

		BHARAT HEAVY ELECTRICALS LIMITED [A Government of India Undertaking] Ramachandrapuram, Hyderabad, 502032, A.P. India Phone 040-23184526, 23182322 FAX:040-23021910, 1954			भारत हेवी इलेक्ट्रिकल्स लिमिटेड (भारत सरकार का उपक्रम) रामचन्द्रपुरम, हैदराबाद, 502032 आंध्र प्रदेश, भारत			RFQ NO :		PURCHASE DEPARTMENT ENQUIRY क्रय विभाग जांच (ई मेल : tenderbox@bhelhyd.co.in)		SHEET:1 OF :11	
HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322			FAX : 091-40-23021910 091-40-23021954			PURCHASE DEPARTMENT					
		GSTIN:			Enq/Collective No :B7A1Z11020		Enq.Dt. : 27.01.2026		No.Of Items :*		DUE Dt. OF QUOTN. : 10.02.2026		
Office Copy				Please submit your lowest quotation in sealed cover superscribed with Enquiry No./Collective No.(RFQ No) and due date subject to our terms and conditions attached ,for the materials mentioned below.Your offer has to reach us onor before due date by 11.00 Hours (IST) and will be opened at 14.00 Hours.(IST).If our Enquiry No./Collective No.(RFQ No) and tender due date are not super scribed on the tender cover , your offer shall be summarily rejected. Incomplete offers and late offers will not be considered.									
SL NO	Purchase Req.no	item no	Material Code, HSN No.	Drg no - Ver , Rev & Spec - Ver , Rev,Spec-Var	Description	Unit	Qty	Delivery Date	Schedule Qty				
1	8000143723	10	AA7240342352 84841090	NA-,,AA7240342,03,	RING JOINT GASKET OVAL TYPE STAINLESS STEEL RING AND GROOVE NO:R45 PITCH DIA 211.12	EA	3.000	10.10.2026	1.000				
2	7000111020	10	84841090					31.01.2026	1.000				
3	8000135282	10	84841090					31.01.2026	1.000				
4	5000041059	10	AA7240353095 84841090	NA-,,AA21504,02,	GASKET SS JKT COMPRESSED ASBESTOS FIBRE GRADE O/1 SS JACKET NOM.SIZE 6" PRESSURE CLASS	EA	50.000	31.01.2026	50.000				
5	5000044514	10	HY2151703614 72254020	-,,AA21503,02,	KEVLAR SHEET 1.6 THICK, MEDIUM PRE.OIL	KG	100.000	16.09.2026	100.000				
6	5000043364	10	HY7240198090 40169320	NA-,,HY7240199,02,	RING TRDL SELG STATIC ID12 THK 3	EA	200.000	28.04.2026	200.000				
7	5000043348	10	HY7240198103 40169320	NA-,,HY7240199,02,	RING TRDL SELG STATIC ID16 THK 3	EA	300.000	18.05.2026	300.000				
8	8000142824	10	HY7240198499 85030010	NA-,,HY7240199,02,	RING TRDL SELG STATIC ID440 THK 5	EA	12.000	10.10.2026	2.000				
9	8000142743	10	85030010					10.10.2026	2.000				
10	8000142755	10	85030010					10.10.2026	2.000				
						TEST CERTIFICATE REQD: GUARANTEE REQ : SAMPLE REQD : BID TYPE : TWO PART			For and on-behalf of Bharat Heavy Electricals Limited. E VINOD KUMAR MANAGER				

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HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322		FAX : 091-40-23021910 091-40-23021954		PURCHASE DEPARTMENT						
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11	5000043338	10	TC9851303038 84849000	NA-,,TC51303,03,03	ABSTREIFER DIA 50XDIA 60X7X10	EA	150.000	27.06.2026	150.000			
12	8000142767	10	85030010					10.10.2026	2.000			
13	8000142790	10	85030010					10.10.2026	2.000			
14	8000142807	10	85030010					10.10.2026	2.000			
15	5000042786	10	HY7240199975 40169320	NA-,,HY7240199,02,	RING TRDL SELG STATIC ID340 THK 5	EA	50.000	10.12.2025	50.000			
16	8000130445	10	HY7240341445 84841010	NA-,,AA7240341,03,	RING JOINT GASKET OVEL TYPE SOFT IRON RING AND GROOVE NO:R54 PITCH DIA 323.85	EA	34.000	31.01.2026	2.000			
17	5000043040	10	84841010					31.01.2026	10.000			
18	7000109799	10	84841010					10.03.2027	2.000			
19	8000128312	10	84841010					31.01.2026	2.000			
20	8000128340	10	84841010					31.01.2026	2.000			
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		GSTIN:		Enq/Collective No :B7A1Z11020		Enq.Dt. : 27.01.2026		No.Of Items :*		DUE Dt. OF QUOTN. : 10.02.2026			
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21	8000130410	10	84841010					31.01.2026	2.000				
22	8000130414	10	84841010					31.01.2026	2.000				
23	8000130418	10	84841010					31.01.2026	2.000				
24	8000130422	10	84841010					31.01.2026	2.000				
25	8000130426	10	84841010					31.01.2026	2.000				
26	8000130433	10	84841010					31.01.2026	2.000				
27	8000130437	10	84841010					31.01.2026	2.000				
28	8000130441	10	84841010					31.01.2026	2.000				
29	7000112204	10	HY7240342360 84849000	NA-,,AA7240342,03,	RING JOINT GASKET OVAL TYPE STAINLESS STEEL RING AND GROOVE NO:R46 PITCH DIA 211.12	EA	2.000	10.02.2027	1.000				
30	7000112152	10	84849000					10.02.2027	1.000				
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31	8000140163	10	HY7240342433 84841090	NA-,,AA7240342,03,	RING JOINT GASKET OVAL TYPE STAINLESS STEEL RING AND GROOVE NO:R53 PITCH DIA 323.85	EA	14.000	31.01.2026	1.000			
32	7000122749	10	84841090					09.02.2027	6.000			
33	7000126150	10	84841090					31.01.2026	1.000			
34	8000134115	10	84841090					31.01.2026	2.000			
35	8000134127	10	84841090					31.01.2026	2.000			
36	8000134138	10	84841090					31.01.2026	2.000			
37	7000123113	10	HY7240342441 84849000	NA-,,AA7240342,03,	RING JOINT GASKET OVAL TYPE STAINLESS STEEL RING AND GROOVE NO:R54 PITCH DIA 323.85	EA	4.000	31.01.2026	2.000			
38	7000123112	10	84849000					31.01.2026	2.000			
39	8000142996	10	HY7240342450 84841090	NA-,,AA7240342,03,	RING JOINT GASKET OVAL TYPE STAINLESS STEEL RING AND GROOVE NO:R55 PITCH DIA 342.9	EA	9.000	10.10.2026	1.000			
40	7000124168	10	84841090					31.01.2026	1.000			
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HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322			FAX : 091-40-23021910 091-40-23021954			PURCHASE DEPARTMENT					
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41	7000124398	10	84841090							31.01.2026	2.000		
42	8000142962	10	84841090							10.10.2026	1.000		
43	8000142969	10	84841090							10.10.2026	1.000		
44	8000142976	10	84841090							10.10.2026	1.000		
45	8000142984	10	84841090							10.10.2026	1.000		
46	8000142990	10	84841090							10.10.2026	1.000		
47	8000142951	10	HY7240361217 84841010	NA-,,HY7240361,01,	GASKET METALLIC SPIRAL WOUND NOM.SIZE 32" PRESSURE CLASS 150			EA	1.000	15.09.2026	1.000		
48	5000043327	10	HY7240363031 84841090	NA-,,HY7240363,00,	NON ASBESTOS M.S.W. GASKET SIZE 1" CLASS 300 PTFE FILLER			EA	1,000.000	31.01.2026	1,000.000		
49	5000043479	10	HY7240366030 84841010	NA-,,HY7240366,00,	NON ASBESTOS M.S.W. GASKET SIZE 1" CLASS 600 GRAPHITE FILLER			EA	300.000	31.01.2026	300.000		
50	5000043395	10	HY7240368033 84841090	NA-,,HY7240368,00,	NAB M.S.W. GASKET SIZE 1" #1500 GRPH FLR			EA	100.000	31.01.2026	100.000		
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HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322			FAX : 091-40-23021910 091-40-23021954			PURCHASE DEPARTMENT					
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51	5000043361	10	TC9751202051 84841090	NA-,,TC51202,05,05	SEALING RING OPEN 40/60X10			EA	200.000	27.06.2026	200.000		
52	5000043326	10	TC9751203031 84841090	NA-,,TC51203,08,03	SEALING RING CLOSED 25/38X6.5			EA	500.000	26.04.2026	500.000		
53	5000043369	10	TC9751203040 84841090	NA-,,TC51203,08,04	SEALING RING CLOSED 32/48X8			EA	500.000	27.06.2026	500.000		
54	5000042783	10	TC9751203058 84841090	NA-,,TC51203,08,05	SEALING RING CLOSED 40/60X10			EA	2,000.000	27.01.2026	1,000.000		
55	5000041081	10	84841090							10.12.2025	1,000.000		
56	8000137355	10	TC9751203147 84841090	NA-,,TC51203,08,14	SEAL RING (CLOSED),DIA 140/160X10			EA	50.000	09.04.2026	25.000		
57	8000136990	10	84841090							09.04.2026	5.000		
58	8000137007	10	84841090							09.04.2026	5.000		
59	8000137018	10	84841090							09.04.2026	5.000		
60	8000137027	10	84841090							09.04.2026	5.000		
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61	8000137038	10	84841090							09.04.2026	5.000		
62	5000043545	10	TC9751332010 84842000	NA-,,TC51332,02,01		TAR-PTFE ABSTRIEFER 3.03-0.025		EA	100.000	06.07.2026	100.000		
63	7000128472	10	TC9751849012 68159990	NA-,,TC51849,03,01		GASKET,D879.5/740X3,MTL:GRAPHIT+CRNI STL		EA	1.000	09.01.2027	1.000		
64	8000145976	10	TC9758028030 40169320	NA-,,TC58028,02,03		O-RING 16X3.0		EA	4.000	10.02.2027	2.000		
65	8000145971	10	40169320							10.02.2027	2.000		
66	8000139453	10	TC9758028049 40169320	NA-,,TC58028,02,04		O-RING 9X2.5		EA	4.000	09.04.2027	1.000		
67	8000137093	10	40169320							09.04.2026	1.000		
68	8000137536	10	40169320							10.03.2026	1.000		
69	8000139320	10	40169320							10.09.2026	1.000		
70	8000139454	10	TC9758028057 40169320	NA-,,TC58028,02,05		O-RING 44X3.53		EA	4.000	09.04.2027	1.000		
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72	8000137535	10	40169320							10.03.2026	1.000		
73	8000139321	10	40169320							10.09.2026	1.000		
74	8000145978	10	TC9758028065 40169320	NA-,,TC58028,02,06		O-RING 25X3.0		EA	5.000	10.02.2027	1.000		
75	8000136968	10	40169320							09.04.2026	1.000		
76	8000139315	10	40169320							10.09.2026	1.000		
77	8000139448	10	40169320							09.04.2027	1.000		
78	8000145973	10	40169320							10.02.2027	1.000		
79	8000139450	10	TC9758028073 40169320	NA-,,TC58028,02,07		O-RING 11.3X2.4		EA	4.000	09.04.2027	1.000		
80	7000127967	10	40169320							08.08.2026	1.000		
								TEST CERTIFICATE REQD: GUARANTEE REQ : SAMPLE REQD : BID TYPE : TWO PART		For and on-behalf of Bharat Heavy Electricals Limited. E VINOD KUMAR MANAGER			

		BHARAT HEAVY ELECTRICALS LIMITED [A Government of India Undertaking] Ramachandrapuram, Hyderabad, 502032, A.P. India Phone 040-23184526, 23182322 FAX:040-23021910, 1954			भारत हेवी इलेक्ट्रिकल्स लिमिटेड (भारत सरकार का उपक्रम) रामचन्द्रपुरम, हैदराबाद, 502032 आंध्र प्रदेश, भारत			RFQ NO :		PURCHASE DEPARTMENT ENQUIRY क्रय विभाग जांच (ई मेल : tenderbox@bhelhyd.co.in)		SHEET:9 OF :11	
HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322		FAX : 091-40-23021910 091-40-23021954		PURCHASE DEPARTMENT							
		GSTIN:		Enq/Collective No :B7A1Z11020		Enq.Dt. : 27.01.2026		No.Of Items :*		DUE Dt. OF QUOTN. : 10.02.2026			
Office Copy				Please submit your lowest quotation in sealed cover superscribed with Enquiry No./Collective No.(RFQ No) and due date subject to our terms and conditions attached ,for the materials mentioned below.Your offer has to reach us onor before due date by 11.00 Hours (IST) and will be opened at 14.00 Hours.(IST).If our Enquiry No./Collective No.(RFQ No) and tender due date are not super scribed on the tender cover , your offer shall be summarily rejected. Incomplete offers and late offers will not be considered.									
SL NO	Purchase Req.no	item no	Material Code, HSN No.	Drg no - Ver , Rev & Spec - Ver , Rev,Spec-Var		Description		Unit	Qty	Delivery Date	Schedule Qty		
81	8000137090	10	40169320							10.03.2027	1.000		
82	8000139317	10	40169320							10.09.2026	1.000		
83	8000139447	10	TC9758028081 40169320	NA-,,TC58028,02,08		O-RING 18X2.5		EA	12.000	09.04.2027	3.000		
84	7000127968	10	40169320							08.08.2026	1.000		
85	7000127970	10	40169320							08.08.2026	2.000		
86	8000136967	10	40169320							10.03.2027	3.000		
87	8000139314	10	40169320							10.09.2026	3.000		
88	8000139451	10	TC9758028090 40169320	NA-,,TC58028,02,09		O-RING 9.3X2.4		EA	8.000	09.04.2027	2.000		
89	7000127969	10	40169320							08.08.2026	2.000		
90	8000137091	10	40169320							09.04.2026	2.000		
								TEST CERTIFICATE REQD: GUARANTEE REQ : SAMPLE REQD : BID TYPE : TWO PART		For and on-behalf of Bharat Heavy Electricals Limited. E VINOD KUMAR MANAGER			

		BHARAT HEAVY ELECTRICALS LIMITED [A Government of India Undertaking] Ramachandrapuram, Hyderabad, 502032, A.P. India Phone 040-23184526, 23182322 FAX:040-23021910, 1954			भारत हेवी इलेक्ट्रिकल्स लिमिटेड (भारत सरकार का उपक्रम) रामचन्द्रपुरम, हैदराबाद, 502032 आंध्र प्रदेश, भारत			RFQ NO :		PURCHASE DEPARTMENT ENQUIRY क्रय विभाग जांच (ई मेल : tenderbox@bhelhyd.co.in)		SHEET:10 OF :11	
HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322		FAX : 091-40-23021910 091-40-23021954		PURCHASE DEPARTMENT							
		GSTIN:		Enq/Collective No :B7A1Z11020		Enq.Dt. : 27.01.2026		No.Of Items :*		DUE Dt. OF QUOTN : 10.02.2026			
Office Copy				Please submit your lowest quotation in sealed cover superscribed with Enquiry No./Collective No.(RFQ No) and due date subject to our terms and conditions attached ,for the materials mentioned below.Your offer has to reach us onor before due date by 11.00 Hours (IST) and will be opened at 14.00 Hours.(IST).If our Enquiry No./Collective No.(RFQ No) and tender due date are not super scribed on the tender cover , your offer shall be summarily rejected. Incomplete offers and late offers will not be considered.									
SL NO	Purchase Req.no	item no	Material Code, HSN No.	Drg no - Ver , Rev & Spec - Ver , Rev,Spec-Var		Description		Unit	Qty	Delivery Date	Schedule Qty		
91	8000139318	10	40169320							10.09.2026	2.000		
92	8000139452	10	TC9758028103 40169320	NA-,,TC58028,02,10		O-RING 16X3.5		EA	4.000	09.04.2027	1.000		
93	7000127971	10	40169320							08.08.2026	1.000		
94	8000137092	10	40169320							09.04.2026	1.000		
95	8000139319	10	40169320							10.09.2026	1.000		
96	5000043376	10	TC9851284009 84849000	NA-,,TC51284,00,00		ABSTREIFER TYPE SA-16-26-5-8		EA	100.000	27.06.2026	100.000		
97	5000043581	10	TC9851284025 84849000	NA-,,TC51284,00,02		ABSTREIFER TYPE SA-10-16-3-4.5		EA	200.000	08.07.2026	200.000		
98	5000043389	10	TC9851302040 74199990	NA-,,TC51302,06,04		TURCON STEP SEAL DIA32		EA	300.000	27.06.2026	300.000		
99	5000043544	10	TC9851302058 74199990	NA-,,TC51302,06,05		TURCON STEP SEAL DIA40		EA	200.000	06.07.2026	200.000		
100	5000043546	10	TC9851302082 84842000	NA-,,TC51302,06,08		TURCON STEP SEAL 16 MM		EA	300.000	06.07.2026	300.000		
								TEST CERTIFICATE REQD: GUARANTEE REQ : SAMPLE REQD : BID TYPE : TWO PART		For and on-behalf of Bharat Heavy Electricals Limited. E VINOD KUMAR MANAGER			

Special Remarks

CheckList of Quality Interventions:

**BHEL reserves the right to enforce any or all of the following checks during execution of the order.
There is no additional cost to the vendor on account of these checks.**

TEST CERTIFICATE REQD:
GUARANTEE REQ :
SAMPLE REQD :
BID TYPE : TWO PART

For and on-behalf of
Bharat Heavy Electricals Limited.

E VINOD KUMAR
MANAGER



Special Conditions of Contract (SCC)

TC Purchase Department
HPEP - RC Puram, Hyderabad - 502032

ITB Clause Ref No.	Clause	BHEL requirements	Bidder response
3	Mode of Submission	Conventional	Non Deviatable
5	Type of Bid	Two Part	Non Deviatable
6	Indigenous purchase - Destination	BHEL 01 Stores, Hyd	Non Deviatable
		TC STORES BHEL HYDERABAD R C PURAM 502032	
	Freight	Supplier Scope	
	Insurance	Supplier Scope	
9	Price validity	90 Days from Part-1 bid opening date	
8	Delivery Period	03 months of PO date	
18	Evaluation basis	Item Wise Basis	Non Deviatable
9	Price Variation Clauser (PVC)	Not applicable	Non Deviatable
12	Payment Terms	As per ITB Clause 12	
	Tender cost	Not applicable	Non Deviatable
	Earnest Money Deposit (EMD)	Not applicable	Non Deviatable
	E & C Supervision Charges	Not Applicable	Non Deviatable
Others	Contract execution Bank Guarantee	Not applicable	Non Deviatable
17	Performance Bank Guarantee	Not applicable	Non Deviatable
13	Max Penalty applicable on	Order Value (Non-Deviatable)	Non Deviatable
16	Guarantee / Warranty Period	As per Standard ITB GC/WC	
48	Detailed Billing Breakup (BBU)	Applicable	Non Deviatable
Others	Customer approval of vendor	Applicable	Non Deviatable
	Drawing approval	Applicable	Non Deviatable
	QAP approval	Applicable	Non Deviatable
36	Inspection by (All Indian supplier offers will be loaded by 0.188% for BHEL TPIA charges. This TPIA charges will be in BHEL Scope only)	BHEL/BHEL TPI	Non Deviatable
Others	Reverse Auction	Not Applicable	Non Deviatable
Others	Price Bid: 1. Penalty: In the event of delay in supply of goods, penalty of 0.5% per week or part there of shall be levied on the undelivered portion subject to a maximum of 10% of the undelivered Portion. 2. Vendors has to quote FOR Destination. 3. Integrity Pact to be submitted by Vendor (if applicable).		Non Deviatable
Others	terms agreed in SCC, ITB & It's Annexures are final. Other terms mentioned anywhere in your offer, will not be applicable.		

Note: In case, Supplier is not filling the above sheet, it is understood that Supplier is accepting the BHEL Requirements mentioned as above.

Vendor Sign Stamp

(बीएचईएल) BHEL HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51202
			REV 05
			PAGE 0 OF 4
SEALING RING (OPEN) (FOR INTERNAL REFERENCE ONLY) REMOVE THIS PREFACE SHEET BEFORE ISSUING TO THE SUPPLIER DESCRIPTION : Sealing ring(open) of nominal size dia d / D x h of this standard shall be designated as follows ON THE DRAWINGS : MATERIAL SPCN. COLUMN : TC51202 DESCRIPTION COLUMN : Sealing ring (open) dia d / D x h MATERIAL CODE COLUMN : TC9751202xxx ON THE INDENTS : MATERIAL SPCN. COLUMN : TC51202 DESCRIPTION COLUMN : Sealing ring (open) dia d / D x h MATERIAL CODE COLUMN : TC9751202xxx ON ENQUIRIES AND PURCHASE ORDERS : a) A copy of this standard shall be enclosed without preface sheet. NOTE : - For placing order on the above suplier for sealing ring(open) of nominal size dia d / D x h, the ordering description shall be as follows: Sealing ring(open) (DIAPLEX) DIA d / D x h			
FORMAT TD-201 REV - 00 REF DOC	PREPARED BY : -SD- PNR	APPROVED BY : -SD- DGM(TCGT)	DATE : 10.05.79
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बीएचईएल  HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51202	
			REV 05	
			PAGE 1 OF 4	
SEALING RING(OPEN) (DIAPLEX) 1.0) : SCOPE : This standard specifies the requirements of sealing ring(open) Diaplex used in the governing valves assembly of steam turbines. 2.0) : TECHNICAL REQUIREMENTS : 2.1) : MATERIAL : Diagonal Diaplex braid of Graphite with stainless (Chrome- Nickel) steel reinforcement and slightly rubberised. Thermal volumetric loss should be negligible. 2.2): MATERIAL DENSITY: 1.5 gm/cm³ 2.3) : MAXIMUM OPERATING CONDITIONS : Upto 180 bar and 550 Deg C, velocity = 8 m/sec. PH range = 6 - 10 2.4) : DIMENSIONS : All dimensions as per Variant Table. 3.0) : TEST & GUARANTEE CERTIFICATES : 3.1) : TEST CERTIFICATES : Three copies of the test certificates indicating the properties and dimensions shall be supplied for each item, quoting BHEL standard Serial Number of the component. 3.2) : GUARANTEE CERTIFICATE : A guarantee certificate for 24 months of trouble free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished. 4.0) : DOCUMENTS : 4.1) : Technical literature shall accompany the offer.				
FORMAT TD-201 REV - 00 REF DOC		PREPARED BY : -SD- PNR	APPROVED BY : -SD- DGM(TCGT)	DATE : 10.05.79
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HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS**

TC51202

REV 05

PAGE 2 OF 4

5.0) : MARKING :

5.1) : A tag bearing relevant 12 digit material code of BHEL shall be attached for each component.

5.2) : The following details shall be marked on the packing case.

- A) Manufacturer's name.
- B) BHEL Order Number.
- C) BHEL Standard Number : TC 51202
- D) BHEL Material Code : TC9751202xxx

6.0) : VARIANT TABLE :

VAR NO.	NOMINAL SIZE	SPINDLE DIA. d(mm)	GLAND BUSH DIA D (mm)	HEIGHT h (mm)	MATL. CODE
01	16 / 28 x 6	15.90 - 0.01	28H7	6	TC9751202019
02	20 / 32 x 6	19.90 - 0.01	32H7	6	TC9751202027
03	25 / 38 x 6.5	24.89 - 0.02	38H7	6.5	TC9751202035
04	32 / 48 x 8	31.87 - 0.02	48H7	8	TC9751202043
05	40 / 60 x 10	39.85 - 0.03	60H7	10	TC9751202051
06	20 / 40 x 10	19.90 - 0.01	40H7	10	TC9751202060
07	25 / 48 x 11.5	24.89 - 0.02	48H7	11.5	TC9751202078
08	35 / 50 x 10	34.90 - 0.01	50H7	10	TC9751202086
09	30 / 50 x 10	29.90 - 0.01	50H7	10	TC9751202094

FORMAT
TD-202
REV-00

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HYDERABAD

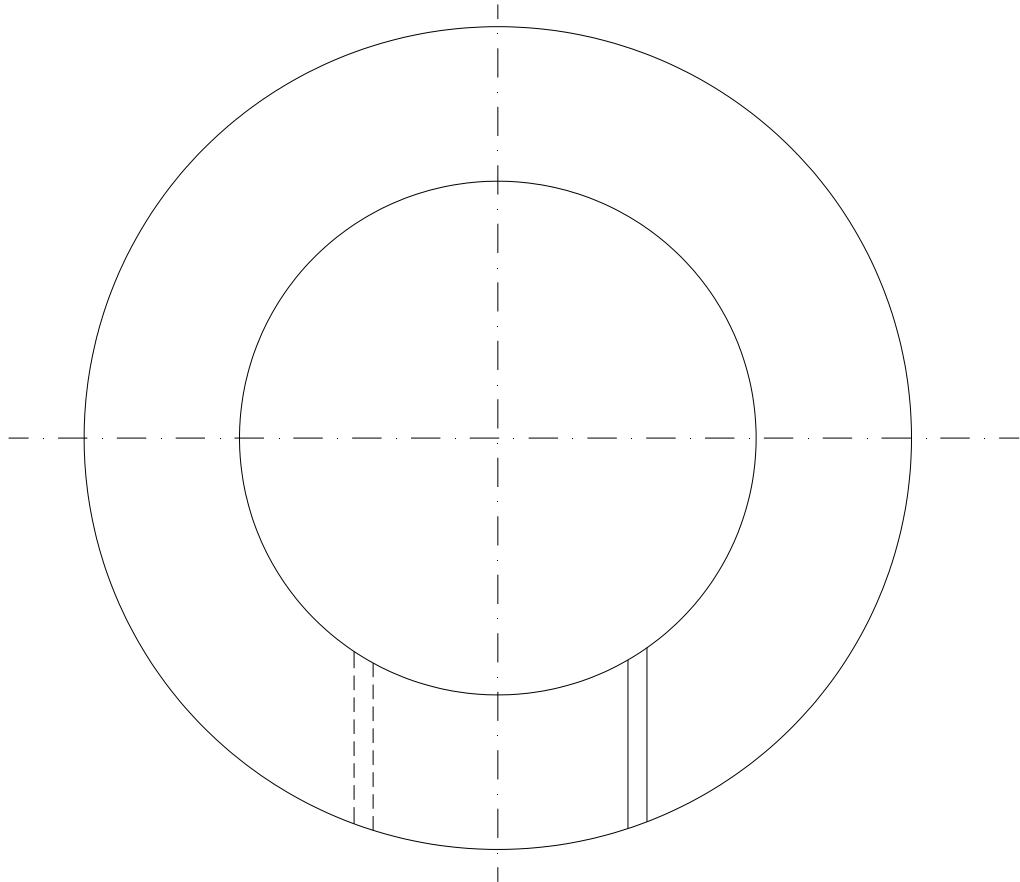
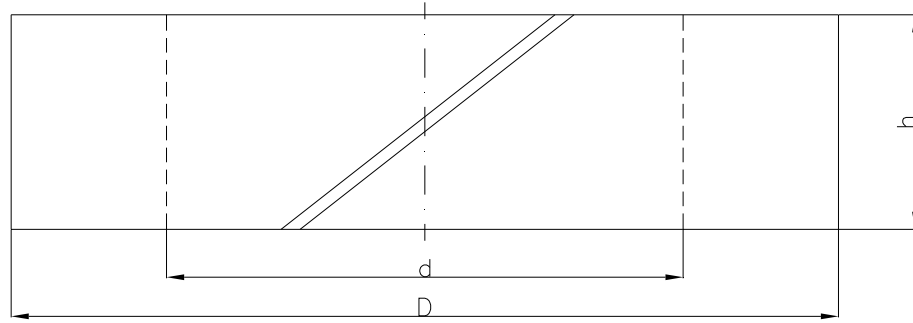
**PRODUCT STANDARD
TURBINES & COMPRESSORS**

TC51202

REV 05

PAGE 3 OF 4

SEALING RING (OPEN)



**FORMAT
TD-202
REV-00**

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HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS**

TC51202

REV 05

PAGE 4 OF 4

RECORD OF REVISIONS

REV NO.	DATE	REVISION DETAILS	REVISED	APPROVED
00	10.05.79	NEW	P.N.R.	DGM(TCGT)
01	02.11.91	COMPUTERISED	V.V.N.R.	DGM(TCGT)
02	01.06.93	VARIANTS ADDED	V.V.N.R.	A.GUPTA
03	21.03.97	GENERALLY REVISED SUPPLIERS ADDRESS ADDED	V.V.RAO	P.S.BABU
04	29.07.19	SPECIFICATION REVIEWED AND FOUND OK	AT	KHS
05	29.11.21	GENERALLY REVISED	AT	KHS

FORMAT
TD-203
REV-00

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बीएचईएल  HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51203
			REV 08
			PAGE 0 OF 4
SEALING RING (CLOSED) (FOR INTERNAL REFERENCE ONLY) REMOVE THIS PREFACE SHEET BEFORE ISSUING TO THE SUPPLIER DESCRIPTION : Sealing ring(closed) of nominal size dia d / D x h of this standard shall be designated as follows. ON THE DRAWINGS : MATERIAL SPCN. COLUMN : TC51203 DESCRIPTION COLUMN : Sealing ring (closed) dia d / D x h MATERIAL CODE COLUMN : TC9751203xxx ON THE INDENTS : MATERIAL SPCN. COLUMN : TC51203 DESCRIPTION COLUMN : Sealing ring (closed) dia d / D x h MATERIAL CODE COLUMN : TC9751203xxx ON ENQUIRIES AND PURCHASE ORDERS : a) A copy of this standard shall be enclosed without preface sheet. NOTE : - For placing order on the above supplier for sealing ring(closed) of nominal size dia d / D x h, the ordering description shall be as follows: Sealing ring(closed) : Dia d / D x h			
FORMAT TD-201 REV - 00 REF DOC	PREPARED BY : -SD- PNR	APPROVED BY : -SD- DGM(TCGT)	DATE : 10.05.79
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बीएचईएल  HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51203
			REV 08
			PAGE 1 OF 4
SEALING RING(CLOSED) 1.0) : SCOPE : This standard specifies the requirements of sealing ring(closed) used in the gland packing of high steam pressure & high steam temperature control valve assemblies of steam turbines. 2.0) : TECHNICAL REQUIREMENTS : 2.1) : The seal rings should be made of pure graphite(99.9% carbon) free from contamination with good chemical resistant properties. 2.2) : The sealing rings should be permanently elastic with excellent sliding properties. 2.3) : The seal rings material density : 1.1 to 1.3 gm/cm³. 2.4) : Supply dimensions/conditions : To be supplied in the form of rings. To be suitable to the size of spindles and gland bushes as per Variant Table & Figure - 1. 2.5) : Maximum operating conditions : 180 bar/ 580 degree C. 3.0) : TEST & GUARANTEE CERTIFICATES : 3.1): TEST CERTIFICATES : Three copies of the test certificates indicating the propertiesand dimensions shall be supplied for each item, quoting BHEL Standard Number, Purchase OrderNumber and manufacturers Serial Number of the component. 3.2) : GUARANTEE CERTIFICATE : A guarantee certificate for 24 months of trouble free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished. 4.0) : DOCUMENTS : 4.1) : Technical literature shall accompany the offer.			
FORMAT TD-201 REV - 00 REF DOC	PREPARED BY : -SD- PNR	APPROVED BY : -SD- DGM(TCGT)	DATE : 10.05.79
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बीएचईएल  HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC51203
		REV 07
		PAGE 2 OF 4

5.0) : MARKING :

5.1) : A tag bearing relevant 12 digit material code of BHEL shall be attached for each component

5.2) : The following details shall be marked on the packing case.

A) Manufacturer’s name.

B) BHEL Order Number.

C) BHEL Standard Number : TC 51203

D) BHEL Material Code : TC9751203xxx

SEALING RING (CLOSED)

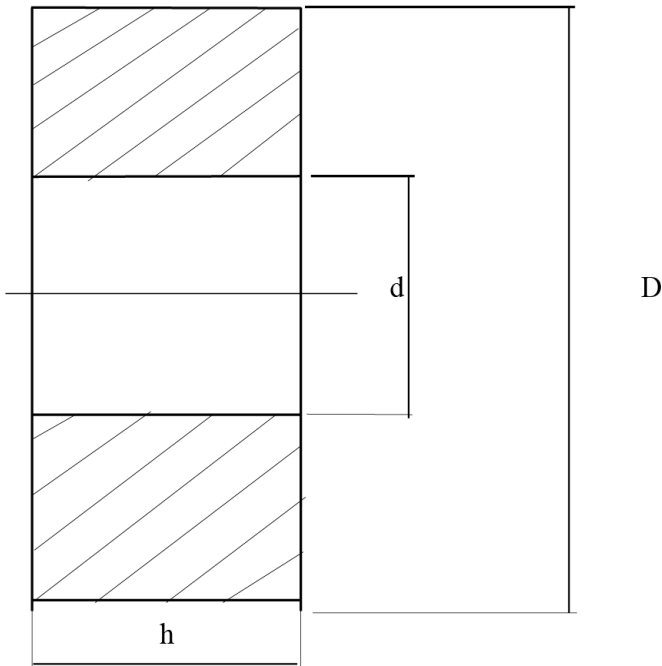


FIGURE - 1

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बी एच ई एल  HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS				TC51203
					REV 07
					PAGE 3 OF 4

6.0) : VARIANT TABLE :

VAR NO.	NOMINAL SIZE	SPINDLE DIA.d(mm)	GLAND BUSH DIA D (mm)	HEIGHT h (mm)	MATL. CODE
01	16 / 28 x 6	15.90 - 0.01	28H7	6	TC9751203015
02	20 / 32 x 6	19.90 - 0.01	32H7	6	TC9751203023
03	25 / 38 x 6.5	24.89 - 0.02	38H7	6.5	TC9751203031
04	32 / 48 x 8	31.87 - 0.02	48H7	8	TC9751203040
05	40 / 60 x 10	39.84 - 0.04	60H7	10	TC9751203058
06	8 / 14.8 x 5	DIA 8 f 7	15H7	5	TC9751203066
07	6 / 14.8 x 5	DIA 6 f 7	15H7	5	TC9751203074
08	30.1 / 45x 10	DIA20 f 7	45H7	10	TC9751203082
09	20 / 40 x 10	19.90 - 0.01	40H7	10	TC9751203090
10	25 / 48 x 11.5	24.89 - 0.02	48H7	11.5	TC9751203104
11	25 / 40 x 10	24.89 - 0.02	40H7	10	TC9751203112
12	35 / 50 x 10	34.89 - 0.02	50H7	10	TC9751203120
13	30 / 50 x 10	29.87 - 0.02	50H7	10	TC9751203139
14	140 / 160 x 10	139.0 - 0.01	160.0+0.2	10	TC9751203147
15	50 / 70 x 10	49.82 - 0.02	70H7	10	TC9751203155
16	180/200 x 10	180.0 - 0.14	200.0 + 0.2	10	TC9751203163
17	45/65 x 12	44.9- 0.02	65H7	12	TC9751203171

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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51203																																																																												
			REV 08																																																																												
			PAGE 4 OF 4																																																																												
RECORD OF REVISIONS <table border="1"> <thead> <tr> <th>REV NO.</th> <th>DATE</th> <th>REVISION DETAILS</th> <th>REVISED</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>10.05.79</td> <td>NEW</td> <td>P.N.R.</td> <td>DGM(TCGT)</td> </tr> <tr> <td>01</td> <td>02.11.91</td> <td>COMPUTERISED</td> <td>V.V.N.R.</td> <td>P.N.R.</td> </tr> <tr> <td>02</td> <td>13.12.92</td> <td>VARIANTS 11 TO 14 ADDED</td> <td>N.V.S.S.</td> <td>A.GUPTA</td> </tr> <tr> <td>03</td> <td>03.06.93</td> <td>SUPPLIERS ADDRESS ADDED</td> <td>V.N.R.</td> <td>A.GUPTA</td> </tr> <tr> <td>04</td> <td>06.03.96</td> <td>VAR.15 ADDED, TECHNICAL REQUIREMENTS MODIFIED</td> <td>P.S.BABU</td> <td>A.GUPTA</td> </tr> <tr> <td>05</td> <td>21.03.97</td> <td>GENERALLY REVISED</td> <td>V.V.RAO</td> <td>P.S.BABU</td> </tr> <tr> <td>06</td> <td>23.07.14</td> <td>VARIANT 16 ADDED</td> <td>SG</td> <td>KHS</td> </tr> <tr> <td>07</td> <td>29.07.19</td> <td>SPECIFICATION REVIEWED AND FOUND OK</td> <td>AT</td> <td>KHS</td> </tr> <tr> <td>08</td> <td>04.02.25</td> <td>REAFFIRMED</td> <td>SG</td> <td>KHS</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>					REV NO.	DATE	REVISION DETAILS	REVISED	APPROVED	00	10.05.79	NEW	P.N.R.	DGM(TCGT)	01	02.11.91	COMPUTERISED	V.V.N.R.	P.N.R.	02	13.12.92	VARIANTS 11 TO 14 ADDED	N.V.S.S.	A.GUPTA	03	03.06.93	SUPPLIERS ADDRESS ADDED	V.N.R.	A.GUPTA	04	06.03.96	VAR.15 ADDED, TECHNICAL REQUIREMENTS MODIFIED	P.S.BABU	A.GUPTA	05	21.03.97	GENERALLY REVISED	V.V.RAO	P.S.BABU	06	23.07.14	VARIANT 16 ADDED	SG	KHS	07	29.07.19	SPECIFICATION REVIEWED AND FOUND OK	AT	KHS	08	04.02.25	REAFFIRMED	SG	KHS																									
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02	13.12.92	VARIANTS 11 TO 14 ADDED	N.V.S.S.	A.GUPTA																																																																											
03	03.06.93	SUPPLIERS ADDRESS ADDED	V.N.R.	A.GUPTA																																																																											
04	06.03.96	VAR.15 ADDED, TECHNICAL REQUIREMENTS MODIFIED	P.S.BABU	A.GUPTA																																																																											
05	21.03.97	GENERALLY REVISED	V.V.RAO	P.S.BABU																																																																											
06	23.07.14	VARIANT 16 ADDED	SG	KHS																																																																											
07	29.07.19	SPECIFICATION REVIEWED AND FOUND OK	AT	KHS																																																																											
08	04.02.25	REAFFIRMED	SG	KHS																																																																											
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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC 512 84
			REV 00
			PAGE 0 OF 5
<u>WIPER SEAL(PTFE-ABSTREIFER TYPE-SA)</u> (FOR INTERNAL REFERENCE ONLY) REMOVE THIS PREFACE SHEET BEFORE ISSUING TO THE SUPPLIER DESCRIPTION : Wiper seal (Abstreifer Type-SA) This is to be designated as follows: ON DRAWINGS : MATERIAL SPCN. COLUMN : TC51284 DESCRIPTION COLUMN : Wiper seal (Abstreifer Type-SA) MATERIAL CODE COLUMN : TC9751284XXX ON INDENTS : MATERIAL SPCN. COLUMN : TC51284 DESCRIPTION COLUMN : Wiper seal (Abstreifer Type-SA) MATERIAL CODE COLUMN : TC9751284XXX ON ENQUIRIES AND PURCHASE ORDERS : a) A copy of this standard shall be enclosed without preface sheet.			
FORMAT TD-201 REV -00 REF DOC	PREPARED BY: -SD- V.N.R.	APPROVED BY: -SD- DGM (TC>)	DATE: 04.04.93
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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 512 84
		REV 00
		PAGE 1 OF 5

<

 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 512 84 REV 00 PAGE 2 OF 5
3.0) : TEST AND GUARANTEE CERTIFICATES : 3.1) : TEST CERTIFICATES : Three copies of the Type Test Certificates indicating the properties and dimensions shall be supplied for each item, quoting BHEL Standard Serial Number of the component. 3.2) : GUARANTEE CERTIFICATE : A guarantee certificate for 24 months of trouble free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished. 4.0) : DOCUMENTS : 4.1) : Technical literature shall accompany the offer. 5.0) : MARKING : 5.1) : A tag bearing relevant 12 digit material code of BHEL shall be attached for each component 5.2) : The following details shall be marked on the packing case. A) Manufacturer's name. B) BHEL Order Number. C) BHEL Standard Number : TC 51284 D) BHEL Material Code : TC9751284XXX		
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**PRODUCT STANDARD
TURBINES & COMPRESSORS**

TC 512 84

REV 00

PAGE 3 OF 5

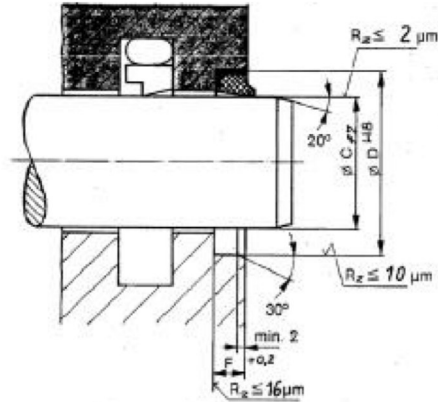


FIGURE-I

Abstreifer



FIGURE-II

6.0) VARIANT TABLE

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**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 512 84****REV 00****PAGE 4 OF 5**

VAR NO.	C f7	D H8	F +0.2	b1	b2	MATERIALCODE
00	16	26	5	5	8	TC9851284009
01	12	20	4	4	6	TC9851284017
02	10	16	3	3	4.5	TC9851284025
03	8	13	3	3	4.5	TC9851284033

RECORD OF REVISIONS

REV. NO	DATE	REVISION DETAILS	REVISED	APPROVED
00	26.04.2005	NEW	SVTS	A.GUPTA

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			REV 00																				
			PAGE 5 OF 5																				
<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																							
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	PRODUCT STANDARD TURBINES & COMPRESSORS		TC 51302	
			REV 06	
			PAGE 0 OF 3	

TURCON STEP SEAL WITH 'O'RING

(For internal reference only)

Remove this sheet before issuing to supplier.

DESIGNATION (EG): Turcon step seal suitable for spindle dia 12mm to this standard, shall be designated as follows.

ON THE DRAWING

Material specification column: TC51302
Description : Turcon step seal 12
Material code column : TC 9851302015

ON THE INDENTS:

Material specification column: TC51302
Description : Turcon step seal 12
Spindle dia =12 mm
Material code column : TC 9851302015

ON ENQUIRIES AND PURCHASE ORDERS:

A copy of this standard shall be enclosed without preface sheet.

NOTE: For placing orders on the above supplier for turcon step seal suitable for spindle dia 12 mm, the ordering description shall be as follows:

TURCON STEP SEAL
SPINDLE DIA = 12 mm
ORDERING No. RSK000120-T46N
BHEL CODE: TC9851302015

FORMAT:	PREPARED BY:	APPROVED BY:	DATE:	Rev No
TD - 201	SB/APARNA	KHS	07/07/2020	04
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REF DOC:				

बीएचईएल  HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC 51302	
			REV 06	
			PAGE 1 OF 3	
TURCON STEP SEAL WITH 'O'RING				
1.0 SCOPE: This standard specifies that the requirements of turcon step seal used in amplifiers for steam turbines.				
2.0 TECHNICAL REQUIREMENTS:				
2.1 Material: PTFE				
2.2 Ordering Number: As per enquiry				
2.3 Spindle diameter: As per enquiry				
3.0 TEST & GUARANTEE CERTIFICATES:				
3.1 <u>Test Certificates:</u> Three copies of the test certificates indicating the test results and chemical analysis and physical properties of the material shall be supplied for each item of the consignment. BHEL standard number and purchase order number shall be mentioned in the test certificates.				
3.2 <u>Guarantee certificate:</u> A guarantee certificate for 24 months of trouble free performance from the date of shipment 12 months from the date of commissioning whichever is earlier shall be furnished.				
4.0 DOCUMENTS:				
4.1 Technical literature shall be accompanying the offers.				
5.0 MARKING:				
5.1 A tag bearing 12 digit material code of BHEL and purchase order Number shall be attached in the supply.				
5.2 Following details shall be marked on the packing case. Manufacturers name BHEL Order Number BHEL standard number: TC51302.				
</				

	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 51302
		REV 06
		PAGE 2 OF 3

6.0 EXECUTION & CODIFICATION:

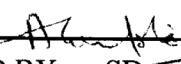
Sl.No.	Spindle dia (mm)	Ordering No. (TSS old part no.)	Ordering No. (TSS new part no.)	BHEL material code
01	12	S55015-0120 46/015-8307	RSK000120-T46N	TC9851302015
02	20	S55015-0200 46/119-19357	RSK100200-T46V	TC9851302023
03	25	S55015-0250 46/122-19357	RSK100250-T46V	TC9851302031
04	32	S55015-0320 46/126-19357	RSK100320-T46V	TC9851302040
05	40	S55015-0400 46/224-19357	RSK200400-T46V	TC9851302058
06	8	S55013-0080 46/111-8307	RSK100080-T46N	TC9851302066
07	18	RS 1300180 V	RSK100180-T46V	TC9851302074
08	16	RS 1300160 V	RSK100160-T46V	TC9851302082
09	10	RS 1300100 V	RSK100100-T46V	TC9851302090
10	6	RS 1300080 V	RSK000060-T46V	TC9851302104

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RECORD OF REVISIONS

Revision No.	Date	Revision details	Revised By	Approved By
00	5/79	New	VNR	AG
01	-	-	-	-
02	-	-	-	-
03	26/04/05	Revised in general	-	-
04	12/11/14	-Revised in general. -TSS new part no added.	Aparna	KHS
05	07/07/20	Reviewed and found ok	SB	KHS
06	21/07/25	Reviewed and found ok	SB	SG

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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC 5 1303
REV 03			
PAGE 0 OF 5			
<u>ABSTREIFER (SCRAPER SEAL RING)</u> <u>(For Internal reference only)</u> DESCRIPTION : Scraper seal ring This is to be designated as follows: ON DRAWINGS : MATERIAL SPCN. COLUMN : TC 5 1303 DESCRIPTION COLUMN : Scraper seal ring MATERIAL CODE COLUMN : TC9751303xxx ON INDENTS : MATERIAL SPCN. COLUMN : TC 5 1303 DESCRIPTION COLUMN : Scraper seal ring MATERIAL CODE COLUMN : TC9751303xxx ON ENQUIRIES AND PURCHASE ORDERS : a) A copy of this standard shall be enclosed without preface sheet.			
FORMAT TD-201 REV -00	PREPARED BY: - SD - VVNR	 APPROVED BY: - SD - A.GUPTA	DATE : 05.05.79
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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 5 1303
		REV 03
		PAGE 1 OF 5

ABSTREIFER (SCRAPER SEAL RING)

1.0 : SCOPE : The standard specifies the requirement of abstreifer (scraper seal ring) used in hand barring devices of steam turbines.

2.0 : TECHNICAL REQUIREMENTS :

2.1 : CONSTRUCTION : The scraper seal should be a mould-vulcanised single acting elastomer scraper vulcanised into a metal race at the outer circumference. (See Figure - I)

The dimensions of scraper ring should be suitable for the groove dimensions given in variant table and Figure - II.

2.2 : MATERIAL : Scraper : - Acrylonitrile butadiene rubber or equivalents.
Metal case : - Sheet metal, AISI 1008

2.3 : PROPERTIES : The scraper seal should have good gliding properties. It should have good dry running properties / characteristics. It should be chemically stable at high temperatures (i.e.,) it should not disintegrate or stick to eve position rod. The scraper lip should have a proper and firm contact throughout the circumference of the piston rod which results in very good elimination of external dirt. The scraper seal should not be sensitive to dirt.

2.4 : GLIDING SPEED : 1 m/sec

2.5 : TEMPERATURE : - 30⁰ C to + 150⁰ C.

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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC 5 1303
		REV 03
		PAGE 2 OF 5
3.0 : <u>TEST & GUARANTEE CERTIFICATE :</u> 3.1 : <u>TEST CERTIFICATES :</u> Type / Routine test certificates as per manufacture's practice to be furnished. 3.2 : <u>GUARANTEE CERTIFICATES:</u> A guarantee certificate for 24 months of trouble free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished. 4.0 : <u>DOCUMENTS :</u> Technical literature, dimensional drg. & catalogues giving full details of maintenance abstreifer (scraper seal ring) shall be furnished alongwith offer and also with consignment. 5.0 : <u>PACKING :</u> The material shall be properly packed to ensure it is capable of withstanding transit risks without damage. 6.0 : <u>MARKING :</u> 6.1 : A tag bearing the relevant 12 digit material code of BHEL shall be attached to each item. 6.2 : The following details shall be marked on the packing case. A) Manufacture's Name B) BHEL Order Number C) BHEL Standard Number D) BHEL Material Code : TC9751303XXX		
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TURBINES & COMPRESSORS**

TC 5 1303

REV 03

PAGE 3 OF 5

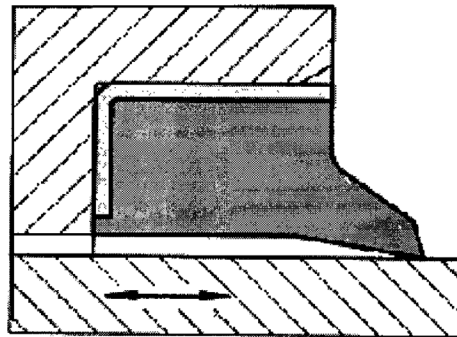


FIGURE - I

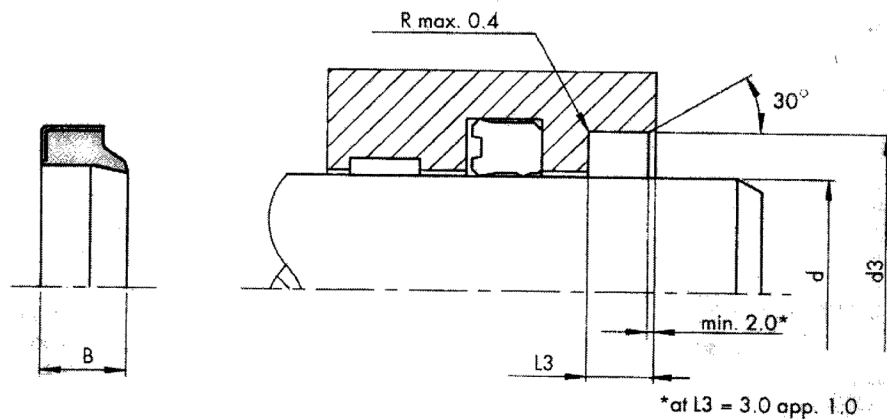


FIGURE - II

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**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 5 1303****REV 03****PAGE 4 OF 5****6.0 : EXECUTION & CODIFICATION :**

VAR	Rod Diameter (mm) d f8/f9	Bore Diameter(mm) d3 H8	Installation Depth(mm) L ₃ +0.2	Width (mm) B	MATERIAL CODE
01	25	35	7	10	TC 9851303011
02	20	28	3.5	5	TC 9851303020
03	50	60	7	10	TC 9851303038
04	32	45	4	8	TC 9851303046
05	40	50	5	8	TC 9851303054
06	50	56	5	7	TC 9851303062
07	28	38	5	7	TC 9851303070
08	28	38	5	8	TC 9851303089

VAR	DESCRIPTION	MATERIAL CODE
09	ABSTREIFER SEAL RING S 500 30 - 8 - 8307	TC9851303976

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TURBINES & COMPRESSORS****TC 5 1303****REV 03****PAGE 5 OF 5****RECORD OF REVISIONS**

REV NO.	DATE	REVISION DETAILS	REVISED	APPROVED
00	05.79	FIRST LIST MADE	VVNR	A.GUPTA
01	01.11.91	GENERALLY REVISED	A.GUPTA	N. ADINARAYANA
02	01.06.97	GENERALLY REVISED	T.S.SINGH <i>T.S. Singh</i>	P.S. BABU <i>P. S. Babu</i>
03	08.02.21	REAFFIRMED	RP	<i>A. K. Patil</i> PATIL

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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51332
			REV 02
			PAGE 0 OF 5
<u>WIPER SEAL(TAR-PTFE-ABSTREIFER)</u> (FOR INTERNAL REFERENCE ONLY) REMOVE THIS PREFACE SHEET BEFORE ISSUING TO THE SUPPLIER DESCRIPTION : Wiper seal (Type :TAR-PTFE) This is to be designated as follows: ON DRAWINGS : MATERIAL SPCN. COLUMN : TC51332 DESCRIPTION COLUMN : Wiper seal (Type :TAR-PTFE) MATERIAL CODE COLUMN : TC9751332xxx ON INDENTS : MATERIAL SPCN. COLUMN : TC51332 DESCRIPTION COLUMN : Wiper seal (Type :TAR-PTFE) MATERIAL CODE COLUMN : TC9751332xxx ON ENQUIRIES AND PURCHASE ORDERS : a) A copy of this standard shall be enclosed without preface sheet.			
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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS		TC51332
			REV 02
			PAGE 1 OF 5
<u>WIPER SEAL(TAR-PTFE-ABSTREIFER)</u> 1.0) SCOPE : This standard specifies the requirements of wiper seals used in the stop valve of steam turbines. 2.0) TECHNICAL REQUIREMENTS : 2.1) CONSTRUCTION : The TAR wiper seal is with a slit wiper element. It comprises of slit body and a rust free helical spring located in the groove of the body. The dimensions of the TAR wiper seal should be suitable for the groove dimensions given the variant table and Figure-I 2.2) MATERIAL : Wiper material : PTFE Helical spring : Inconel 2.3) PROPERTIES : The TAR wiper seal should have good gliding properties (i.e.) it should cause low friction and allow a smooth and even motion of the piston rod even at low gliding speeds. It should have good dry running properties/characteristics. It should be chemically stable at high temperatures (i.e.) it should not disintegrate or stick to the piston rod. The wiper lip should be inelastic so that a proper and firm contact is available throughout the circumference of the piston rod which results in very good elimination of external dirt. The TAR wiper seal should not be sensitive to dirt. 2.4) GLIDING SPEEDS : 3 m/sec : continuous 15 m/sec : intermittent 2.5) TEMPERATURE : - 50⁰ C to + 200⁰ C 2.6) REFERENCE CATALOGUE : Section 3.03 of M/s ULMAN'S catalogue.			
FORMAT 04.04.93 TD-201 REV -00 REF DOC	PREPARED BY: -SD- V.N.R.	APPROVED BY: -SD- DGM (TC>)	DATE:
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 HYDERABAD	PRODUCT STANDARD TURBINES & COMPRESSORS	TC51332
		REV 02
		PAGE 2 OF 5
3.0) : TEST AND GUARANTEE CERTIFICATES : 3.1) : TEST CERTIFICATES : Three copies of the Type Test Certificates indicating the properties and dimensions shall be supplied for each item, quoting BHEL Standard Serial Number of the component. 3.2) : GUARANTEE CERTIFICATE : A guarantee certificate for 24 months of trouble free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished. 4.0) : DOCUMENTS : 4.1) : Technical literature shall accompany the offer. 5.0) : MARKING : 5.1) : A tag bearing relevant 12 digit material code of BHEL shall be attached for each component 5.2) : The following details shall be marked on the packing case. A) Manufacturer’s name. B) BHEL Order Number. C) BHEL Standard Number : TC 51332 D) BHEL Material Code : TC9751332xxx		
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TC51332

REV 02

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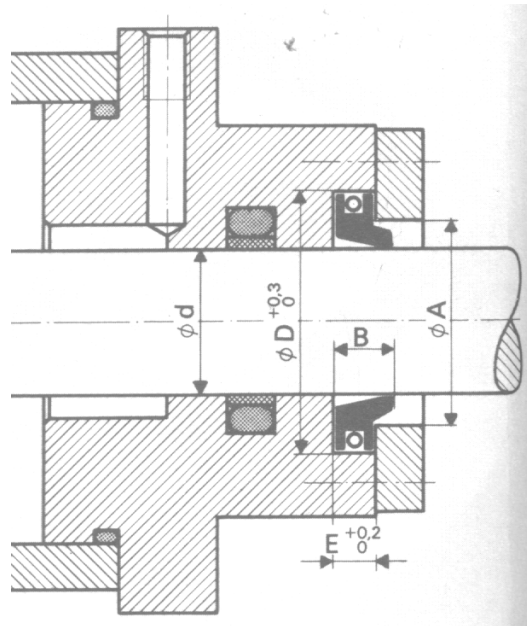


FIGURE-I

6.0) VARIANT TABLE

VAR NO.	d	D	A	E	B	MATERIALCODE
01	25	37	32	4	6	TC9751332010
02	32	44	39	4	6	TC9751332028

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03	40	52	47	4	6	TC9751332036
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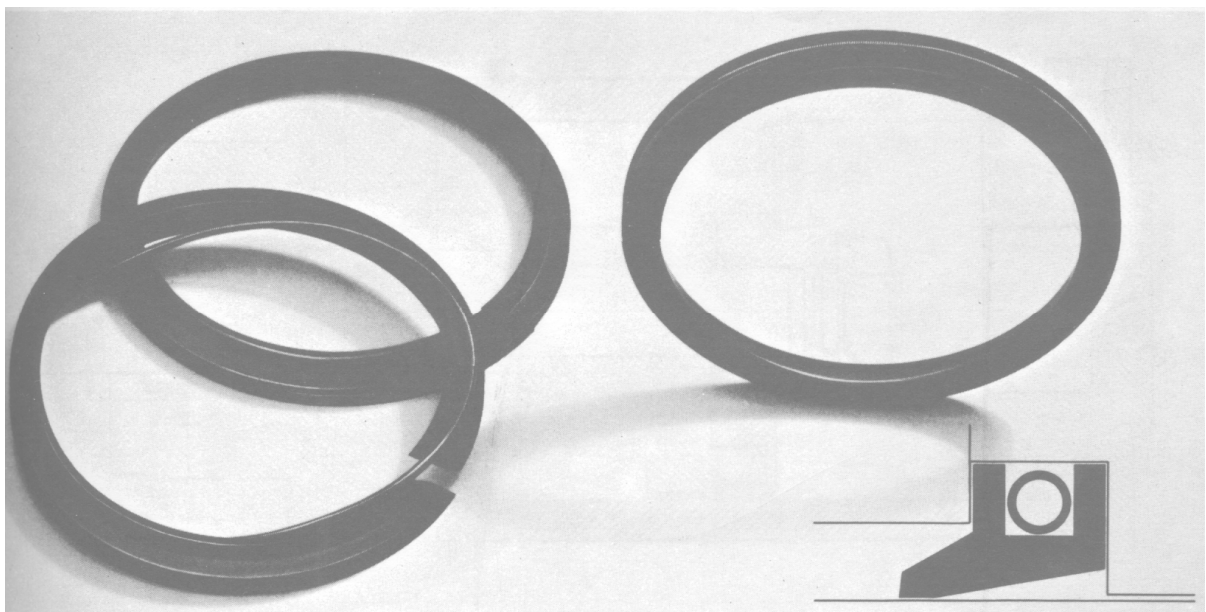


FIGURE-II

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HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 5 1849****REV 03****PAGE 0 OF 4****GRAPHITE + Cr-Ni STEEL GASKET**

NON-ASBESTOS

(For internal reference only)

Remove this preface sheet before issuing to supplier.

Designation: Flat gaskets based on base material Cr-Ni – steel with layers of graphite.**ON DRAWINGS :**

Material specification column : TC 51849

Description column : Graphite + Cr-Ni Steel Gasket OD879.5xID740x3 mm

Material code column : TC9751849012

ON INDENTS :

Material specification column : TC 51849

Description column : Graphite + Cr-Ni Steel Gasket OD879.5xID740x3

mm

Material code column : TC9751849012

ON ENQUIRES & PURCHASE ORDERS :

A copy of this standard shall be enclosed without preface sheet.

FORMAT
TD-201
REV-00PREPARED BY :
DSRAPPROVED BY :
D.S.RDATE :
05.12.2000

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**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 5 1849****REV 03**

PAGE 1 OF 4

GRAPHITE + CrNi – STEEL GASKETS
(NON-ASBESTOS)**1.0 SCOPE:**

This specification is valid for non-asbestos flat gaskets based steel profiles layered with graphite in the middle at both top and bottom of gasket as sealing material. This is based on the principle of secondary frictional connection (transmission of external loads through hard steel material). These gaskets are used in steam medium at temperatures up to 550 °C.

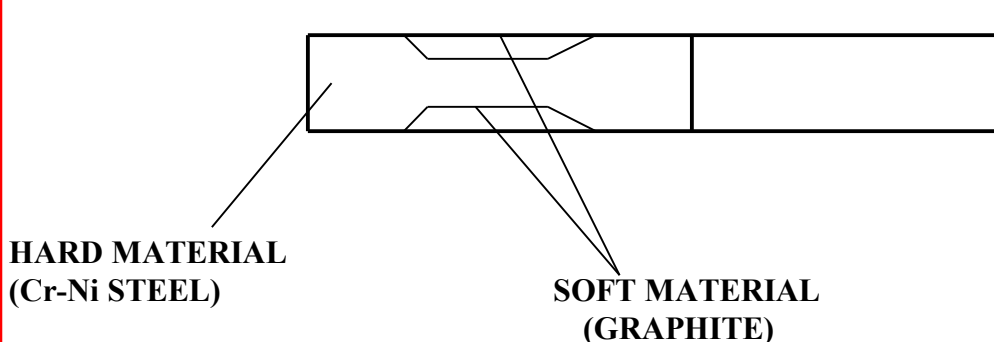
2.0 TECHNICAL SPECIFICATION:

This standard applies to asbestos free flat gaskets / sheets “ Graphite + CrNi – steel “ to seal the flange connections up to 40 bar and operating temperatures up to 550 °C, equivalent to SAFE-HX seals of M/s IBK Wiesehahn GmbH, Germany.

3.0 REQUIREMENTS:**3.1 Composition & other requirements:**

Manufacturing of non-asbestos flat gaskets shall be done with base materials as follows:

- Hard material (Cr-Ni steel) profile section and graphite (at least 95%) in the top and bottom troughs as sealing material
- Bonding agent, free from halogen
- Forces & moments are transmitted from one flange to the next via the hard steel material and therefore any risk of over-compression of the graphite seal material is eliminated.
- High tightening torque and high overall load bearing capacity of flange joint.

FORMAT
TD-201
REV-00PREPARED BY :
DSRAPPROVED BY :
D.S.RDATE :
05.12.2000

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PRODUCT STANDARD TURBINES & COMPRESSORS

TC 5 1849

REV 03

PAGE 2 OF 4

3.2 Properties:

The sealing material properties must meet the requirements as mentioned in the following table:

PROPERTIES	LIMITED REFERENCE VALUES	TEST METHOD
Bulk density of graphite	0.9 – 1.1 g/cm ³	DIN 53479 ASTM D 297
Total chlorine & fluorine content (graphite & portion of bonding agent)	< or = 200 mg/kg.	--
Ash content (portion of graphite)	< or = 5 %	DIN 51903
Recovery	10 – 20 %	ASTM F 36 A
Compressibility	30 – 50 %	ASTM F 36 A
Compressive creep strength at 16h/300 °C.	= or > 45 N/mm ²	DIN 52913

The manufacturer/supplier must give the maximum stability under pressure (dependent on temperature and medium).

Dimensions and Properties for GRAPHITE+CrNi-Steel.

Thick ness	Tol.	Spec. Weight	Pr. Max in Bar	Spring Back as per ASTM F36	Compre- ssibility as per ASTM F36	Compressive Strength in N/mm ²	Gas Perme- ability	Medi um pH	Temp Max. in °C.
1	±0.15	0.7 to 1.0	40	=> 7	=> 15	=> 45	< = 1.3	0 to 14	550
2	±0.2								
3	±0.3								

The surface finish of the flat gaskets must be plain, free of bubbles and also free of tool digs. The cutting edges have to be cut plainly, straightly and without fragments.

3.3 SHELF LIFE:

Unlimited, storage temperature has no influence on shelf life.

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**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 5 1849****REV 03****PAGE 3 OF 4****4.0 TEST AND GUARANTEE CERTIFICATES :****4.1 TEST CERTIFICATES :**

The following documents must be submitted to BHEL for examination:

- Product data sheet
- Description of application and product processing.

Three copies of test certificate according to the standard EN 10 204 is to be given for each consignment. BHEL Standard number and purchase order no shall be mentioned in the test certificates.

4.2 GUARANTEE CERTIFICATE : A guarantee certificate for 24 months of trouble-free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be supplied.

5.0 DOCUMENTS : Technical literature shall accompany the offers.

6.0 PACKING : The material shall be properly packed to ensure it is capable of with standing transit risks without damage.

7.0 MARKING :

A tag bearing relevant 12 digit material code of BHEL and Purchase Order number shall be attached to the supply. Product name and manufacturer's name has to be clearly indicated on the product.

Following details shall be marked on the packing case.

- a) Manufacturer's name. :
- b) BHEL order number. :
- c) BHEL standard number :

8.0 VARIANT TABLE :

VARIANT	DESCRIPTION	MATERIAL CODE
01	Dia. 879.5x Dia. 740x 3mm	TC9751849012

FORMAT
TD-203
REV-01

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HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 5 1849****REV 03****PAGE 4 OF 4**

02

Dia. 416x Dia. 310x 3mm

TC9751849020

RECORD OF REVISIONS

REV. NO.	DATE	REVISION DETAILS	REVISED	APPROVED
00	05.12.2000	NEW SPEC.	DSR	D.S.R
01	02.04.2004	SAFE-HX seal was KNH seal in Tech. Spec. (S.No. 2)	DSR	DSR
02	03.03.2014	NEW VARIANT ADDED	PSK	GMM
03	06.02.2021	REAFFIRMED	ASHOK	ASHOK

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REV-01**COPY RIGHT AND CONFIDENTIAL**

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Bharat Heavy Electricals Limited
Ramachandrapuram, Hyderabad 502032, India

Ref # TCEL/PQC/GASKETS/01

Dt: 22/02/2021

Pre- Qualifying criteria for the vendors participating in "Open Tender for enquiry no _____ – Reg.

Considering BHEL customers' requirement, offers from Chinese manufacturers / Chinese manufactured items are not allowed.

Clause wise response of vendor is necessarily to be submitted for technical evaluation of technical bid

Sl. No.	Description	Vendor's Response	Details of Documents enclosed, if any
1.1. General Requirements			
1.1.1	The manufacturers or their authorized principals (authority letter to be submitted) who are submitting the offer shall have in-house manufacturing facilities, heat treatment and testing facilities suitable for the manufacturing & testing of all gaskets as per this enquiry. Note: i) Offers from traders (for the purpose of this tender, any agency who is keeping /buying/supplying materials from different manufacturers under the same company's name, will be treated as trader) will not be considered.		
1.1.2	The offer shall be accompanied with relevant list of the in-house manufacturing and testing facilities & their capacities / ranges etc. Company catalogue or website address which included these details may be provided as an alternative.		
1.1.3	Vendors to confirm that they will meet all the requirements of BHEL specification provided with the enquiry. In case of any dispute/contradictions with the requirement of Pre-qualification criteria (this document) with the specification, the requirements of Pre-qualification criteria will be applicable.		
1.1.4	The vendor must have experience of manufacturing and supplying gaskets of the corresponding standards and grades as mentioned in the enquiry. Test Certificates shall be submitted as evidence of experience. At least two copies (one for minimum size and thickness/rating and other for maximum size and thickness/rating) manufacturer test certificates for the same or		



Bharat Heavy Electricals Limited
Ramachandrapuram, Hyderabad 502032, India

	similar grade supplied by them to other customers shall be submitted along with the offer. a) The date of the issue of "Test certificate" shall not be older than 3 years from the NIT date. b) The mill test certificate shall include the results / reports for all the tests like Chemical, Mechanical and NDT etc., as required by BHEL Specification applicable to the present enquiry. c) The test certificates submitted as an evidence of the past experience of the manufacturer must include test requirements as stipulated in BHEL specification.		
1.1.5	Evaluation of Experience Evidence: The experience will be evaluated against the test certificate provided by the vendor with respect to BHEL technical requirement of the specification.		
1.1.6	Prior to dispatch of the material, Test Certificates (English language only) shall be send to BHEL for review and dispatch clearance by BHEL. The photographs of the material with the traceability/ marking and condition of the material before dispatch may be provided for dispatch clearance.		
1.1.7	As per "Ministry of Steel Order (latest as applicable)," if any of the enquiry items fall under "List of Steel Products under Mandatory Bureau of Indian Standards Certification," BIS certificate is to be provided mandatorily. The BIS certificate submitted by the vendor shall be valid till the delivery of material. In case the BIS certificate is expiring before the material delivery date, Vendor shall confirm the renewal of the certificate in advance so that the timely supply of the material to BHEL is ensured.		



HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS**

TC 5 8028

REV 02

PAGE 0 OF 3

O-RING (VITON-700)
(For Internal Reference Only)

(Remove this Preface sheet before issuing to the supplier)

DESIGNATION : O-RING (I.D).90 x (Thickness) 3.55

ON INDENTS :

Material specification column : TC 58028
Description column : O-RING 90.x 3.55

ON ENQUIRES : A copy of this standard shall be enclosed without preface sheet.

FORMAT
TD-201
REV-00

PREPARED BY :
DSR

APPROVED BY :
D.S.R

DATE :
02.10.95

REF-DOC

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HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS****TC 5 8028****REV 02**

PAGE 1 OF 3

O-RING (VITON –700)

1.0 **SCOPE** : This Standard specifies the requirement of O-rings of Viton 700 and is based on Siemens' Std.: KUN 678.02

2.0 **DIMENSIONS** :

As per the following Variant table: (I.D. indicates Inner Dia.)

<u>Var</u>	<u>I.D.with Tol.</u>	<u>Thick (Dia.) with Tol.</u>
-01	90.0±0.9	3.55±0.1
-02	218.0±1.5	5.3±0.12
-03	16.0±0.3	3.0±0.1
-04	9.0±0.3	2.5±0.08
-05	44.0±0.6	3.53±0.1
-06	25.0±0.4	3.0±0.1
-07	11.3±0.3	2.4±0.08
-08	18.0±0.3	2.5±0.08
-09	9.3±0.3	2.4±0.08
-10	16.0±0.3	3.5±0.1
-11	59.0±0.6	3.0±0.1
-12	28.0±0.4	3.0±0.1
-13	128.0±1.0	6.0±0.12
-14	142.0±1.0	4.0±0.12

3.0 **MATERIAL & RANGE OF APPLICATION** :

Material: Viton 700

Range of application: General purpose sealing machine components, flanges etc.

Temperature limits: -30 to 250C.

Shore 'A' hardness: 70.

Pressure (kg/cm²): ≤ 160

Quality: Quality mark "B" according to DIN 3770

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TD-202
REV-01

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HYDERABAD

**PRODUCT STANDARD
TURBINES & COMPRESSORS**

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PAGE 2 OF 3

4.0 GUARANTEE CERTIFICATE :

A Guarantee certificate for 24 months of trouble free performance from the date of shipment or 12 months from the date of commissioning whichever is earlier shall be furnished.

5.0 PACKING : Item shall be properly packed to ensure that it is capable of withstanding transit risks without damage.

6.0 MARKINGS : A tag bearing relevant 12 digit material code of BHEL shall be attached for the items.

The following details shall be marked on the packing case:

- a) Manufacture's Name :
- b) BHEL Order Number :
- c) BHEL Standard Number: TC 58028
- d) Material Code : As per Variant table.

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TD-202
REV-01

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**PRODUCT STANDARD
TURBINES & COMPRESSORS**

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REV 02

PAGE 3 OF 3

RECORD OF REVISIONS

REV. NO.	DATE	REVISION DETAILS	REVISED	APPROVED
00	2.10.95	NEW	DSR	DSR
01	22.07.11	VAR. 11 to 14 ADDED	GMM	DSR
02	11.06.21	REAFFIRMED	RP	PATIL

FORMAT
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CORPORATE PURCHASE SPECIFICATION

AA 215 03

Rev. No. 02

PAGE 1 OF 3

KEVLAR SHEETS (MEDIUM PRESSURE OIL) ↑

1.0 GENERAL:

This specification governs the quality of Kevlar sheets for medium pressure oil application. ↑

2.0 APPLICATION:

Suitable for use with oil in steam turbine and industrial applications at maximum operating pressure of 7.0 N/mm² and temperature of 425°C.

3.0 DIMENSIONS AND TOLERANCES:

3.1 Dimensions: The material shall be supplied to the dimensions specified on the order.

3.2 Thickness: The thickness of sheets shall preferably be selected from the following:

0.40, 0.50, 0.75, 1.00, 1.50, 2.00, 3.00 mm.

3.3 Tolerances: Maximum permissible deviation on nominal thickness of sheets shall be as follows:

Nominal Thickness mm		Permissible deviation from nominal thickness ± mm	Max. deviation between points not more than 250 mm apart, ± mm
Above	Upto & incl.		
-	0.50	0.05	0.05
0.50	1.00	0.10	0.10
1.00	2.00	0.15	0.10
2.00	3.00	0.20	0.15

4.0 MATERIAL:

The sheets shall consist mainly of Kevlar material. ↑

5.0 FREEDOM FROM DEFECTS:

The Kevlar sheets shall be of uniform texture, smooth on both sides without any crack and free from irregularities. ↑

6.0 TEST SAMPLE:

Supplier shall supply a test sample to BHEL for acceptance before regular supplies. ↑

Revisions : Ref. Cl. 34.1.10 of 34th MRC-E
Asbestos deleted. Kevlar substituted.

APPROVED :
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE-MRC (E)

Rev. No. 02

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt. 22.05.2007

Dt :

Year :

HYDERABAD

Corp. R&D

MAR. 1982

AA 215 03	CORPORATE PURCHASE SPECIFICATION	
Rev. No. 02		
PAGE 2 OF 3		

7.0 PROPERTIES:

When tested the material shall show the following properties:

7.1 Flexibility after accelerated ageing: Shall show no visual sign of cracking.

7.2 Compressibility and recovery test:

7.2.1 Compressibility: 6 to 14%

7.2.2 Recovery: 40% minimum

7.3 Tensile strength: 7 N/mm² minimum

7.4 Oil absorption: The percentage ingress in thickness and mass shall not exceed the value given below.

7.4.1 Oil: Ingress in thickness/mass for 5 hours at 150 ±2°C – 50% maximum.

7.4.2 Petrol: Increase in thickness for 5 hours at 20 to 30°C : 50% maximum.
Increase in mass for 5 hours at 20 to 30°C : 30% maximum.

7.5 Water absorption: Increase in mass : 10% maximum.

7.6 Tensile strength: For 0.4 mm up to and including 1.0 mm thick : 9.0 N/mm²
Above 1.0 mm thick : 12.0 N/mm²

7.7 Stress relaxation: Residual stress : 17.5 N/mm² minimum.

8.0 TYPE APPROVAL:

Samples for type approval testing shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory, to ensure continuous supply of good product.

9.0 TEST CERTIFICATES:

Unless otherwise stated, three copies of the test certificate shall be supplied along with each consignment, giving the following information.

AA 21503 Rev.No.02 : Kevlar sheet for medium pressure oil application.

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch/Lot No.

Date of manufacture.

Quantity supplied.

Test results of Clauses 3 and 7.

↑

↑



CORPORATE PURCHASE SPECIFICATION

AA 215 03

Rev. No. 02

PAGE 3 OF 3

10.0 PACKING AND MARKING:

Unless otherwise stated, the material shall be supplied either flat or in rolls suitably packed to prevent damages during transit.

Manufacturer's name and grade shall be clearly marked on a piece of 300x300 mm cut from any position of the sheet.

Each package shall be legibly marked with the following information:

AA 21502 Rev. No.02 : Kevlar sheet for medium pressure oil application.

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch/Lot No.

Date of manufacture.

Quantity supplied

- 11.0 Probable Supplier
M/s. V.J. Industries,
Kumarpuram, Chrompet
Chennai – 600044.



CORPORATE PURCHASE SPECIFICATION

AA 215 04

Rev. No. 02

PAGE 1 OF 3

KEVLAR SHEETS (HIGH PRESSURE STEAM & WATER)

↑

1.0 GENERAL:

This specification governs the quality of Kevlar sheets for high pressure steam & water applications.

↑

2.0 APPLICATION:

Suitable for use with steam & water in steam turbines, boilers, thermal insulation, packing & sealing purposes at maximum operating pressure of 14.0 N/mm² and temperature of 540°C.

↑

3.0 DIMENSIONS AND TOLERANCES:

3.1 Dimensions: The material shall be supplied to the dimensions specified on the order.

3.2 Thickness: The thickness of sheets shall preferably be selected from the following:

0.40, 0.50, 0.75, 1.00, 1.50, 2.00, 3.00 mm.

3.3 Tolerances: Maximum permissible deviation on nominal thickness of sheets shall be as follows:

Nominal Thickness mm		Permissible deviation from nominal thickness ± mm	Max. deviation between points not more than 250 mm apart, ± mm
Above	Upto & incl.		
-	0.50	0.05	0.05
0.50	1.00	0.10	0.10
1.00	2.00	0.15	0.10
2.00	3.00	0.20	0.15

4.0 MATERIAL:

The sheets shall consist mainly of Kevlar material.

↑

5.0 FREEDOM FROM DEFECTS:

The Kevlar sheets shall be of uniform texture, smooth on both sides without any crack and free from irregularities.

↑

6.0 TEST SAMPLE:

Supplier shall supply a test sample to BHEL for acceptance before regular supplies.

↑

Revisions : Ref. Cl. 34.1.10 of 34th MRC-E
Asbestos deleted. Kevlar substituted.

APPROVED :
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE-MRC (E)

Rev. No. 02

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Dt. 22.05.2007

Dt :

Year :

HYDERABAD

Corp. R&D

MAR. 1982

AA 215 04	CORPORATE PURCHASE SPECIFICATION	
Rev. No. 02		
PAGE 2 OF 3		

7.0 PROPERTIES:

When tested the material shall show the following properties:

7.1 Flexibility after accelerated ageing: Shall show no visual sign of cracking.

7.2 Compressibility and recovery test:

7.2.1 Compressibility: 6 to 14%

7.2.2 Recovery: 40% minimum

7.3 Tensile strength: For 0.4 and upto including 1 mm thick = 18 N/mm² minimum.
For above 1 mm thick 24 N/mm² minimum.

7.4 Water absorption: Increase in mass : 10% maximum.

7.5 Stress relaxation: Residual stress : 23 N/mm² minimum.

8.0 TYPE APPROVAL:

Samples for type approval testing shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory, to ensure continuous supply of good product.

9.0 TEST CERTIFICATES:

Unless otherwise stated, three copies of the test certificate shall be supplied along with each consignment, giving the following information.

AA 21504 Rev.No.02 : Kevlar sheet for medium pressure oil application. ↑

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch/Lot No.

Date of manufacture.

Quantity supplied.

Test results of Clauses 3 and 7. ↑

10.0 PACKING AND MARKING:

Unless otherwise stated, the material shall be supplied either flat or in rolls suitably packed to prevent damages during transit.

Manufacturer's name and grade shall be clearly marked on a piece of 300x300 mm cut from any position of the sheet.



CORPORATE PURCHASE SPECIFICATION

AA 215 04

Rev. No. 02

PAGE 3 OF 3

Each package shall be legibly marked with the following information:

AA 21504 Rev. No.02 : Kevlar sheet for high pressure steam and water applications. ↑

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch/Lot No.

Date of manufacture.

Quantity supplied

11.0 Probable Supplier ↑
M/s. V.J. Industries,
Kumarpuram, Chrompet
Chennai – 600044.



CORPORATE STANDARD

AA7240341

Rev No.03

PAGE 1 of 4

RING JOINT GASKETS, OVAL TYPE, SOFT IRON

1.0 SCOPE

This standard covers the designation, material, sizes, dimensions and other requirements of ring joint gaskets, oval type and made of soft iron. These gaskets are suitable for use with carbon steel slip-on-welding flanges with ring groove and carbon steel welding neck flanges with ring groove of all pressure classes.

2.0 DESIGNATION:

A ring joint gasket to this standard of number R 11 shall be designated as follows:

2.1 On drawings:

- a) Material specification column: AA7240341
- b) Description column: R.J. GASKET OVAL R 11 SI

2.2 For placing indents on purchase:

Ring joint gasket, oval type, soft iron No. R 11, AA7240341

2.3 For issuing enquiries and purchase orders:

While issuing enquiries and purchase orders, delete the corporate standard no. from clause 2.2 and add the information given under clauses 3, 4 and 5.

3.0 COMPLIANCE WITH STANDARDS:

3.1 Dimensions, tolerances and other requirements: ASME B16.20-2017

3.2 Material: Soft iron with brinell hardness of 90 max.

3.3 Finish: The contact faces of gasket shall have a max of 1.6 micron surface finish.

4.0 MARKING, PRESERVATION & PACKING:

4.1 The outer surface of each gasket shall carry the following details:

- a) BHEL Standard No. AA7240341
- b) Manufacturer's name or trade mark.
- c) Gasket number prefixed by the letter 'R' and followed by the letter 'D' for material identification.

Revisions: Clause 3.1 and 3.3

APPROVED:INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(SMC+RP)

Rev No.03

Amd No.

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Prepared

Issued

Dt. of 1st Issue

Dt:28-01-2021

Dt:

Year:

HPEP, Hyderabad

Corp.R&D

Dec 1980

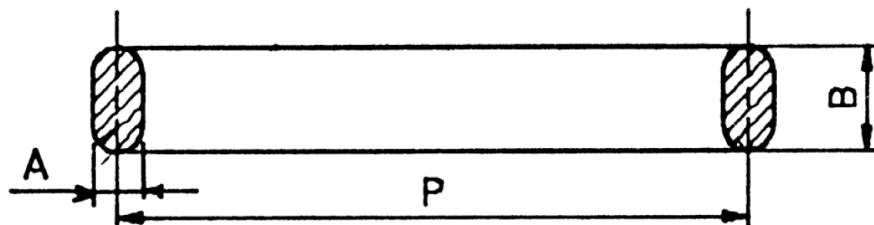
CORPORATE STANDARD

4.2 Suitable protective plastic coating (Peel off type) shall be given on each gasket to prevent rust formation.

4.3 The gasket shall be packed in such a manner as to prevent damage in transit or during storage.

5.0 TEST CERTIFICATE:

Three copies of test certificate consisting of mechanical properties and chemical composition shall be furnished.



All dimensions are in inches

Ring & groove number	Pitch diameter P ± 0.007	Width of ring A ± 0.008	Height of ring B $+0.05$ -0.02	Wt./piece in kg	Sub Code
R11	1.344	0.250	0.44	0.06	011
R12	1.563	0.313	0.56	0.10	020*
R13	1.688	0.313	0.56	0.11	038
R14	1.750	0.313	0.56	0.12	046
R15	1.875	0.313	0.56	0.13	054
R16	2.000	0.313	0.56	0.13	062
R17	2.250	0.313	0.56	0.15	070
R18	2.375	0.313	0.56	0.15	089
R19	2.563	0.313	0.56	0.16	097
R20	2.688	0.313	0.56	0.17	100
R21	2.844	0.438	0.69	0.31	119
R22	3.250	0.313	0.56	0.20	127
R23	3.250	0.438	0.69	0.35	135
R24	3.750	0.438	0.69	0.39	143
R25	4.000	0.313	0.56	0.24	151
R26	4.000	0.438	0.69	0.42	160*
R27	4.250	0.438	0.69	0.45	178
R28	4.375	0.500	0.75	0.57	186
R29	4.500	0.313	0.56	0.28	194
R30	4.625	0.438	0.69	0.48	208
R31	4.875	0.438	0.69	0.52	216
R32	5.000	0.500	0.75	0.65	224
R33	5.188	0.313	0.56	0.32	232
R34	5.188	0.438	0.69	0.54	240
R35	5.375	0.438	0.69	0.57	259
R36	5.875	0.313	0.56	0.36	267
R37	5.875	0.438	0.69	0.62	275
R38	6.188	0.625	0.88	1.20	283
R39	6.375	0.438	0.69	0.67	291
R40	6.750	0.313	0.56	0.41	305
R41	7.125	0.438	0.69	0.75	313
R42	7.500	0.750	1.00	2.00	321

CORPORATE STANDARD



Ring & groove number	Pitch diameter P ± 0.007	Width of ring A ± 0.008	Height of ring B $+0.05$ -0.02	Wt./piece in kg	Sub Code
R43	7.625	0.313	0.56	0.47	330*
R44	7.625	0.438	0.69	0.81	348
R45	8.313	0.438	0.69	0.88	356
R46	8.313	0.500	0.75	0.88	364
R47	9.000	0.750	1.00	2.71	372
R48	9.750	0.313	0.56	1.22	380
R49	10.625	0.438	0.69	2.30	399
R50	10.625	0.625	0.88	4.18	402
R51	11.000	0.875	1.13	7.78	410
R52	12.000	0.313	0.56	1.50	429
R53	12.750	0.438	0.69	3.65	437
R54	12.750	0.625	0.88	6.64	445
R55	13.500	1.125	1.44	20.71	453
R56	15.000	0.313	0.56	2.50	461
R57	15.000	0.438	0.69	1.50	470*
R58	15.000	0.875	1.13	4.91	488
R59	15.625	0.313	0.56	0.91	496
R60	16.000	1.250	1.56	10.32	500*
R61	16.500	0.438	0.69	2.00	518
R62	16.500	0.625	0.88	3.64	526
R63	16.500	1.000	1.31	8.67	534
R64	17.875	0.313	0.56	1.26	542
R65	18.500	0.438	0.69	2.24	550
R66	18.500	0.625	0.88	4.10	569
R67	18.500	1.125	1.44	12.00	577
R68	20.375	0.313	0.56	1.43	585
R69	21.000	0.438	0.69	2.55	593
R70	21.000	0.750	1.00	6.33	607
R71	21.000	1.125	1.44	13.67	615
R72	22.000	0.313	0.56	1.52	623
R73	23.000	0.500	0.75	3.48	631
R74	23.000	0.750	1.00	6.96	640*
R75	23.000	1.250	1.56	18.98	658
R76	26.500	0.313	0.56	1.87	666
R77	27.250	0.625	0.88	6.01	674
R78	27.250	1.000	1.31	14.31	682
R79	27.250	1.375	1.75	26.30	690

NOTE:

- 1) Corporate sub codes are shown against corporate rationalised sizes.
- 2) Sizes used by individual plants are covered in the annexure along with complete code numbers.
- 3) Weights given in the table are for general reference only and are not meant for commercial transactions.



CORPORATE STANDARD

AA7240342

Rev No.03

PAGE 1 of 4

RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL

1.0 SCOPE

This standard covers the designation, material, sizes, dimensions and other requirements of ring joint gaskets, oval type and made of stainless steel. These gaskets are suitable for use with welding neck flanges with ring groove, alloy steel and stainless steel all pressure classes.

2.0 DESIGNATION:

A ring joint gasket to this standard of number R 11 shall be designated as follows:

2.1 On drawings:

- Material specification column: AA7240342
- Description column: R.J. GASKET OVAL R 11 SS

2.2 For placing indents on purchase:

Ring joint gasket, oval type, stainless steel, No. R 11, AA7240342

3.0 COMPLIANCE WITH STANDARDS

3.1 Dimensions, tolerances and other requirements: ASME B16.20-2017

3.2 Material: AISI 304 with brinell hardness of 160 max.

3.3 Finish: The contact faces of gaskets shall have a max of 1.6 micron surface finish.

4.0 MARKING, PRESERVATION & PACKING:

4.1 The outer surface of each gasket shall carry the following details:

- BHEL Standard No. AA7240342
- Manufacturer's name or trade mark.
- Gasket number prefixed by the letter 'R' and followed by "S304" for material identification.

Revisions: Clause 3.1, 3.2 and 3.3

APPROVED:INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(SMC+RP)

Rev No.03

Amd No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt:28-01-2021

Dt:

Year:

HPEP, Hyderabad

Corp.R&D

Dec 1980

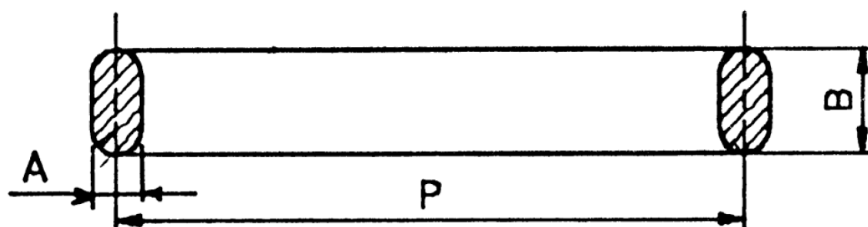
CORPORATE STANDARD

4.2 Suitable protective plastic coating (Peel off type) shall be given on each gasket to prevent rust formation.

4.3 The gasket shall be packed in such a manner as to prevent damage in transit or during storage.

5.0 TEST CERTIFICATE:

Three copies of test certificates consisting of mechanical properties and chemical composition shall be furnished.



All dimensions are in inches

Ring & groove number	Pitch diameter P ±0.007	Width of ring A ±0.008	Height of ring B +0.05 -0.02	Wt./piece in kg	Sub Code
R11	1.344	0.250	0.44	0.06	018
R12	1.563	0.313	0.56	0.10	026
R13	1.688	0.313	0.56	0.11	034
R14	1.750	0.313	0.56	0.12	042
R15	1.875	0.313	0.56	0.13	050
R16	2.000	0.313	0.56	0.13	069
R17	2.250	0.313	0.56	0.15	077
R18	2.375	0.313	0.56	0.15	085
R19	2.563	0.313	0.56	0.16	093
R20	2.688	0.313	0.56	0.17	107
R21	2.844	0.438	0.69	0.31	115
R22	3.250	0.313	0.56	0.20	123
R23	3.250	0.438	0.69	0.35	131
R24	3.750	0.438	0.69	0.39	140*
R25	4.000	0.313	0.56	0.24	158
R26	4.000	0.438	0.69	0.42	166
R27	4.250	0.438	0.69	0.45	174
R28	4.375	0.500	0.75	0.57	182
R29	4.500	0.313	0.56	0.28	190
R30	4.625	0.438	0.69	0.48	204
R31	4.875	0.438	0.69	0.52	212
R32	5.000	0.500	0.75	0.65	220
R33	5.188	0.313	0.56	0.32	239
R34	5.188	0.438	0.69	0.54	247
R35	5.375	0.438	0.69	0.57	255
R36	5.875	0.313	0.56	0.36	263
R37	5.875	0.438	0.69	0.62	271
R38	6.188	0.625	0.88	1.20	280*
R39	6.375	0.438	0.69	0.67	298
R40	6.750	0.313	0.56	0.41	301
R41	7.125	0.438	0.69	0.75	310*

CORPORATE STANDARD



Ring & groove number	Pitch diameter P ± 0.007	Width of ring A ± 0.008	Height of ring B +0.05 -0.02	Wt./piece in kg	Sub Code
R42	7.500	0.750	1.00	2.00	328
R43	7.625	0.313	0.56	0.47	336
R44	7.625	0.438	0.69	0.81	344
R45	8.313	0.438	0.69	0.88	352
R46	8.313	0.500	0.75	1.25	360
R47	9.000	0.750	1.00	2.72	379
R48	9.750	0.313	0.56	0.69	387
R49	10.625	0.438	0.69	1.30	395
R50	10.625	0.625	0.88	2.34	409
R51	11.000	0.875	1.13	4.37	417
R52	12.000	0.313	0.56	0.85	425
R53	12.750	0.438	0.69	1.55	433
R54	12.750	0.625	0.88	2.81	441
R55	13.500	1.125	1.44	8.82	450*
R56	15.000	0.313	0.56	1.07	468
R57	15.000	0.438	0.69	1.82	476
R58	15.000	0.875	1.13	6.00	484
R59	15.625	0.313	0.56	1.11	492
R60	16.000	1.250	1.56	12.62	506
R61	16.500	0.438	0.69	2.00	514
R62	16.500	0.625	0.88	3.64	522
R63	16.500	1.000	1.31	8.75	530
R64	17.875	0.313	0.56	1.27	549
R65	18.500	0.438	0.69	2.24	557
R66	18.500	0.625	0.88	4.08	565
R67	18.500	1.125	1.44	12.08	573
R68	20.375	0.313	0.56	1.44	581
R69	21.000	0.438	0.69	2.55	590*
R70	21.000	0.750	1.00	6.36	603
R71	21.000	1.125	1.44	13.72	611
R72	22.000	0.313	0.56	1.56	620*
R73	23.000	0.500	0.75	3.48	638
R74	23.000	0.750	1.00	6.97	646
R75	23.000	1.250	1.56	18.15	654
R76	26.500	0.313	0.56	1.88	662
R77	27.250	0.625	0.88	6.01	670
R78	27.250	1.000	1.31	14.45	689
R79	27.250	1.375	1.75	26.45	697

NOTE:

- 1) Corporate sub codes are shown against corporate rationalised sizes.
- 2) Sizes used by individual plants are covered in the annexure along with complete code numbers.
- 3) Weights given in the table are for general reference only and are not meant for commercial transactions.

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PLANT STANDARD HYDERABAD

HY 724 01 99

PAGE 1 OF 9

TOROIDAL SEALING RINGS FOR STATIC PURPOSES

CONTROLLED COPY

1.0 SCOPE

- 1.1 This standard covers the designation, material, sizes, dimensions, technical and other requirements of toroidal sealing rings for static purposes and dimensions of the grooves.
- 1.2 These rings are used for sealing flanges, lids etc., stationary parts of hydraulic and pneumatic equipment, piston pumps etc., for a maximum pressure of 200 kg/cm².

2.0 DESIGNATION

- 2.1 A toroidal sealing ring for static purpose with inner diameter (d) 32mm and thickness (s) 2 mm shall be designated as:
- 2.2 On drawings:
- a) Material specification column: HY 724 01 99
 - b) Description column: TRDL SEAL RING STATIC 32 x 2
 - c) Material code column: HY 724 01 99 142
- 2.3 For placing indents on purchase: Toroidal sealing ring for static purpose, I.D. (d) 32 mm, Th (s) 2mm, HY 724 01 99
- 2.4 For issuing enquiries and purchase orders: The above description shall be specified and a copy of this standard shall be enclosed.

3.0 COMPLIANCE WITH STANDARDS

- 3.1 Dimensions, tolerances and general requirements: To CSN 029281
- 3.2 Test methods: As per relevant parts of IS 3400
- 3.3 Material: Rubber to CSN 622446.07 (oil resisting vulcanised rubber)

4.0 MECHANICAL PROPERTIES

- 4.1 The properties obtained on a 3mm sample sheet shall be as furnished below:

Hardness: Shore A 55 to 64
Tensile strength, min: 70 kg/cm²
Elongation, min: 35 to 70%
Compression set, max: 30%

Ageing in hot air: After ageing in hot air @ 70°C for 72 hours, max. permissible loss in tensile strength: 20%, max. permissible loss in elongation: 30%.

5.0 MANUFACTURING DETAILS

- 5.1 Surface finish of ring shall be max. Ra=1.6μ and surface roughness of the sealing area for the ring shall be max. Ra=6.3μ.
- 5.2 In parting plane of the press mould fins are permissible with thickness max. of 0.1 mm exceeding the dimension of '3' (for ex. 5 ± 0.2) max. about 0.15mm.

Revision

②

Var 092, 131 included
Var 124, 129 deleted
Old code Nos. in Page 8 are changed.

BROUGHT UPTODATE
MAR 1986

Date

Issued Standards section

Technical services division

Prepared

KSS
PDP

Approved:

KLM

Date

August '79



PLANT STANDARD HYDERABAD

HY 724 01 99

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6.0 TESTING

6.1 2% of the rings (a minimum of 5 pcs.) from each consignment shall be checked for the dimensions and permissible defects to this standard.

6.2 While checking the dimensions the gauge may be pressed to the extent that the force does not distort the shape of the ring.

6.3 Other appearance shall be checked by visual inspection.

6.4 Test Certificates: Three copies of the test certificate shall be supplied unless otherwise specified with the particulars of mechanical properties of the rubber used and shall guarantee that all the rings comply with the specifications of this standard. Test certificate shall contain the following particulars also:

- a) Title and the marking of the manufacturer and trade mark
- b) Manufacturing data (No., date of manufacture)

7.0 PACKING AND MARKING:

7.1 Packing: Rings shall be packed in paper bags, cardboard boxes etc. Rings of same size only shall be packed in a smallest bag.

7.2 Marking: Rings shall not be marked. The following details shall be marked on the cover containing the rings.

- a) HY 724 01 99
- b) Dimensions (d x S)
- c) No. of pieces
- d) Date of manufacture
- e) supplier's identification

8.0 NOTE

8.1 Toroidal sealing rings covered in this standard are also known as 'O' rings.

8.2 Weight is calculated by taking specific gravity of the rubber as 1.2 kg/cm³

8.3 Weights given in this standard are for general reference only and are not meant for commercial transactions.

8.4 Details of grooves have been given for standard thicknesses of rings only i.e., 2 mm, 3 mm and 5 mm.



PLANT STANDARD
HYDERABAD

HY 724 01 99

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TOROIDAL SEALING RINGS FOR STATIC PURPOSES

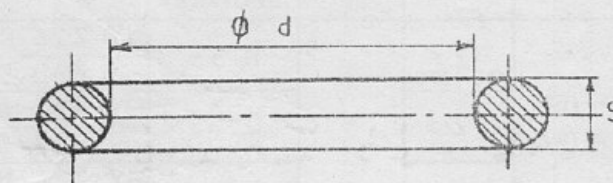


TABLE A

ALL DIMENSIONS IN mm

VAR. NO.	Ring Dimensions				Weight kg/ 1000 Nos.	NEW CODE	Stock symbol	User depart- ment.
	ID		Thickness			OLD CODE		
	dia. (d)	Tol.	S	Tol.				
001	6	+0.2 -0.3	2	+0.2 -0.1	0.09	HY 724 01 99 010 720 90 40 001	●	M&S
002	8		2		0.12	HY 724 01 99 029 720 90 40 002	●	M&S
003	10		2		0.14	HY 724 01 99 037 720 90 40 003	●	M&S
004	12		2		0.17	HY 724 01 99 045 720 90 40 004	●	M&S
005	14		2		0.19	HY 724 01 99 053 720 90 40 005	●	M&S
006	16		2		0.21	HY 724 01 99 061 720 90 40 006	●	M&S,ST
007	18		2		0.24	HY 724 01 99 070 720 90 40 007	●	M&S
008	20		2		0.26	HY 724 01 99 088 720 90 40 008	●	M&S,ST
009	22		2		0.28	HY 724 01 99 096 720 90 40 009	●	M&S
010	25		2		0.32	HY 724 01 99 100 720 90 40 010	●	M&S
011	26		2		0.33	HY 724 01 99 118 720 90 40 011	●	M&S
012	28		2		0.35	HY 724 01 99 126 720 90 40 012	●	M&S
013	30	2	0.38	HY 724 01 99 134 720 90 40 013	●	M&S		
014	32	+0.3 -0.4	2	0.40	HY 724 01 99 142 720 90 40 014	●	M&S	
015	34		2	0.43	HY 724 01 99 150 720 90 40 015	●	M&S	
016	36		2	0.45	HY 724 01 99 169 720 90 40 016	●	M&S,ST	
017	38		2	0.47	HY 724 01 99 177 720 90 40 017	●	M&S	
018	40		2	0.50	HY 724 01 99 185 720 90 40 018	●	M&S	
019	42		2	0.52	HY 724 01 99 193 720 90 40 019	●	M&S	

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PLANT STANDARD
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HY 724 01 99

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VAR. NO.	Ring dimensions				Weight kg/ 1000 Nos.	NEW CODE		Stock symbol	User dep ments
	I D		Thickness			OLD CODE			
	Ø d	Tol.	S	Tol.					
20	45	+0.3 -0.4	2	+0.2 -0.1	0.55	HY 724 01 99 207 720 90 40 020	●	M&S	
21	48		2		0.59	HY 724 01 99 215 720 90 40 021	●	M&S	
22	50		2		0.62	HY 724 01 99 223 720 90 40 022	●	M&S	
23	52	2	0.64		HY 724 01 99 231 720 90 40 023	●	M&S		
24	55	2	0.68		HY 724 01 99 240 720 90 40 024	●	M&S		
25	60	2	0.74		HY 724 01 99 258 720 90 40 025	●	M&S		
26	63	2	0.77		HY 724 01 99 266 720 90 40 026	●	M&S		
27	65	2	0.80		HY 724 01 99 274 720 90 40 027	●	M&S		
28	70	+0.4 -0.5	2		0.85		○		
29	75		2		0.91	HY 724 01 99 290	⊘		
30	80		2		0.97		○		
31	85		2		1.03		○		
32	90		2		1.09		○		
33	95		2		1.15		○		
34	100		2		1.21		○		
35	50	+0.3 -0.4	3		1.41	HY 724 01 99 355 720 90 40 101	●	M&S	
36	52	+0.4 -0.5	3		1.46	HY 724 01 99 363 720 90 41 102	●	M&S,TC	
37	55		3		1.55	HY 724 01 99 371 720 90 40 103	●	M&S	
38	60		3		1.68	HY 724 01 99 380 720 90 40 104	●	M&S	
39	63		3		1.76	HY 724 01 99 398 720 90 40 105	●	M&S	
40	65		3		1.81	HY 724 01 99 401 720 90 40 106	●	M&S	
41	70		3		1.94	HY 724 01 99 410 720 90 40 107	●	M&S	
42	75		3		2.08	HY 724 01 99 428 720 90 40 108	●	M&S	
43	80		3		2.21	HY 724 01 99 436 720 90 40 109	⊘	M&S,TC	

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VAR. NO.	Ring dimensions				Weight kg/ 1000Nos.	NEW CODE	Stock symbol	User depart- ments
	I D		Thickness			OLD CODE		
	Ø d	Tol.	S	Tol.				
044	85	+0.4 -0.5	3	+0.2 -0.1	2.35	HY 724 01 99 444 ✓ 720 90 40 110	●	M & S
045	90		3		2.48	HY 724 01 99 452 ✓ 720 90 40 111	●	M & S, ST, TC
046	95		3		2.61	HY 724 01 99 460 ✓ 720 90 40 112	●	M & S
047	100	3	2.75		HY 724 01 99 479 ✓ 720 90 40 113	●	M & S	
048	105	+0.5 -0.8	3		2.88		○	
049	110		3		3.05		○	
050 ✓	120		3		3.28	HY 724 01 99 509 ✓ —	◐	TC
051	125		3		3.42		○	
052	130		3		3.55		○	
053	140	+0.8 -1.2	3		3.82		○	
054	150		3		4.08		○	
055	160		3		4.35		○	
056	170		3		4.62		○	
057	180		3		4.89		○	
058	190		3		5.15		○	
059	200	+1.2 -1.6	3		5.42		○	
060	210		3		5.66		○	
061	220		3		5.95		○	
062	240		3		6.47		○	
063	250		3		6.74		○	
064	260		3		7.00		○	
065	280		3		7.55		○	
066	300	+1.6 -2.0	3		8.06		○	
067	320		3		8.63		○	

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HY 724 01 99

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VAR. NO.	Ring dimensions				Weight kg/ 1000 Nos.	NEW CODE	Stock symbol	Use depart- ments
	I D		Thickness			OLD CODE		
	ϕ d	Tol.	S	Tol.				
068	340	+1.6 -2.0	3	+0.2 -0.1	9.15		○	
069	360		3		9.68		○	
070	380		3		10.2		○	
071	400		3		10.7		○	
072	420		3		11.3		○	
073	450		3		12.1		○	
074	480		3		12.9		○	
075	500		3		13.4		○	
076	100	+0.4 -0.5	5	±0.2	7.78	HY 724 01 99 762 720 90 40 201	●	M & S
077	105	+0.5 -0.8	5		8.15	HY 724 01 99 770 720 90 40 202	●	M & S
078	110		5		8.52	HY 724 01 99 789 720 90 40 203	●	M & S
079	120		5		9.25	HY 724 01 99 797 720 90 40 204	●	M & S
080	125		5		9.63	HY 724 01 99 800 720 90 40 205	●	M & S
081	130		5		10.0	HY 724 01 99 819 720 90 40 206	●	M & S, TC
082	140		5		10.7	HY 724 01 99 827 720 90 40 207	●	M & S
083	150		5		11.5	HY 724 01 99 835 720 90 40 208	●	M & S
084	160	+0.8 -1.2	5		12.2	HY 724 01 99 843 720 90 40 209	●	M & S
085	170		5		13.0		○	
086	180		5		13.7		○	
087	190		5		14.4		○	
088	200	+1.2 -1.6	5		15.2		○	
089	210		5		15.9		○	
090	220		5		16.7	HY 724 01 99 908 720 90 40 215	●	T G
091	240		5	18.1		○		

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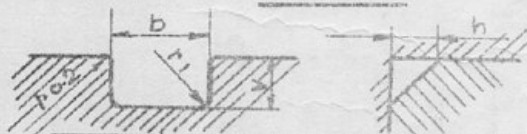
HY 724 01 99

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VAR. NO.	Ring dimensions				Weight kg/ 1000Nos.	NEW CODE	Stock symbol	User depart- ments
	I D		Thickness			OLD CODE		
	ϕ d	Tol.	S	Tol.				
092	250	+1.2 -1.6	5	± 0.2	18.9	HY 724 01 99 924 ✓ 720 90 40 217		TC
093	260		5		19.6			
094	280		5		21.0			
095	300		5		22.5	HY 724 01 99 959 ✓ —		TG
096	320	+1.6 -2.0	5		24.0			
097 ✓	340		5		25.5	HY 724 01 99 975 ✓ —		IT
098	360		5		27.0			
099	380		5		28.5			
100	400		5		30.0			
101	420		5		31.4			
102	450		5		33.7			
103	480		5		35.9			
104	500		5		37.4			

TABLE B. GROOVES



S	± 0.05	± 0.1	± 0.1	r_1
2	1.5	2.7	2.8	0.2
3	2.3	4	4	0.3
5	3.9	6.7	7	0.5



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VAR. NO.	Ring dimensions				Weight kg/ 1000Nos.	NEW CODE	Stock symbol	User dep- ments
	I D		Thickness			OLD CODE		
	φ d	Tol.	S	Tol.				
105	11	+0.2 -0.3	2.5	+0.2 -0.1	0.25	HY 724 01 98 065 ✓ 720 90 41 081	▲	TC
106	6		3		0.24	HY 724 01 98 073 ✓ 720 90 41 159	▲	TC
107	10		3		0.35	HY 724 01 98 081 ✓ 720 90 41 090	▲	TC
108	12		3		0.40	HY 724 01 98 090 ✓ 720 90 41 178	▲	TC
109	16		3		0.51	HY 724 01 98 103 ✓ 720 90 41 089	▲	TC
110	18		3		0.56	HY 724 01 98 111 ✓ 720 90 41 179	▲	TC
111	20		3		0.61	HY 724 01 98 120 ✓ 720 90 41 091	▲	TC
112	22		3		0.67	HY 724 01 98 138 ✓ 720 90 41 085	▲	TC
113	26		3		0.77	HY 724 01 98 146 ✓ D 116 77 00 10	▲	TC
114	28		3		0.83	HY 724 01 98 154 ✓ 720 90 41 086	▲	TC
115	30	+0.3 -0.4	3	+0.2 -0.1	0.88	HY 724 01 98 162 ✓ 720 90 41 093	▲	TC
116	34		3		0.99	HY 724 01 98 170 ✓ 720 90 41 150	▲	TC
117	40		3		1.15	HY 724 01 98 189 ✓ 720 90 41 156	▲	TC
118	43		3		1.15	HY 724 01 98 197 ✓ 720 90 41 172	▲	TC
119	45		3		1.28	HY 724 01 98 200 ✓ 720 90 41 157	▲	TC
120	56	+0.4 -0.5	3	+0.2 -0.1	1.57	HY 724 01 98 219 ✓ 720 90 41 151	▲	TC
121	64		3		1.79	HY 724 01 98 227 ✓ 720 90 41 153	▲	TC
122	74		3		2.05	HY 724 01 98 235 ✓ 720 90 41 154	▲	TC
123	94		3		2.51	HY 724 01 98 243 ✓ 720 90 41 155	▲	TC
124								
125	150	+0.5 -0.8	4	±0.2	7.30	HY 724 01 98 260 ✓ 720 90 41 409	▲	TC
126	180	+0.8 -1.2	4		8.72	HY 724 01 98 278 ✓ 720 90 41 408	▲	TC
127	228	+1.2 -1.6	4		11.0	HY 724 01 98 286 ✓ 720 90 41 407	▲	TC
128	21	+0.2 -0.3	5		1.92	HY 724 01 98 294 ✓ -	▲	FP
129								
130	580	+1.6 -2.0	5		43.3	HY 724 01 98 316 ✓ -	▲	FP

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PLANT STANDARD
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HY 724 01 99

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VAR. NO.	RING DIMENSIONS				WEIGHT kg/ 1000Nos	NEW CODE	STOCK SYMBOL	USER Depart- ments
	I D		Thickness			OLD CODE		
	Ø d	Tol	S	Tol				
131	75	+ 0.4 - 0.5	5	±0.2		HY 724 01 98 324 ✓ 720 90 40 198		F P
132	350.8	+ 1.6 - 2.0	6	—		HY 724 01 98 332 ✓ —		T C
133	340	+ 1.6 - 2.0	8	—		HY 724 01 98 340 ✓ —		T C
134	108	+ 0.5 - 0.8	3	+0.2 -0.1		HY 724 01 98 359 ✓ —		T C
135	80	+ 0.4 - 0.5	5	±0.2		HY 724 01 98 367 ✓ 720 90 40 244		O E
136	95	+ 0.4 - 0.5	5	±0.2		HY 724 01 98 375 ✓ 720 90 40 197		F P
137	390	+ 1.6 - 2.0	7	—		HY 724 01 98 383 ✓ D 111 26 07 30		T C
138	430	+ 1.6 - 2.0	7	—		HY 724 01 98 391 ✓ D 111 26 07 40		T C
139	500	+ 1.6 - 2.0	7	—		HY 724 01 98 405 ✓ D 111 26 07 10		T C
140	560	+ 1.6 - 2.0	7	—		HY 724 01 98 413 ✓ D 111 26 07 20		T C
141	53	+ 0.4 - 0.5	3	+0.2 -0.1		HY 724 01 98 421 ✓ D 111 27 44 80		T C
142	180	+ 0.8 - 1.2	6	—		HY 724 01 98 430 ✓ —		T C
143	320	+ 1.6 - 2.0	7	—		HY 724 01 98 448 ✓ —		T C
144	350	+ 1.6 - 2.0	7	—		HY 724 01 98 456 ✓ D 111 26 10 00		T C
145	54	+ 0.4 - 0.5	3	+0.2 -0.1		HY 724 01 98 464 ✓ —		
146	61	+ 0.4 - 0.5	3	+0.2 -0.1		HY 724 01 98 472 ✓ —		
147	400	+ 1.6 - 2.0	4	—		HY 724 01 98 480 ✓ —		
148	440	+ 1.6 - 2.0	5	±0.2		HY 724 01 98 499 ✓ —		
149	460	+ 1.6 - 2.0	4	—		HY 724 01 98 502 ✓ —		
150	47	+ 0.3 - 0.4	3	+0.2 -0.1		HY 724 01 98 510 ✓ —		T C
151	292	+ 1.2 - 1.6	4	—		HY 724 01 98 529 ✓ —		T C
152	330	+ 1.6 - 2.0	5	±0.2		HY 724 01 98 537 ✓ —		T C
153	355	+ 1.6 - 2.0	4	—		HY 724 01 98 545 ✓ —		T C
154	255	+ 1.2 - 1.6	6	—		HY 724 01 98 553 ✓ 720 90 40 318		T G
155	130	+ 0.5 - 0.8	6	—		HY 724 01 98 561 ✓ —		T C
156	1040.1	—	7	—		HY 724 01 98 570 ✓ —		T C

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I.D Thickness
φ d. s

420 x 5

448 x 4

380 x 4

100 x 4

39 x 3

275 x 4

NFW code

H47240198 588

H47240198 596

" 60

H47240198 61

H47240198 62

H47240198 63



PLANT STANDARD HYDERABAD

HY 724 03 61

REV. NO: 01

PAGE 1 OF 3

METALLIC SPIRAL WOUND GASKETS WITH EXTERNAL CENTERING RING AND INNER RING FOR ANSI FLANGES, PRESSURE CLASS 150

1.0 SCOPE:

This standard covers the designation, material, sizes, dimensions and other requirements of metallic spiral wound gaskets with external centering ring and inner ring for ANSI flanges. These gaskets are suitable for use with welding neck flanges with raised face of pressure class 150 (HY 724 67 75) for steam service.

2.0 DESIGNATION :

A metallic spiral wound gasket to this standard of nominal size 2" shall be designated as follows.

2.1 On drawings :

- a) Material specification column: HY 724 03 61
- b) Description column : M.S.W. GASKET CL 150 SIZE 2"

2.2 For placing indents on purchase :

Metallic spiral wound gasket with external centering ring and inner ring, pressure class 150, size 2", HY 724 03 61.

2.3 For issuing enquiries and purchase orders :

The above description shall be specified and a copy of this standard shall be enclosed.

3.0 COMPLIANCE WITH STANDARDS :

3.1 Dimensions, tolerances and other requirements : to this standard

3.2 Material for metal winding : Stainless steel-ANSI 304

For external centering ring : Carbon Steel
And inner ring

For filler material : Compressed asbestos fibre jointing
to IS:2712-1979 Gr:W/1

Revisions:			Issued : STANDARDS ENGINEERING DEPARTMENT		
Rev.No.	Rev.Date.	Revised:	Prepared:	Approved:	Date:
01	JAN 94	STDS .ENGG	VNR	DGM (E&CC)	Oct , 88.

HY 724 03 61	PLANT STANDARD HYDERABAD	
REV. NO.01		
PAGE 2 OF 3		

4.0 **MARKING AND PACKING :**

4.1 The gasket centering ring shall be marked with the following details:

 a) BHEL Standard No. HY 724 03 61

 b) Manufacturer’s name or trade mark

 c) Nominal size

 d) Pressure class : CL 150

4.2 The gasket shall be enclosed in a moisture resistant wrapping and packed in such a manner as to prevent damage in transit or during storage.

5.0 **TEST CERTIFICATE**

 Three copies of test certificate consisting of mechanical properties and chemical composition of the material shall be furnished.

6.0 **NOTE :**

6.1 The flat surface of the facings of the raised face flanges using these metallic spiral wound gaskets shall have rough surface finish of 12.5 microns.

6.2 Weights indicated in the table are approximate and they are not meant for commercial transactions.

6.3 Suffix sub code to the Standard number to obtain the material code.

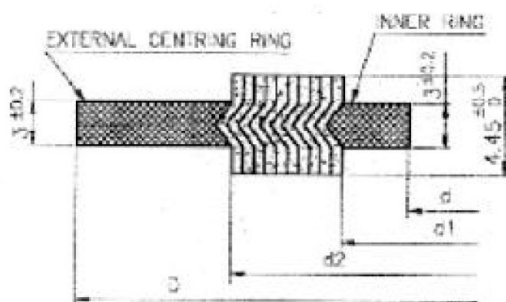


PLANT STANDARD HYDERABAD

HY 724 03 61

REV. NO.01

PAGE 3 OF 3



Nominal size Inches	d ± 0.5	d1 ± 0.8	d2 ± 0.8	D 0 - 1.5	Weight in Kg	SUB-CODE
½	16	22	32	48		012
¾	21	29	40	57		020
1	27	35	47	67		039
1 ¼	37	45	57	76		047
1 ½	42	51	67	85		055
2	55	67	83	105		063
2 ½	67	79	95	124		071
3	82	95	118	137		080
3 ½	96	110	133	162		098
4	106	121	146	175		101
5	131	150	178	197		110
6	158	175	206	222		128
8	206	225	260	279		136
10	260	281	314	340		144
12	310	332	372	410		152
14	342	365	406	451		160
16	392	416	460	515		179
18	443	467	524	550		187
20	493	519	575	605		195
24	600	621	683	720		209

 भारत भारती BHEL	TD-219 Rev.00	PLANT STANDARDS HYDERABAD	HY 7240363 REV.NO. 00 PAGE 1 OF 2
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NON- ASBESTOS METALLIC (SS 304) SPIRAL WOUND GASKETS WITH
Pr. CLASS ANSI 300 (PTFE) FILLER

1.0 Scope:
 This standard covers the designation, material, sizes, dimensions and other requirements of metallic spiral wound gaskets with PTFE filler having external centering ring and inner ring for ANSI flanges. These gaskets are suitable for use with slip-on-welding flanges and welding neck flanges with raised face of pressure class 300 for oil and water service in Steam Turbines.

2.0 Designation:

A Non Asbestos metallic spiral wound gasket to this standard of nominal size 4" class 300 shall be designated on drawings as follows.

- i) Material specification column: HY7240363
- ii) Description column: NON ASBESTOS M.S.W.GASKET SIZE 4" CLASS 300 PTFE FILLER

3.0 Compliance with Standards:

3.1 Materials for
 Metal winding: Stainless Steel-AISI 304
 External Centering Ring: Carbon Steel
 Inner Ring: Stainless Steel-AISI 304
 Filler Material: PTFE

3.2 Dimensions, tolerances and other requirements: to this standard.

4.0 Marking and Packing

4.1 The gasket-centering ring shall be marked with the following details:

- i) BHEL Standard No.: HY7240363
- ii) Manufacturer's name or trade mark.
- iii) Nominal size.
- iv) Pressure Class.

4.2 The gasket shall be enclosed in a moisture resistant wrapping and packed in such a manner as to prevent damage in transit or during storage.

5.0 Test Certificates:

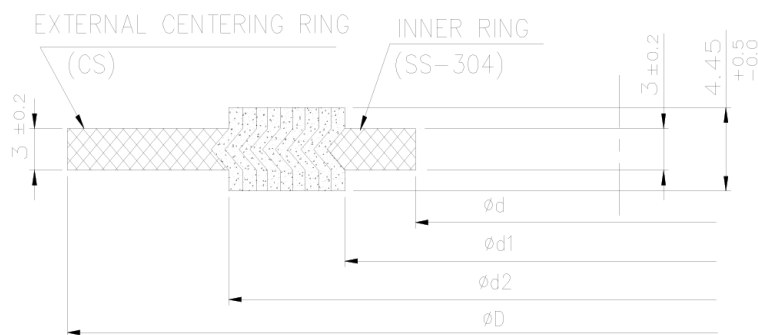
Three copies of test certificate consisting of mechanical properties and chemical composition of the metals shall be furnished.

6.0 Note:

The flat surface of the facings of the raised face flanges using these metallic spiral wound gaskets shall have rough surface finish of 12.5 microns.

Revisions : 00			Issued : STANDARDS ENGINEERING DEPARTMENT		
Rev.No.	Amd.No.	Reaffirmed	Prepared	Approved	Dt.of 1st Issue
Dt.	Dt.	Year :	DY. MANAGER	MANAGER, STDS. ENGG.	NOV,2002

NON ASBESTOS MSW GASKETS PR.CLASS 300

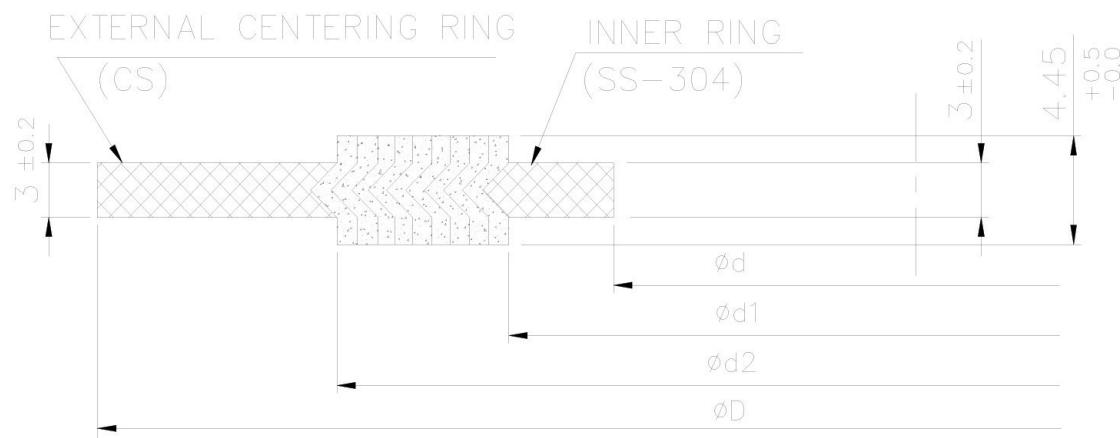


(ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED)

VAR NO	Nominal Size (Inches)	d + 0.5 - 0.0	d ₁ + 0.8 - 0.0	d ₂ + 0.8 - 0.0	D + 0.0 - 1.5	Wt (Kg)	BHEL Material code
1	1/2	16	22	32	54	0.01	HY7240363015
2	3/4	21	29	40	67	0.05	HY7240363023
3	1	27	35	47	73	0.02	HY7240363031
4	1 1/2	42	51	67	95	0.035	HY7240363040
5	2	55	67	83	111	0.05	HY7240363058
6	3	82	95	118	149	0.07	HY7240363066
7	4	106	121	146	181	0.08	HY7240363074
8	6	158	175	206	251	0.15	HY7240363082
9	8	206	225	260	308	0.2	HY7240363090
10	10	260	281	314	362	0.3	HY7240363104
11	12	310	332	372	422	0.35	HY7240363112
12	14	342	365	406	486	0.4	HY7240363120
13	16	392	416	460	540	0.45	HY7240363139
14	18	443	467	524	597	0.46	HY7240363147
15	20	493	519	575	654	0.48	HY7240363155
16	24	600	621	683	775	0.5	HY7240363163

 TD-219 Rev.00	PLANT STANDARDS HYDERABAD	HY 7240366 REV.NO. 00 PAGE 1 OF 2																		
<u>NON ASBESTOS METALLIC (SS 304) SPIRAL WOUND GASKETS WITH PR.CLASS ANSI 600 (GRAPHITE) FILLER</u> 1.0 Scope: This standard covers the designation, material, sizes, dimensions and other requirements of metallic spiral wound gaskets with graphite filler having external centering ring and inner ring for ANSI flanges. These gaskets are suitable for use with slip-on-welding flanges and welding neck flanges with raised face of pressure class 600 for steam service in Steam Turbines. 2.0 Designation: A Non Asbestos metallic spiral wound gasket to this standard of nominal size 4" class 600 shall be designated on drawings as follows. i) Material specification column: HY7240366 ii) Description column: NON ASBESTOS M.S.W.GASKET SIZE 4" CLASS 600 graphite FILLER 3.0 Compliance with Standards: 3.1 Materials for Metal winding: Stainless Steel-AISI 304 External Centering Ring: Carbon Steel Inner Ring: Stainless Steel-AISI 304 Filler Material: graphite 3.2 Dimensions, tolerances and other requirements: to this standard. 4.0 Marking and Packing 4.1 The gasket-centering ring shall be marked with the following details: i) BHEL Standard No.: HY7240366 ii) Manufacturer's name or trade mark. iii) Nominal size. iv) Pressure Class. 4.2 The gasket shall be enclosed in a moisture resistant wrapping and packed in such a manner as to prevent damage in transit or during storage. 5.0 Test Certificates: Three copies of test certificate consisting of mechanical properties and chemical composition of the metals shall be furnished. 6.0 Note: The flat surface of the facings of the raised face flanges using these metallic spiral wound gaskets shall have rough surface finish of 12.5 microns.																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="padding: 5px;">Revisions : 00</td> <td colspan="3" style="padding: 5px;">Issued : STANDARDS ENGINEERING DEPARTMENT</td> </tr> <tr> <td style="width: 16.6%; padding: 5px;">Rev.No.</td> <td style="width: 16.6%; padding: 5px;">Amd.No.</td> <td style="width: 16.6%; padding: 5px;">Reaffirmed</td> <td style="width: 16.6%; padding: 5px;">Prepared</td> <td style="width: 16.6%; padding: 5px;">Approved</td> <td style="width: 16.6%; padding: 5px;">Dt.of 1st Issue</td> </tr> <tr> <td style="padding: 5px;">Dt.</td> <td style="padding: 5px;">Dt.</td> <td style="padding: 5px;">Year :</td> <td style="padding: 5px;">DY.MANAGER</td> <td style="padding: 5px;">MANAGER, STDS. ENGG.</td> <td style="padding: 5px;">NOV,2002</td> </tr> </table>			Revisions : 00			Issued : STANDARDS ENGINEERING DEPARTMENT			Rev.No.	Amd.No.	Reaffirmed	Prepared	Approved	Dt.of 1st Issue	Dt.	Dt.	Year :	DY.MANAGER	MANAGER, STDS. ENGG.	NOV,2002
Revisions : 00			Issued : STANDARDS ENGINEERING DEPARTMENT																	
Rev.No.	Amd.No.	Reaffirmed	Prepared	Approved	Dt.of 1st Issue															
Dt.	Dt.	Year :	DY.MANAGER	MANAGER, STDS. ENGG.	NOV,2002															

NON ASBESTOS MSW GASKETS PR.CLASS 600



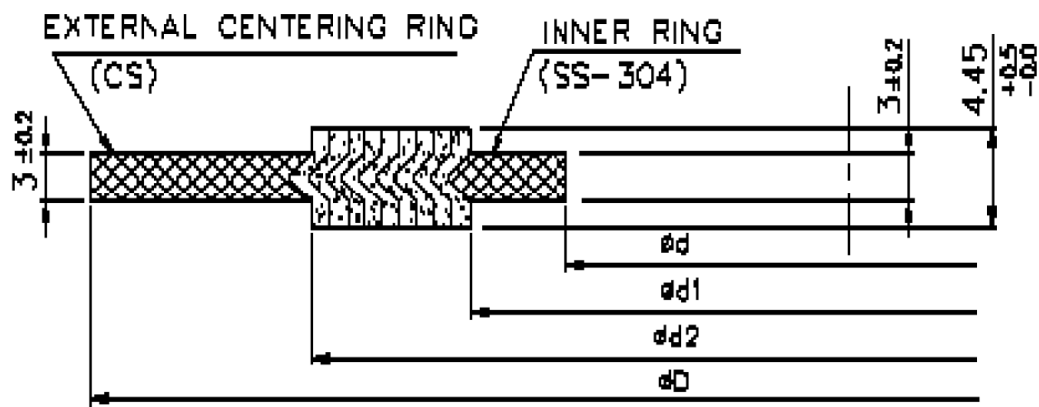
(ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED)

VAR NO	Nominal Size (Inches)	d + 0.5 - 0.0	d ₁ + 0.8 - 0.0	d ₂ + 0.8 - 0.0	D + 0.0 - 1.5	Wt (Kg)	BHEL Material code
01	1/2	16	22	32	54	0.01	HY7240366014
02	3/4	21	29	40	67	0.05	HY7240366022
03	1	27	35	47	73	0.02	HY7240366030
04	1 ½	42	51	67	95	0.035	HY7240366049
05	2	55	67	83	111	0.05	HY7240366057
06	3	82	95	118	149	0.07	HY7240366065
07	4	106	121	146	181	0.08	HY7240366073
08	6	158	175	206	251	0.15	HY7240366081
09	8	206	225	260	308	0.2	HY7240366090
10	10	260	281	314	362	0.3	HY7240366103
11	12	310	332	372	422	0.35	HY7240366111
12	14	342	365	406	486	0.4	HY7240366120
13	16	392	416	460	540	0.45	HY7240366138
14	18	443	467	524	597	0.46	HY7240366146
15	20	493	519	575	654	0.48	HY7240366154
16	24	600	621	683	775	0.5	HY7240366162

		TD-219 Rev.00		PLANT STANDARD HYDERABAD		HY7240368 REV. NO. 00 PAGE 1 OF 2	
NON ASBESTOS METALLIC (SS 304) SPIRAL WOUND GASKETS WITH PR. CLASS ANSI 1500 (GRAPHITE) FILLER 1.0 Scope: This standard covers the designation, material, sizes, dimensions and other requirements of metallic spiral wound gaskets with graphite filler having external centering ring and inner ring for ANSI flanges. These gaskets are suitable for use with slip-on-welding flanges and welding neck flanges with raised face of pressure class 1500 for steam service in Steam Turbines. 2.0 Designation: A Non Asbestos metallic spiral wound gasket to this standard of nominal size 4” class 1500 shall be designated on drawings as follows. i) Material specification column: HY7240368 ii) Description column: NON ASBESTOS M.S.W.GASKET SIZE 4” CLASS 1500 graphite FILLER 3.0 Compliance with Standards: 3.1 Materials for Metal winding: Stainless Steel-AISI 304 External Centering Ring: Carbon Steel Inner Ring: Stainless Steel-AISI 304 Filler Material: graphite 3.2 Dimensions, tolerances and other requirements: to this standard. 4.0 Marking and Packing 4.1 The gasket-centering ring shall be marked with the following details: i) BHEL Standard No.: HY7240368 ii) Manufacturer’s name or trade mark. iii) Nominal size. iv) Pressure Class. 4.2 The gasket shall be enclosed in a moisture resistant wrapping and packed in such a manner as to prevent damage in transit or during storage. 5.0 Test Certificates: Three copies of test certificate consisting of mechanical properties and chemical composition of the metals shall be furnished. 6.0 Note: The flat surface of the facings of the raised face flanges using these metallic spiral wound gaskets shall have rough surface finish of 12.5 microns.							
Revisions :				Issued :			
				STANDARDS ENGINEERING DEPARTMENT			
Rev.No.	Amd.No.	Reaffirmed		Prepared	Approved	Dt.of 1 st Issue	
Dt.	Dt.	Year :		T&C ENGG.	DGM (TS)	MAR. 2005	

HY7240368	PLANT STANDARD HYDERABAD	
REV. NO.00		
PAGE 2 OF 2		

NON-ASBESTOS MSW GASKETS PR.CLASS 1500



(ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED)

VAR NO	Nominal Size (Inches)	d + 0.5 - 0.0	d ₁ + 0.8 - 0.0	d ₂ + 0.8 - 0.0	D + 0.0 - 1.5	Wt (Kg)	BHEL Material code
01	1/2	16	22	32	64	0.02	HY7240368017
02	3/4	21	29	40	70	0.06	HY7240368025
03	1	27	35	47	79	0.03	HY7240368033
04	1 1/2	42	51	67	98	0.045	HY7240368041
05	2	55	67	83	143	0.06	HY7240368050
06	3	82	95	118	174	0.08	HY7240368068
07	4	106	121	146	211	0.10	HY7240368076
08	6	158	175	206	283	0.20	HY7240368084
09	8	206	225	260	351	0.30	HY7240368092
10	10	260	281	314	435	0.36	HY7240368106
11	12	310	332	372	520	0.41	HY7240368114
12	14	342	365	406	579	0.46	HY7240368122
13	16	392	416	460	641	0.50	HY7240368130
14	18	443	467	524	705	0.55	HY7240368149
15	20	493	519	575	755	0.60	HY7240368157
16	24	600	621	683	902	0.65	HY7240368165

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PRE-QUALIFICATION CRITERIA				
O RING				
S.No.	BHEL Requirement	Vendor's Confirmation	Deviation if Any	Remarks
1	All the suppliers need to submit this document i.e. titled pre-qualification criteria and furnish required information along with offer.			
2	a) Name, address, e-mail id, contact no.etc. of manufacturer b) Name, address, e-mail id, contact no. etc. of authourised agency / trading house quoting on behalf of manufacturing company. In case offer is received from authourised agency / trading house, the following requirements shall be full filled. i) Valid letter of authorisation and copy of agreement to be enclosed with offer. ii) The offer shall be either from the authorised agency or from the manufacturer directly. In case of BHEL receiving offer from both, then offer from manufaturer will only be considered. Offer from an unauthorised agency / entity on behalf of any vendor shall be summarily rejected. iii) Name, address, e-mail id, contact no.etc. of entity on whom order to be released in case of L1 shall be clearly indicated.			
3	Supplier to confirm/provide the following criteria/documents for evaluation of offer.			
	(a) The supplier shall have already supplied similar grade of O Ring earlier to either any of the BHEL units or to any other customer. Supplier shall provide the list of customers with sizes & grade of O Ring supplied.			
	i) Date of supply			
	ii) Purchaser' s Name, Address, Contact No. & email ID			
	All the above criteria 3(a) (i) to 3(a) (ii) must be combinedly met by the vendor.			
	Note : All the documents shall be furnished only in English. Documents furnished in other languages will not be considered for further evaluation.			
	(b) BHEL reserves the right to cross verify with the above such customers and satisfy itself with reference to the claims of the supplier. If the information furnished by the supplier is not found satisfactory, the offer will be technically rejected.			
4	Offers without the requirement as above 3(a) & 3(b) will not be technically evaluated by BHEL. Further, no correspondence in this matter will be entertained.			
5	The vendors should furnish the detailed process of manufacturing and testing procedures (NDT and destructive) along with the offer.			
6	BHEL team may carry out vendor evaluation/assesment(incase of a new vendor)by a visit to vendor works for qualifying /rejecting the technical bid based on the findings of the visit.			



Bharat Heavy Electricals Limited

Ramachandrapuram, Hyderabad 502032, India.

Ref # HE&F/PUR/2022/PQC/Gasket/02

Pre- Qualifying criteria for the vendors participating in "Open Tender for enquiry no _____
for the supply of Gaskets – Reg.

Clause wise response of vendor is necessarily to be submitted for technical evaluation of technical bid

SI NO	Description	Vendor's response	Details of the documents enclosed, if any
1.1 General Requirements			
1.1.1	The manufacturers or their authorized principals who are submitting the offer shall have in-house manufacturing facilities, heat treatment and testing facilities suitable for manufacturing and testing of Gaskets as per the enquiry.		
1.1.2	The offer shall be accompanied with relevant list of the in-house manufacturing and testing facilities Company catalog or website address which contains these details may be provided as an alternative.		
1.1.3	Vendors to confirm that they will meet all the requirements of BHEL specification provided with the enquiry. In case of any dispute / contradictions with the requirement of Pre-qualification criteria (this document) with the specification, the requirements of Pre-qualification criteria will be applicable.		
1.1.4	The vendor must have experience of manufacturing and supplying Gaskets of the corresponding standards and grades as mentioned in the enquiry. TCs of earlier supplies can be submitted as evidence of experience. At least one copy of the certificates for the same or similar grade supplied by them to other customers shall be submitted along with the offer. a) The date of the issue of "Test certificate" shall not be older than 3 years from the NIT date. b) The test certificates submitted as an evidence of the past experience of the manufacturer must indicate chemical and mechanical properties as applicable to BHEL specification. c) This compliance may be met though MTCs submitted against a single Customer Order or multiple Customer Orders.		
	Evaluation of Experience Evidence: The experience will be evaluated against the test certificate provided by the vendor with respect to BHEL technical requirement of the specification.		
1.1.5	TC (English language only) review shall be done by BHEL before dispatch of the materials and all the TCs shall be in English Language only. The photographs of the material with the traceability/ marking and condition of the material before dispatch may be provided for dispatch clearance.		



Bharat Heavy Electricals Limited
Ramachandrapuram, Hyderabad 502032, India

Ref # HEE/PQC/GASKET/01

Date: 21-06-2021

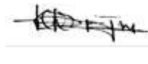
Pre- Qualifying criteria for the vendors participating in “Open Tender for the supply of Gaskets” – Reg.

Clause wise response of vendor is necessarily to be submitted for technical evaluation of technical bid

Sl. No.	Description	Vendor's Response	Details of Documents enclosed, if any
General Requirements			
1	Vendors to confirm that they will meet all the requirements of BHEL specification provided with the enquiry. In case of any dispute/contradictions with the requirement of Pre-qualification criteria (this document) with the specification, the requirements of Pre-qualification criteria will be applicable.		
2	Prior to dispatch of the material, Test Certificates (English language only) shall be send to BHEL for review and dispatch clearance by BHEL. The photographs of the material with the traceability/ marking and condition of the material before dispatch may be provided for dispatch clearance.		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/24-25/02 Rev. No. : 00 DATE: 30.05.2024 VALID UPTO: 29.05.2026 PAGE 1 OF 2						
				ITEM: TOROIDAL SEALING RINGS BHEL SPEC: HY7240199 Rev.02										
				Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency
									D	P	W	V		
1.0 RAW MATERIAL STAGE														
1.1	Rubber Material	Shore Hardness Tensile strength Elongation Compression set Ageing in hot air	Major	Testing	One Sample per lot/Batch	As per BHEL SPEC.	As per BHEL SPEC.	TC	√	2	-	1		
2.0 INPROCESS INSPECTION														
2.1	Cutting Machine	Dimensions	Major	Visual & Measurement	100%	As per BHEL SPEC.	As per BHEL SPEC.	IR	-	2	-	-		
3.0 FINAL ASSEMBLY & TESTING														
3.1	Teflon Gasket	Visual Examination & Dimensions (OD, ID & cross-sectional diameter)	Critical	Visual & Measurement	100% by Supplier, 2% of the rings (a minimum of 5 pcs.) by BHEL/TPI	As per BHEL SPEC.	As per BHEL SPEC.	IR	√	2	1	-		
4.0 PRESERVATION & PACKING														
4.1	Final Inspection & Identification tag	Tagging/Marking & Packing	Major	Visual	100%	As per BHEL SPEC.	As per BHEL SPEC.	IR	√	2	-	1		

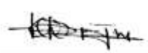
IR – INSPECTION REPORT TC – TEST CERTIFICATE SPEC. – SPECIFICATION

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/24-25/02 Rev. No. : 00 DATE: 30.05.2024 VALID UPTO: 29.05.2026 PAGE 2 OF 2					
				ITEM: TOROIDAL SEALING RINGS BHEL SPEC: HY7240199 Rev.02									
				Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*
									D	P	W	V	

Notes:

1. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
2. DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
3. BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
4. BHEL APPROVED INSPECTION ENGINEERS TO BE DEPLOYED FOR INSPECTION.
5. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS.
6. INSPECTION TO BE OFFERED ONLY AFTER ENSURING THAT ALL DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER.
7. VENDOR TO OFFER ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.
8. VENDOR TO ENSURE WITH TPIA THAT A NOTE 'COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER' SHALL CONTAIN WITH EVERY INSPECTION REPORT.
9. ONLY VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT SHALL BE USED – TPIA TO VERIFY.
10. VENDOR TO ENSURE WITH TPIA THAT MATERIAL TEST CERTIFICATE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL.
11. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC. (AS APPLICABLE AS PER PO) SHALL BE ENSURED.
12. VENDOR TO ENSURE THAT ALL CERTIFICATES ARE ENDORSED BY TPIA WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN.
13. VENDOR SHALL OFFER LOG SHEETS CONTAINING ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK TO TPIA.
14. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (v) UNDER COLUMN 'D' OF APPROVED QUALITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
15. VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL Nominated INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: SEALING RING (OPEN AND CLOSED) BHEL SPEC: TC51202 & TC51203				QP. NO: HYQA/SQP/TC/1415/18					
								Rev. No.: 02					
				DATE: 11.03.2024									
				VALID UPTO: 10.03.2026									
PAGE 1 OF 3													
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	
1.0 RAW MATERIALS & BROUGHT OUT ITEMS													
1.1	Graphite	Chlorine & fluorine content	Major	Chemical	One Sample /lot	Mfg. Std	Mfg. Std	TC	√	2		1	
		Ash Content	Major	Chemical	One Sample /lot	Mfg. Std	Mfg. Std	TC	√	2		1	
		Bulk density of graphite	Major	Testing	One Sample /lot	Mfg. Std	As per BHEL Spec.	TC	√	2		1	
1.2	Sealing Properties (Operating Conditions)	Temp. Max (°C)	Major	Measurement	One Sample /lot	Mfg. Std	As per BHEL Spec.	TC	√	2		1	
		Pr. Max in Bar	Major	Measurement	One Sample /lot	Mfg. Std	As per BHEL Spec.	TC	√	2		1	
2.0 IN PROCESS INSPECTION													
2.1	Cutting Machine	Dimensions	Major	Visual & Measurement	100%	Mfg. Std	As per BHEL Spec.	IR		2		-	
3.0 FINAL INSPECTION & TESTING													
3.1	Sealing Ring	Visual Examination & Dimensions	Critical	Visual & Measurement	100%	As per BHEL Spec.	As per BHEL Spec.	TC	√	2	1*	* Refer Annexure –I for Sampling Plan for BHEL TPIA witness. For remaining, Verification of TC/IR by BHEL TPIA.	
		Density	Critical	Testing	100%	As per BHEL Spec.	As per BHEL Spec.	TC	√	2	1*		
4.0 PRESERVATION & PACKING													
4.1	Final Inspection	Packing & Marking	Major	Visual	100%	As per BHEL SPEC.	As per BHEL SPEC.	IR	√	2		1	

Notes:

1. PRE-DESPATCH INSPECTION PHOTOGRAPHS OF THE EQUIPMENT/ITEM SHALL BE INCLUDED IN QUALITY DOCUMENTATION.

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
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Format no. : HYQA/QP/VSQP Rev.02

	BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS					QP. NO: HYQA/SQP/TC/1415/18 Rev. No.: 02 DATE: 11.03.2024 VALID UPTO: 10.03.2026 PAGE 2 OF 3					
			ITEM: SEALING RING (OPEN AND CLOSED) BHEL SPEC: TC51202 & TC51203										
			Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency

2. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
3. DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
4. BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
5. BHEL APPROVED INSPECTION ENGINEERS TO BE DEPLOYED FOR INSPECTION.
6. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS.
7. INSPECTION TO BE OFFERED ONLY AFTER ENSURING THAT ALL DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER.
8. VENDOR TO OFFER ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.
9. VENDOR TO ENSURE WITH TPIA THAT A NOTE 'COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER' SHALL CONTAIN WITH EVERY INSPECTION REPORT.
10. ONLY VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT SHALL BE USED – TPIA TO VERIFY.
11. VENDOR TO ENSURE WITH TPIA THAT MATERIAL TEST CERTIFICATE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL.
12. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC. (AS APPLICABLE AS PER PO) SHALL BE ENSURED.
13. VENDOR TO ENSURE THAT ALL CERTIFICATES ARE ENDORSED BY TPIA WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN.
14. VENDOR SHALL OFFER LOG SHEETS CONTAINING ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK TO TPIA.
15. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (v) UNDER COLUMN 'D' OF APPROVED QUALITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
16. VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.

ABBREVIATIONS:		
MTC – MILL TEST CERTIFICATE	MPI - MAGNETIC PARTICLE INSPECTION	TC – TEST CERTIFICATE, TR – TEST REPORT
HT – HEAT TREATMENT	UT - ULTRASONIC TEST	TPIA - THIRD PARTY INSPECTION AGENCY APPOINTED BY BHEL.
IR - INSPECTION REPORT	RT – RADIOGRAPHY TEST	COC – CERTIFICATE OF CONFORMITY
MEASRT - MEASUREMENT	WPS – WELDING PROCEDURE SPECIFICATION	PQR – WELDING PROCESS QUALIFICATION RECORD
WQR – WELDER QUALIFICATION RECORDS	PO – PURCHASE ORDER	LPI – LIQUID PENETRANT INSPECTION

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/SQP Rev.02		

	BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS					QP. NO: HYQA/SQP/TC/1415/18 Rev. No.: 02 DATE: 11.03.2024 VALID UPTO: 10.03.2026 PAGE 3 OF 3					
			ITEM: SEALING RING (OPEN AND CLOSED) BHEL SPEC: TC51202 & TC51203										
			SI No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency
									D	P	W	V	

Annexure – I
Sampling Plan for Inspection

SI NO.	Lot Size (Numbers)	Sample Size	Acceptance Number (Maximum number of permissible defectives)
1.	2 - 8	Sample size = Lot Size	0
2.	9 - 15	Sample size = Lot Size	0
3.	16 - 25	8	0
4.	26 - 50	13	0
5.	51 - 90	20	0
6.	91 - 150	32	0
7.	151 - 280	50	0
8.	281 - 500	80	0
9.	501 - 1200	125	0
10.	1201 - 3200	200	0

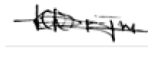
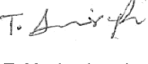
Visual Inspection:

Vendor: 100%
 BHEL / BHEL TPIA:
 A) 1 – 200 numbers lot size, 100% to be visually inspected.
 B) > 200 numbers lot size, 200 numbers to be visually inspected.

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

 BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS						QP. NO: HYQA/SQP/TC/1516/05 Rev. No. : 02 DATE: 15.05.2024 VALID UPTO: 14.05.2026 PAGE 1 OF 2					
		ITEM: O RINGS BHEL SPEC: HY7240193 Rev.02, HY7240194 Rev.02, HY59661 Rev.01											
		Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency	
									D	P	W	V	
1.0	RAW MATERIAL STAGE												
1.1	Raw Material	Material Properties	Major	Testing	One Sample /lot	As per BHEL SPEC.	As per BHEL SPEC.	TC	√	2	-	1	
2.0	INPROCESS INSPECTION												
2.1	Compression/ Injection Moulding	Dimensions	Major	Visual & Measurement	100%	As per BHEL SPEC.	As per BHEL SPEC.	IR	-	2	-	-	
3.0	FINAL ASSEMBLY & TESTING												
3.1	Gasket	Visual Examination & Dimensions (OD, ID & cross-sectional diameter)	Critical	Visual & Measurement	100%	As per BHEL SPEC.	As per BHEL SPEC.	IR	√	2	1	-	
4.0	PRESERVATION & PACKING												
4.1	Final Inspection & Identification tag	Tagging & Packing	Major	Visual	100%	As per BHEL SPEC.	As per BHEL SPEC.	IR	√	2	-	1	

IR – INSPECTION REPORT TC – TEST CERTIFICATE SPEC. – SPECIFICATION
Refer Annexure-I for Notes.

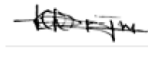
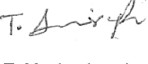
LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

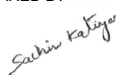
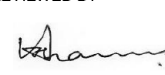
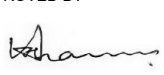
		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: O RINGS BHEL SPEC: HY7240193 Rev.02, HY7240194 Rev.02, HY59661 Rev.01				QP. NO: HYQA/SQP/TC/1516/05 Rev. No. : 02 DATE: 15.05.2024 VALID UPTO: 14.05.2026					
								PAGE 2 OF 2					
				Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*
									D	P	W	V	

Annexure – I

Notes:

1. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
2. DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
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14. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (v) UNDER COLUMN 'D' OF APPROVED QUALITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
15. VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.

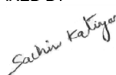
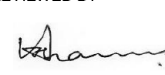
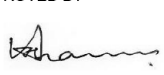
LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION. INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/1920/11 Rev. No. : 02 DATE: 27.06.2023 VALID UPTO: 26.06.2025 PAGE 1 OF 4					
				ITEM: M. S. W. GASKET BHEL SPEC: HY7240362, 63,64,65,66,67,68									
SI No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	
1.0 RAW MATERIALS													
1.1	Winding Material	Chemical Composition, TS,YS, Elongation, Hardness	Major	Chemical Analysis & Mechanical Properties	One Sample / heat	AISI SS 304 / BHEL Spec	Supplier TC /Lab TC	✓	2	-	1		
1.2	Inner Ring	Chemical Composition, TS,YS, Elongation, Hardness	Major	Chemical Analysis & Mechanical Properties	One Sample / heat	AISI SS 304 / BHEL Spec	Supplier TC /Lab TC	✓	2	-	1		
1.3	External Centring Ring	Chemical Composition, TS,YS, Elongation, Hardness, Bend Test	Major	Chemical Analysis & Mechanical Properties	One Sample / heat	CS / BHEL Spec	Supplier TC /Lab TC	✓	2	-	1		
1.4	Filler Material	Chemical/ Mech Property. PTFE: Specific Gravity, Shore Hardness, TS, Elongation GRAPHITE: Graphite Purity, Density, Ash Content; Chloride Content, Sulphate Content	Major	Chemical Analysis & Mechanical Properties	Sample/ Lot/ Batch	ASTM Standard/ IS Standard	Supplier TC /Lab TC	✓	2	-	1		
LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.						PREPARED BY  Sachin Katiyar Dy. Manager / QA		REVIEWED BY  B. Ashok Kumar AGM/QA		APPROVED BY  B. Ashok Kumar AGM/QA			
Format no. : HYQA/QP/VSQP Rev.02													

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/1920/11 Rev. No. : 02 DATE: 27.06.2023 VALID UPTO: 26.06.2025 PAGE 2 OF 4							
				ITEM: M. S. W. GASKET BHEL SPEC: HY7240362, 63,64,65,66,67,68											
Sl No	Component & Operations		Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	* D	Agency P W V			Remarks	
2.0	IN PROCESS INSPECTION														
2.1	Gasket – Machining	Visual, Dimension check, Surface Finish	Major	Visual & Measrt.	100%	BHEL Spec / Appvd Drg			IR	-	2	-	1		
3.0	FINAL INSPECTION & TESTING														
3.1	Gasket - Final Inspection	Visual & Dimension Check	Major	Visual & Measrt.	100%	BHEL Spec / Appvd Drg			IR	√	2	1*	-	* Refer Annexure –I for Sampling Plan for BHEL TPIA Inspection.	
3.2	Gasket - Final Inspection	PMI (if applicable as per Spec.)	Major	PMI	100%	BHEL Spec / Appvd Drg			IR	√	2	1*			
3.3	Gasket - Final Inspection	Surface Finish	Major	Measrt.	100%	BHEL Spec / Appvd Drg			IR	√	2	1*	-		
3.4	Packing , Marking & Preservation			Major	Visual	100%	BHEL Spec / Appvd Drg			IR	√	2	-	1	

Notes:

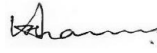
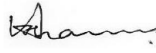
1. ANY PROJECT SPECIFIC REQUIREMENT SHALL BE COMPLIED WITH.
2. CS & FILLER MATERIAL SELECTION SHALL BE DONE AS PER SERVICE AND PRESSURE CLASS SUITABILITY OF FLANGE AS MENTIONED IN BHEL SPEC.
3. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
4. DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
5. BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
6. BHEL APPROVED INSPECTION ENGINEERS TO BE DEPLOYED FOR INSPECTION.
7. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS.
8. INSPECTION TO BE OFFERED ONLY AFTER ENSURING THAT ALL DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER.

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY  Sachin Katiyar Dy. Manager / QA	REVIEWED BY  B. Ashok Kumar AGM/QA	APPROVED BY  B. Ashok Kumar AGM/QA
	Format no. : HYQA/QP/VSQP Rev.02		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/1920/11 Rev. No. : 02 DATE: 27.06.2023 VALID UPTO: 26.06.2025 PAGE 3 OF 4						
				ITEM: M. S. W. GASKET BHEL SPEC: HY7240362, 63,64,65,66,67,68										
SI No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency				Remarks
									D	P	W	V		

9. VENDOR TO OFFER ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.
10. VENDOR TO ENSURE WITH TPIA THAT A NOTE 'COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER' SHALL CONTAIN WITH EVERY INSPECTION REPORT.
11. ONLY VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT SHALL BE USED – TPIA TO VERIFY.
12. VENDOR TO ENSURE WITH TPIA THAT MATERIAL TEST CERTIFICATE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL.
13. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC. (AS APPLICABLE AS PER PO) SHALL BE ENSURED.
14. VENDOR TO ENSURE THAT ALL CERTIFICATES ARE ENDORSED BY TPIA WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN.
15. VENDOR SHALL OFFER LOG SHEETS CONTAINING ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK TO TPIA.
16. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (v) UNDER COLUMN 'D' OF APPROVED QUALITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
17. VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.

ABBREVIATIONS:		
MTC – MILL TEST CERTIFICATE	MPI - MAGNETIC PARTICLE INSPECTION	TC – TEST CERTIFICATE, TR – TEST REPORT
HT – HEAT TREATMENT	UT - ULTRASONIC TEST	TPIA - THIRD PARTY INSPECTION AGENCY APPOINTED BY BHEL.
IR - INSPECTION REPORT	RT – RADIOGRAPHY TEST	COC – CERTIFICATE OF CONFORMITY
MEASRT - MEASUREMENT	WPS – WELDING PROCEDURE SPECIFICATION	PQR – WELDING PROCESS QUALIFICATION RECORD
WQR – WELDER QUALIFICATION RECORDS	PO – PURCHASE ORDER	LPI – LIQUID PENETRANT INSPECTION

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY  Sachin Katiyar Dy. Manager / QA	REVIEWED BY  B. Ashok Kumar AGM/QA	APPROVED BY  B. Ashok Kumar AGM/QA
	Format no. : HYQA/QP/VSQP Rev.02		

	BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD	STANDARD QUALITY PLAN FOR VENDOR ITEMS						QP. NO: HYQA/SQP/TC/1920/11 Rev. No. : 02 DATE: 27.06.2023 VALID UPTO: 26.06.2025 PAGE 4 OF 4					
		ITEM: M. S. W. GASKET BHEL SPEC: HY7240362, 63,64,65,66,67,68											
SI No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	

Annexure – I

Sampling Plan for Inspection

SI NO.	Lot Size (Numbers)	Sample Size	Acceptance Number (Maximum number of permissible defectives)
1.	2 - 8	Sample size = Lot Size	0
2.	9 - 15	Sample size = Lot Size	0
3.	16 - 25	8	0
4.	26 - 50	13	0
5.	51 - 90	20	0
6.	91 - 150	32	0
7.	151 - 280	50	0
8.	281 - 500	80	0
9.	501 - 1200	125	0
10.	1201 - 3200	200	0

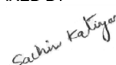
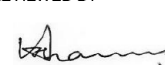
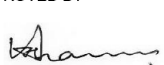
Visual Inspection:

Vendor: 100%

BHEL / BHEL TPIA:

A) 1 – 200 numbers lot size, 100% to be visually inspected.

B) > 200 numbers lot size, 200 numbers to be visually inspected.

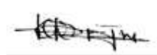
LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY  Sachin Katiyar Dy. Manager / QA	REVIEWED BY  B. Ashok Kumar AGM/QA	APPROVED BY  B. Ashok Kumar AGM/QA
	Format no. : HYQA/QP/VSQP Rev.02		

			BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 01 DATE: 28.06.2024 VALID UPTO: 27.06.2027 PAGE 1 OF 4						
ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03															
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	* D	Agency P W V				Remarks	
1.0	RAW MATERIALS														
1.1	Raw Material for Gasket	Chemical composition & Mechanical Properties, Hardness	Major	Chemical Analysis & Mechanical Properties	One Sample / heat	BHEL Spec / Appvd Drg. / PO	MTC	√	2	-	1				
2.0	IN PROCESS INSPECTION														
2.1	Gasket – Machining	Visual, Dimension check, BOM Check	Major	Visual & Measrt.	100%	BHEL Spec / Appvd Drg. / PO	-	-	2	-	-				
3.0	FINAL INSPECTION & TESTING														
3.1	Gasket - Final Inspection	Visual	Major	Visual	100%	BHEL Spec / Appvd Drg. / PO	IR	√	2	1*	1	* Refer Annexure –I for Sampling Plan for BHEL TPIA witness. For remaining, Verification of TC/IR by BHEL TPIA.			
3.2	Gasket - Final Inspection	Dimension Check	Major	Measrt.	100%	BHEL Spec / Appvd Drg. / PO	IR	√	2	1*	1				
	Gasket - Final Inspection	Hardness Check	Major	Hardness Test	100%	BHEL Spec / Appvd Drg. / PO	TC	√	2	1*	1				
3.3	Gasket - Final Inspection	PMI	Major	PMI	100%	BHEL Spec / Appvd Drg. / PO	TC	√	2	1*	1				
3.4	Gasket - Final Inspection	Surface Finish	Major	Measrt.	100%	BHEL Spec / Appvd Drg. / PO	IR	√	2	1*	1				
3.5	Packing , Marking & Preservation		Major	Visual	100%	BHEL Spec / Appvd Drg. / PO	IR	√	2	-	1				
3.6	Documentation	Test Certificates, Inspection Reports	Major	Compiling	100%	BHEL Spec / Appvd Drg. / PO	-	-	2	-	1				

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03				QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 01 DATE: 28.06.2024 VALID UPTO: 27.06.2027 PAGE 2 OF 4					
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	

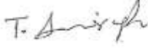
Notes:

1. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
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LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03				QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 01 DATE: 28.06.2024 VALID UPTO: 27.06.2027 PAGE 3 OF 4						
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency				Remarks
									D	P	W	V		

ABBREVIATIONS:		
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WQR – WELDER QUALIFICATION RECORDS	PO – PURCHASE ORDER	LPI – LIQUID PENETRANT INSPECTION
PMI – POSITIVE MATERIAL IDENTIFICATION	SS – STAINLESS STEEL	AS – ALLOY STEEL

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
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	BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD	STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03						QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 01 DATE: 28.06.2024 VALID UPTO: 27.06.2027 PAGE 4 OF 4						
		SI No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency		
										D	P	W	V	

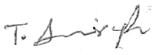
Annexure – I
Sampling Plan for Inspection

SI NO.	Lot Size (Numbers)	Sample Size	Acceptance Number (Maximum number of permissible defectives)
1.	2 - 8	Sample size = Lot Size	0
2.	9 - 15	Sample size = Lot Size	0
3.	16 - 25	8	0
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5.	51 - 90	20	0
6.	91 - 150	32	0
7.	151 - 280	50	0
8.	281 - 500	80	0
9.	501 - 1200	125	0
10.	1201 - 3200	200	0

Visual Inspection:
Vendor: 100%
BHEL / BHEL TPIA:
A) 1 – 200 numbers lot size, 100% to be visually inspected.
B) > 200 numbers lot size, 200 numbers to be visually inspected.

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
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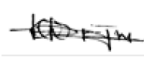
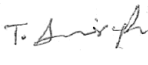
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		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 02 DATE: 28.03.2025 VALID UPTO: 27.03.2028 PAGE 1 OF 4					
				ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03									
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	
1.0 RAW MATERIALS													
1.1	Raw Material for Gasket	Chemical composition & Mechanical Properties, Hardness	Major	Review of TCs	One Sample / heat	ASME B16.20 latest ed./ BHEL Spec / PO	Supplier TC /Lab TC	✓	2	-	1		
2.0 IN PROCESS INSPECTION													
2.1	Gasket – Punching / Machining & Finishing	Visual, Dimension check, Surface Finish	Major	Visual & Measrt.	100%	ASME B16.20 latest ed./ BHEL Spec / PO	IR	-	2	-	1		
3.0 FINAL INSPECTION & TESTING													
3.1	Gasket – Testing	Compressibility, Recovery, Seal ability as applicable, Performance test	Major	Testing	One Sample per size and rating	ASME B16.20 latest ed./ BHEL Spec / PO	TR	✓	2	-	1		
3.2	Gasket - Final Inspection	Visual & Dimension Check	Major	Visual & Measrt.	100%	ASME B16.20 latest ed./ BHEL Spec / PO	IR	✓	2	1*	1	* Refer Annexure –I for Sampling Plan for BHEL TPIA witness. For remaining, Verification of TC/IR by BHEL TPIA.	
3.3	Gasket - Final Inspection	Hardness Check	Major	Hardness Test	100%	ASME B16.20 latest ed./ BHEL Spec / PO	TR	✓	2	1*	1		
3.4	PMI (if applicable as per Enquiry/ Spec.)	PMI	Major	PMI	100%	ASME B16.20 latest ed./ BHEL Spec / PO	IR	✓	2	1*	1		
3.5	Gasket - Final Inspection	Surface Finish	Major	Measrt.	100%	ASME B16.20 latest ed./ BHEL Spec / PO	IR	✓	2	1*	1		
3.6	Packing, Stamping / Marking & Preservation, Colour Coding (as applicable)		Major	Visual	100%	ASME B16.20 latest ed./ BHEL Spec / PO	IR	✓	2	-	1		
LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.						PREPARED BY:  Sachin Katiyar Dy. Manager / QA		REVIEWED BY :  M. L. Rajam Sr. Manager / QA		APPROVED BY:  T. Muniraghavulu AGM / QA			
Format no. : HYQA/QP/VSQP Rev.02													

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03				QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 02 DATE: 28.03.2025 VALID UPTO: 27.03.2028 PAGE 2 OF 4					
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
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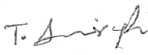
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Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	

ABBREVIATIONS:		
MTC – MILL TEST CERTIFICATE	MPI - MAGNETIC PARTICLE INSPECTION	TC – TEST CERTIFICATE, TR – TEST REPORT
HT – HEAT TREATMENT	UT - ULTRASONIC TEST	TPIA - THIRD PARTY INSPECTION AGENCY APPOINTED BY BHEL.
IR - INSPECTION REPORT	RT – RADIOGRAPHY TEST	COC – CERTIFICATE OF CONFORMITY
MEASRT - MEASUREMENT	WPS – WELDING PROCEDURE SPECIFICATION	PQR – WELDING PROCESS QUALIFICATION RECORD
WQR – WELDER QUALIFICATION RECORDS	PO – PURCHASE ORDER	LPI – LIQUID PENETRANT INSPECTION

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

	BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD	STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: RING JOINT GASKETS, OVAL TYPE, STAINLESS STEEL/ SOFT IRON BHEL SPEC: AA7240341 Rev No.03, AA7240342 Rev No.03					QP. NO: HYQA/SQP/TC/21-22/13 Rev. No. : 02 DATE: 28.03.2025 VALID UPTO: 27.03.2028 PAGE 4 OF 4						
		SI No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency	
									D	P	W	V	

Annexure – I
Sampling Plan for Inspection

SI NO.	Lot Size (Numbers)	Sample Size	Acceptance Number (Maximum number of permissible defectives)
1.	2 - 8	Sample size = Lot Size	0
2.	9 - 15	Sample size = Lot Size	0
3.	16 - 25	8	0
4.	26 - 50	13	0
5.	51 - 90	20	0
6.	91 - 150	32	0
7.	151 - 280	50	0
8.	281 - 500	80	0
9.	501 - 1200	125	0
10.	1201 - 3200	200	0

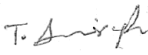
Visual Inspection:

Vendor: 100%

BHEL / BHEL TPIA:

A) 1 – 200 numbers lot size, 100% to be visually inspected.

B) > 200 numbers lot size, 200 numbers to be visually inspected.

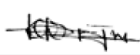
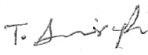
LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY:  Sachin Katiyar Dy. Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
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Format no. : HYQA/QP/VSQP Rev.02

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/23-24/02 Rev. No.: 01 DATE: 16.06.2025 VALID UPTO: 15.06.2028 PAGE 1 OF 2					
				ITEM: WIPER SEAL (PTFE – ABSTREIFER TYPE-SA) BHEL SPEC: TC51284 Rev.00									
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	
1.0	RAW MATERIALS												
1.1	Wiper Material : PTFE	Material Compliance	Major	Review of TC/COC	Sample	BHEL Spec.	BHEL Spec.	TC/COC	√	2	-	1	
2.0	FINAL INSPECTION & TESTING												
2.1	Wiper Seal	Visual & Dimension	Major	Visual & Measrt.	100%	BHEL Spec.	BHEL Spec.	IR	√	2	1	-	
2.2	Marking and packing	Marking, Preservation and Packing	Major	Visual	100%	BHEL Spec.	BHEL Spec.	-	-	2	-	1	

Notes:

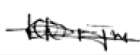
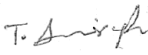
1. LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
2. DRAWING / DATA SHEET/ SPECIFICATION SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION.
3. BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
4. BHEL APPROVED INSPECTION ENGINEERS TO BE DEPLOYED FOR INSPECTION.
5. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS.
6. INSPECTION TO BE OFFERED ONLY AFTER ENSURING THAT ALL DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER.
7. VENDOR TO OFFER ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY  Sachin Katiyar Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HYQA/SQP/TC/23-24/02 Rev. No.: 01 DATE: 16.06.2025 VALID UPTO: 15.06.2028 PAGE 2 OF 2					
				ITEM: WIPER SEAL (PTFE – ABSTREIFER TYPE-SA) BHEL SPEC: TC51284 Rev.00									
Sl No	Component & Operations	Characteristics	Class	Type Of Check	Quantum Of Check	Ref Document	Acceptance Norms	Format Of Record	*	Agency			Remarks
									D	P	W	V	

8. VENDOR TO ENSURE WITH TPIA THAT A NOTE 'COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER' SHALL CONTAIN WITH EVERY INSPECTION REPORT.
9. ONLY VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT SHALL BE USED – TPIA TO VERIFY.
10. VENDOR TO ENSURE WITH TPIA THAT MATERIAL TEST CERTIFICATE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL.
11. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC. (AS APPLICABLE AS PER PO) SHALL BE ENSURED.
12. VENDOR TO ENSURE THAT ALL CERTIFICATES ARE ENDORSED BY TPIA WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN.
13. VENDOR SHALL OFFER LOG SHEETS CONTAINING ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK TO TPIA.
14. VENDOR SHALL SUBMIT COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (V) UNDER COLUMN 'D' OF APPROVED QUALITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT.
15. VENDOR SHALL SUBMIT ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA.

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WQR – WELDER QUALIFICATION RECORDS	PO – PURCHASE ORDER	LPI – LIQUID PENETRANT INSPECTION
PMI – POSITIVE MATERIAL IDENTIFICATION	SS – STAINLESS STEEL	AS – ALLOY STEEL

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.	PREPARED BY  Sachin Katiyar Manager / QA	REVIEWED BY :  M. L. Rajam Sr. Manager / QA	APPROVED BY:  T. Muniraghavulu AGM / QA
	Format no. : HYQA/QP/VSQP Rev.02		



(Attachment to Enquiry No. XXXXXXXXXX Due on Date XX.XX.XXXX for submission by 11.00 hrs to open from 14.00 hrs.)

INSTRUCTIONS TO BIDDER (ITB)**NOTE: Bidder to confirm in affirmative by typing "YES" or "Applicable Data" in the response column. Deviations, if any shall be recorded in deviations/comments column (Separate sheet can be attached if needed). Non deviatable clauses are indicated as "NON DEVIATABLE".**

Sl. No.	DETAILED TERMS & CONDITIONS	BIDDER RESPONSE (YES/NO)	DEVIATIONS / COMMENT
1	SCOPE OF SUPPLY:		
	Signed & Sealed offers are invited for the Scope of Supply of goods or services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer.		
2	DEFINITIONS		
A	'The Buyer' means BHEL-HPEP, Ramachandrapuram, Hyderabad-502 032 of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the companies Act having its registered office at BHEL House, Siri fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.		
B	'The Bidder' means the persons, firm, company or organization on whom the Purchase order is placed and shall be deemed to include the bidder's successors, representatives, heirs, executors and administrator as the case may be. It may also be referred to as Contractor, supplier or bidder.		
C	'Contract' shall mean and include the Purchase order incorporating various documents viz., Notice Inviting Tender (NIT), Offer, Letter Of Intent/Acceptance (LOI/LOA), Instruction to Bidders (ITB) and Special Conditions of Contract (SCC), specifications, inspection/quality plan, schedule of prices and quantities, drawings, if any, enclosed by Bidder/ provided by the Buyer or his authorized nominee and the samples or patterns if any to be provided under the provision of the contract. In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI/LOA followed by Minutes Of Meeting (MOM), NIT, SCC, ITB.		
D	'Parties to the contract' shall mean the bidder and the buyer as named in the main body of the Purchase Order.		
E	'Goods/Material' shall include Works and Services which are incidental or consequential to supply.		
3	GENERAL INSTRUCTIONS:		
A	Mode of submission of offer shall be as indicated in SCC		Non Deviatable
B	The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The offer including annexures and brochures should be submitted in English / Hindi. All Pages of Techno Commercial Bids (Main Pages), ITB, SCC should be signed and Stamped. If there is a conflict in case of bilingual submission, the submission in English will be final. Prices shall be quoted both in figures and words. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 Status. Any discount / revised offer / bids submitted by a bidder on his own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.		Non Deviatable
C	Incomplete offers are liable for rejection.		Non Deviatable
D	Bidders to please note that the Terms & conditions contained in this document and SCC are to be read fully before submission of quotations.		Non Deviatable
E	Bidders are advised to comply with ITB and SCC, should there be any deviations (where deviations are permitted), it shall be entered in the deviation column. BHEL reserves the right to reject such offers or load the bid suitably for evaluation.		Non Deviatable
F	Offers shall be submitted directly, only by the bidder or by their authorized representative / agent and the offer should be in line with the regulatory guidelines (i.e. A valid Agency agreement between principal bidder and agent / representative shall be attached and the agreement shall cover the scope of services rendered by Agent, Agency Commission and any other information called for as per the regulatory guidelines). OEM / Mill details shall be provided if bidder is not a manufacturer. Bid envelopes shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name.		Non Deviatable
G	Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained.		Non Deviatable
H	Unsolicited offers will not be considered.		Non Deviatable
4	OTHER PARTICULARS (Please indicate applicable data)		
A	Name of the Bid currency (freely tradable foreign currency for imports and Indian Rupees for indigenous purchase).		
B	Name of the Port of loading and Port of Discharge (applicable to imports).		

5	BID SUBMISSION PROCEDURE FOR CONVENTIONAL TENDER:		
A	For Single Part Bids:		
	The complete bid shall be submitted in a single sealed cover superscribing the Tender number and due date, addressed to Sr DGM/CMM, 4 th Floor Administrative Building, BHEL, Hyderabad and sent by appropriate mode to above address or dropped in tender box located at Admin II Gate on or before the specified time and date of submission of offers, preferably in the bidder's envelope. E- mail bids shall be sent to mail ID pricebid_hyd@bhel.in only as an attachment.		Non Deviatable
B.	For two-Part Bids:		
i	The offer is to be submitted in two parts viz., Techno-commercial Bid - (Part-I), with all technical specification & scope including bill of material etc., Earnest Money Deposit (EMD)(wherever applicable) and unpriced bid with all applicable Commercial Terms and Conditions, rates of agency commission, duties, taxes and other charges, Signed and Stamped ITB and SCC, <u>except the price</u>, shall be kept in a separate sealed cover, superscribing enquiry No. (Techno-Commercial Bid) and due date AND Price Bid (Part-II), containing ONLY the price (including agency commission, if any) and the applicable duties/taxes/other charges shall be kept in a separate sealed cover superscribing Enquiry no. (Price bid) & due date. Both the above covers (Part –I & II) shall be kept in a Third cover superscribing Enquiry no. & due date. Bidder can also submit offer through email. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID. In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection. All techno commercial terms & conditions mutually agreed prior to price bid opening shall prevail and supersede any terms and conditions specified otherwise in price bid.		Non Deviatable
ii	The bidders whose bids are techno commercially not accepted will be informed and EMD shall be returned wherever submitted.		
iii	Bidders will be allowed to submit the impact on their quoted prices due to changes in technical scope, specifications, and commercial terms/conditions as specified in NIT which in the opinion of BHEL , warrant changes in prices.		Non Deviatable
C	Bids shall be opened on due time and date in the presence of bidders who may like to be present. Only one representative of each bidder shall be permitted to attend the bid opening. Only the price bids of bidder (in case of two part bid) whose techno commercial bids are accepted will be opened later on a specified date.		Non Deviatable
6	DELIVERY TERMS		
A	Indigenous Purchase		
	a. Terms of Delivery for dispatches to BHEL Hyderabad (HPEP) shall be FOR Destination. b. Terms of Delivery for Direct Dispatch (DD) items shall be Ex Works. i. Incase specified in SCC that insurance is in customer/BHEL scope, price quoted shall include Freight charges up to Destination. ii. Otherwise, price quoted shall include Freight and Insurance upto Destination. However, beneficiary for insurance shall be BHEL.		
B.	Imports		
	The goods shall be delivered on FCA capital airport basis in case of freight by Air and CIP basis in case of freight by Sea.		
7	Documentation for Payment		
A	Indigenous Purchase		
	Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site a. Two numbers of Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance)/ e-invoice of GST Portal if applicable) b. Packing List - clearly showing number of packages, gross weight and net weight. c. Test/Warranty/Guarantee certificates, O&M Manual (If specified in SCC) d. Insurance intimation/declaration certificate e. Pre-dispatch Inspection report /Third Party Inspection Certificates. f. Consignee copy of LR signed & stamped by Customer/Site representative for DD Items g. e-waybill h. Any other documents as specified in SCC.		Non Deviatable

B	Softcopies of the above documents shall be uploaded in SUVIDHA portal https://suvidha.bhel.in/suvidha/ or https://hpep.bhel.com/mm/main.jsp Vendor Bills tab. immediately after dispatch of the material. Upload of Documents is mandatory for material Entry. Imports i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery. For Hazardous cargo/DG cargo, supplier must provide the following documents prior to handing over shipment to freight forwarder, wherever freight is in BHEL scope: 1. Valid MSDS 2. DGD certificate with appropriate UN numbers. 3. Labelling and marking on DG cargo along with photo of packaging. 4. Self-declaration for consignment 5. Packaging Certificate as per DG Standards 6. TSA Approved Truckers details to be provided to forwarder at the time of shipment In addition to the above, supplier should ensure to comply all IATA DG regulations, if any new requirement is added in future. ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin & Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (https://hpep.bhel.com/mm) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in. iii) AWB/BL must contain the information of BHEL GST no., and PAN no. iv) Air Shipments: Bidder shall ensure the following a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC). b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier. c) Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings "Cargo handed over in sound condition for Air freighting". Note: Warehouse receipt will not be considered for penalty calculations. d) In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment. e) Following dimensions of single package may be noted. - i). Maximum dimension of the cargo(ODC) -- 125" x 88" x 63" - ii). Maximum weight of the cargo -- 3.5 MT. If any package dimension or weight exceeds the above set limits, it will be treated as Over Dimension Cargo (ODC) or Over Weight Cargo and bidder shall inform BHEL 30 days in advance to the delivery date to enable BHEL to finalize the freight forwarder. - f). If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support. v) Sea Shipments:- bidder shall ensure the following - a). Port of discharge -- Nhavaseva/Mumbai/Chennai. - b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS. - c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt. - d). If the material cannot be containerized in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder. - e). For CIP shipments 1. In case of FCL shipments, Detention free period must be 14 days. 2. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment. 3. No charges for the services rendered till place of destination will be payable by BHEL. In case liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account. 4. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill. 5. bidder must insure the cargo for 110% of material value including the freight amount. (vi). Recovery charges for non-submission of documents: - Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT.		
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	If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under: 1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector A. For FOB Sea Consignments:- Penalty for late submission / negotiation of documents beyond 14 days shall be as under: <table><tr><th rowspan="2">Sl. no</th><th rowspan="2">Period (From Date of Bill of Lading)</th><th>Recoverable Charges</th><th colspan="2">Recoverable Charges per day per container</th></tr><tr><th>LCL per week/ Break bulk cargo per day</th><th>20FT Container</th><th>40FT Container</th></tr><tr><td>i</td><td>Upto 14th day</td><td>Nil</td><td>Nil</td><td>Nil</td></tr><tr><td>ii</td><td>15th day onward</td><td>USD 10</td><td>USD 110</td><td>USD 200</td></tr></table> B. For CIP Sea Shipments: - Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard. In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges. (vii) Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis. (viii) Bidder shall provide package details including number of packages, gross weight, net weight etc. (ix) The bidder shall provide the following documents at the time of submission of offer: a) No Business Connection in India declaration issued by the bidder as per the format specified. (or) b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified. (ii) Tax Residence Certificate issued by the bidder's tax authorities. (iii) Form 10F, as attached in Annexure V, to be issued by the bidder. c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.	Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges	Recoverable Charges per day per container		LCL per week/ Break bulk cargo per day	20FT Container	40FT Container	i	Upto 14th day	Nil	Nil	Nil	ii	15th day onward	USD 10	USD 110	USD 200		
Sl. no	Period (From Date of Bill of Lading)			Recoverable Charges	Recoverable Charges per day per container																
		LCL per week/ Break bulk cargo per day	20FT Container	40FT Container																	
i	Upto 14th day	Nil	Nil	Nil																	
ii	15th day onward	USD 10	USD 110	USD 200																	
8	Delivery Schedule																				
	The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/Hold on payment.		Non Deviatable																		
9	Pricing Terms																				
	Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the execution of PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC.		Non Deviatable																		
10	PRICE VALIDITY :																				
	Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid opening (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC.		Non Deviatable																		

11	Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided)	
A	Indigenous Purchase i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer. ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer. iii) Bidder to quote the applicable taxes in the following manner: - Harmonized System of Nomenclature (HSN) of Goods - Services Accounting Code(SAC) of Services. - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services. v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated. vi) Any other taxes & duties not covered anywhere above may be indicated separately. Taxes deducted at source: - TDS as per the extant statutes shall be deducted. - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act. - Concessional certificates, if any, should be provided well in time for lower deduction of tax.	Non Deviatable
	Terms & Conditions to be complied 1. All invoices (incl. Credit Notes, Debit Notes) to contain BHEL HPEP GSTIN ie 36AAACB4146P1ZG. Invoices submitted should be in the format as specified under GST Law. All details as mentioned in Invoice Rules including Dealer GST registration number (GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST, IGST mentioned separately, HSN Code / SAC Code etc. 2. Reimbursement of GST amount will be made only upon completion of the following: i. Bidder declaring such invoice in their GSTR-1 Return/ IFF ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL iii. The tax invoice is reflected in the GSTR2B of BHEL, HPEP (buyer). Payment of GST will be made only if it is matching with data uploaded by the Bidder in GST portal. 3. In case of discrepancy in the data uploaded by the bidder in the GSTN portal vis-a-vis the tax invoice or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit. The same would be available in PRADAN Portal for the bidder's information. Bidder has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims for processing of such invoices. 4. In cases where invoice details have been uploaded by the bidder but failed to remit the GST amount to GST Department within stipulated time, then GST on the invoices in default will be recovered from the bidder along with the applicable interest. 5. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, such GST amount will be recoverable from bidder along with interest levied/ leviable on BHEL. 6. GST TDS deducted as per GST Act, is uploaded in GSTN portal along GSTR7. Bidders can directly download the GST TDS Certificate from the GSTN Portal. 7. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities. 8. Vendors who fall under the E-Invoice regulations, i.e., having an annual turnover of Rs. 10 crores (Rs 5 crore w.e.f 01.08.2023) in the previous year shall issue e-invoice in line with Rule 48(4) of CGST Rules failing which GST amount will not be reimbursed to the vendor even if the other requirements are fulfilled. 9. In case the vendor is exempted by the GST department under the Rule 48(4) of CGST Rules from issuing E-invoice, a declaration as prescribed in the Notification 17/2022 - Central Tax dated 01-08-2022 shall be provided on the invoice. 10. Vendors who do not fall under the E-Invoice regulations, i.e., whose annual turnover is less than Rs. 10 crores (Rs 5 crore w.e.f 01.08.2023) in the previous year have to give an undertaking indemnifying BHEL that the vendor is not falling under the E-invoice requirement category and that in case of any breach of this E-invoicing requirement, the vendor indemnifies BHEL of any consequences that may arise due to such a breach. 11. No GST shall be levied on liquidated damages / penalty.	

B.	Foreign Purchase (Imports) The offered price shall be inclusive of all the Taxes and duties as applicable in country of export / country of dispatch for the quoted price. Taxes deducted at source: a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered. b. In case bidder does not provide necessary documents for beneficial taxation (Refer clause 7-B-(ix) a-c of ITB), the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.		Non Deviatable
12	Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment.		
A	Indigenous: a. Micro & Small Enterprises (MSEs) - 100% EFT payment within 45 days b. Medium Enterprises - 100% EFT payment within 60 days c. Non MSME Bidders - 100% Direct EFT Payment within 90 Days Note A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Objections, if any on the invoice, available on SUVIDHA portal need to be closed. In such instances, due date is reckoned from the closure of objections. Vendors are advised to get familiarized with the document exchange feature on SUVIDHA portal. Payment will be made for Material accepted value. B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less. D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment. E. In case of packaged items, 10% of supply value will be retained till completion of total supplies. F. Bidders to comply with clause 11 on GST requirements G. MSE benefits are not applicable to Traders / Wholesalers registered as MSEs. H. . In respect of procurement of goods or services from Micro, Small and Medium enterprises (MSMEs), the settlement of invoice shall be only through any of the TReDS platform (i.e RXIL, MI xchange, Invoicemart, KReDX), authorised by the Reserve Bank of India. Supplier will have the option to change the TReDS platform from the drop down menu on Suvidha portal of BHEL, at the time of invoice submission. Wherever the Trade Receivable is accepted by BHEL, the same shall be validated by the Unit on the respective TReDS platform selected by the supplier. The routing of invoices through the TReDS platform shall not be construed as mandating discounting of such invoices and the MSMEs supplier shall have the option to avail or not avail financing or discounting of its receivables on the TReDS platform. In case discounting is not availed by the supplier on TReDS, the trade receivables will be paid through TReDS as per the payment timelines indicated in the contract."		
B	Imports: i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a credit period of 45 days - Cash Against Documents (CAD) ii) In case Bidder opts for Letter of Credit payment, the LC Usance period shall be 90 days with respective bank charges to respective accounts and loading of 0.50% iii) Indian Agency commission if payable and so specified in the Purchase order shall be paid in Indian Rupees, considering the SBI TT selling exchange rate, as on the date of payment after successful completion of the contract.		
C	Conditions for LC: a. LC validity period will be 90 days and for any extension, applicable charges will be to bidder's account. b. LC will be opened after successful completion of pre dispatch inspection prior to the scheduled / agreed delivery date. LC will be opened within 15 bank working days from the date of request.		Non Deviatable
D	Conditions for both Indigenous & Foreign Bidders: a. In case Bidders insist for lesser Credit period and BHEL accepts, a loading of 0.60% for every 15 days reduction will be applicable. b. In case PBG as required is not furnished, Payment will be released deducting the BG amount, which will be paid after expiry of warranty period against submission of supplementary claim. c. Payment does not imply in any respect whatsoever a waiver of Buyer's right to performance of the Order. Buyer is entitled to set off claimable debts against claimable liabilities with the bidder by means of a setoff Note.		Non Deviatable

13	Penalty clause:		
	In the event of delay in supply /part-supply of goods, Penalty as detailed below is leviable a. Penalty of 0.5% per week or part there of shall be levied, limited to a max of 10% (ten percent) of delayed portion value / order value (as specified in SCC). b. Penalty applicable for delay in documentation is as per SCC. c. Date Reckoned for Penalty - Indigenous Orders with delivery terms FOR HPEP: C Note date. - Indigenous Orders (Others): Date of e-waybill. - Imports: For CIP/CIF Orders: IGM date - Imports: For FOB Orders: AWB / BL date - Imports: - For FCA Orders: - Date of acknowledgement from Freight Forwarder. - For Ex Work Orders (both air and sea): - Latest of Air Freight Request (AFR), Invoice, Packing List, Inspection date (if applicable) or any other documentary evidence confirming material readiness. d. In case of Deviation to above Penalty clause, loading applicable to the extent to which not agreed by Bidder. e. Timelines as mentioned in the Annexure 1 will be considered for reckoning delivery.		
14	Excess materials supplied beyond tolerance limit as specified in PO will not be paid and bidder may raise credit note for the excess/unaccepted material as per GST law.		Non Deviatable
15	Rejected materials , if any, shall be collected by the bidder within 90 days of such communication to the bidder. Beyond this period the bidder forfeits their right to the materials.		Non Deviatable
16	Guarantee / Warranty Period: Wherever required, and so provided in the specifications/SCC/Purchase Order, the bidder shall guarantee that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance. a. Guarantee period shall be 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier. b. In case erection & commissioning is involved, guarantee period shall be 12 months from the date of commissioning. c. In case of equipment bought as a package which are intended to be incorporated in installations or systems, the guarantee period shall be 12 months from the date of commissioning of such equipment. The guarantee period shall be extended by the period during which the goods are not in compliance. If the delivery is found to be non-complaint, bidder shall replace, repair or re-execute the as requested by BHEL. If the bidder defaults on his obligations, buyer has the right to proceed to replace, repair or re-execute at the bidder's expense. A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery. Loading for deviation: In case warranty specified in SCC is over and above the period mentioned in b & c above; loading will be 1% per annum for the deviation in warranty end period, on the contract value. Expected commissioning period is as indicated in SCC.		Non Deviatable
17	PERFORMANCE BANK GUARANTEE (PBG) (Applicable in case mentioned in SCC) In case enquiry specifically spells out PBG requirement, PBG is to be submitted by Bidder in requisite format as per Annexure VII. Further detailing on PBG as specified in SCC. The PBG shall be for the performance of the goods and shall remain binding notwithstanding such variations, alterations or extensions of item as may be made, give, conceded or agreed to between the Bidder and BHEL under these Terms and conditions or otherwise.		Non Deviatable
NOTE: Deviations (Commercial as well as Technical) from the tender specifications and conditions are generally not acceptable. However, deviation if any, shall be brought out clearly with proper justification in the offer. The deviation, if considered by BHEL, shall be loaded for comparison, while evaluating the offer. If a bidder unconditionally withdraws any deviation before price bid opening, the same shall not be loaded. Loading criteria in respect of major commercial conditions where deviations if any are accepted shall be as per clause No.18. The Bidders may specifically note the following.			

18	Evaluation and Loading Criteria: i) Evaluation Currency for this tender shall be “INR”. ii) Evaluation of prices shall be done item-wise unless otherwise specified in the SCC. iii) Evaluation shall be on the basis of delivered cost, i.e. “Total Cost to BHEL” w.r.t the finalized technical scope and commercial conditions (after considering incidence of applicable taxes and duties and loading). iv) In the course of evaluation, if more than one Bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 Bidders. In case more than one Bidder happens to occupy the L1 status even after soliciting discounts, the L1 Bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 Bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding. INDIGENOUS a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL. b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value. c. GST and any other charges quoted will be added to the base price. However, in case input credit is available for GST (SGST, CGST/IGST), the same shall be excluded for arriving at “Total Cost to BHEL” IMPORTS For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken. In case of foreign Bidders, the quoted price shall be loaded by the following factors to arrive at “Total Cost to BHEL”: - Import duty as applicable on the date of Part-I bid opening. - Loading will be as per the table below <table><tr><td></td><td>Ex Works</td><td>FOB/F CA</td><td>CIF/C FR</td><td>CIP</td></tr><tr><td>Foreign Inland freight and insurance</td><td>2%</td><td></td><td></td><td></td></tr><tr><td>Marine freight and marine insurance</td><td>3%</td><td>3%</td><td></td><td></td></tr><tr><td>Destination Port handling charges</td><td>0.50%</td><td>0.50%</td><td>0.50%</td><td></td></tr><tr><td>clearing charges & inland freight and insurance</td><td>2%</td><td>2%</td><td>2%</td><td>2%</td></tr></table> COMMON LOADING FOR IMPORTS & INDIGENOUS that will be added for arriving the "Total Cost to BHEL" A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation. B. Loading for payment terms as per clause 12 of ITB C. Loading for deviation in Warranty & PBG as per clause 16,17.		Ex Works	FOB/F CA	CIF/C FR	CIP	Foreign Inland freight and insurance	2%				Marine freight and marine insurance	3%	3%			Destination Port handling charges	0.50%	0.50%	0.50%		clearing charges & inland freight and insurance	2%	2%	2%	2%
	Ex Works	FOB/F CA	CIF/C FR	CIP																						
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Destination Port handling charges	0.50%	0.50%	0.50%																							
clearing charges & inland freight and insurance	2%	2%	2%	2%																						
19	Procurement directly from the manufacturers/ suppliers shall be preferred. However, no agent shall be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both from the manufacturer/ supplier and the agent, bid received from the agent shall be ignored.																									
20	RIGHT OF REJECTION /NON- PLACEMENT OF PO: BHEL reserves the right to accept or reject any or all bid/s in full or part without assigning any reason whatsoever.																									
21	INTEGRITY PACT Bidders shall have to enter into Integrity Pact with BHEL as per Annexure VI - for Tender value of rupees two crores and above and shall be signed by the authorized signatory along with the offer, failing which Bidder’s offer will be rejected.																									
22	Public Procurement																									
A	Make in India For this Procurement, the local content to categorize a bidder as a Class I local bidder / Class II local bidder / Non-Local bidder and purchase preference to Class I local bidder, is as defined in Public Procurement (Preference to Make in India) order No P-45021/2/2017-PP(BE-II) dated 04-06-2020 issued by DPIIT as amended from time to time. Proforma for self-certification for minimum local content and auditor’s certification is given in Annexure III.																									

B	Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with competent authority. GOI website https://www.mea.gov.in/ to be referred for latest details of competent authority and exemptions . Proforma for self-certification for compliance is given in Annexure IV.												
C	Startups: For Start-ups duly registered with DPIIT (Copy of certificate to be provided), condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications. Startups are exempt from paying EMD.												
23	Benefits earmarked for Purchase from Micro & Small Enterprises (MSEs) – Indigenous Purchase												
A	All Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy are exempt from Paying EMD. NSIC/UDYAM registered bidders shall submit NSIC/UDYAM Certificate along with bid documents. Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer. <table><tr><th>Type under MSE</th><th>SC/ST Owned</th><th>Women Owned</th><th>Others (excluding SC/ST & Women Owned)</th></tr><tr><td>Micro</td><td></td><td></td><td></td></tr><tr><td>Small</td><td></td><td></td><td></td></tr></table> Note: If the bidder does not furnish the above in the tender, offer shall be processed construing that the bidder is not falling under MSE category. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE Category till the bidder submits these documents.	Type under MSE	SC/ST Owned	Women Owned	Others (excluding SC/ST & Women Owned)	Micro				Small			
Type under MSE	SC/ST Owned	Women Owned	Others (excluding SC/ST & Women Owned)										
Micro													
Small													
B	MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) and subsequent amendments & clarifications, if any. Documents NSIC/UDYAM Certificate submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.												
C	If an enterprise falling under MSME category as defined in the Act, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category.												
D	BHEL HPEP is registered with TReDS (RXIL , M1XCHANGE , InvoiceMart) platform. MSME bidders are requested to get registered with TReDS(RXIL / M1XCHANGE / InvoiceMart/ exchanges added from time to time) platform to avail the facility as per the GOI guidelines.												
24	Inspection Measuring and Test Equipment (IMTE) used by the Bidder/ Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage.												
25	ISO-9001, ISO14001 & OHSMS 45001 shall be complied.												
26	If BHEL registered supplier is not quoting against this NIT, supplier shall send regret letter positively with valid reasons for not participating. Repeated lack of response on the part of supplier may lead to deletion of such registered supplier from BHEL's approved supplier's list as per BHEL SEARP Guidelines.												
27	<u>BREACH OF CONTRACT, REMEDIES AND TERMINATION</u> 27.1 BREACH OF CONTRACT: The following shall amount to breach of contract: i. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time. ii. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period. iii. The Supplier/Vendor delivers equipment/ material not of the contracted quality. iv. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause. v. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract. vi. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL. vii. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor. viii. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor. ix. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise. x. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner. Note- Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days. In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract												

	27.2 Remedies in case of Breach of Contract.: i. Wherein the period as stipulated in the notice issued under clause 27.1 has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor. ii. Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued. iii. Wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners: iv. In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor. v. If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount: a). from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract. b). If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD. vi. In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor. vii. It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages. viii. In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract. ix. Non-performance of contract attracts penal provisions in line with BHEL guidelines for Suspension of Business Dealings (SBD). Note: 1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include: (a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor. (b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.
28	Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered.
29	All drawings, patterns and tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must be used only in the execution of BHEL's orders.
30	Any amount payable by the bidder under any of the conditions of this contract shall be liable to be adjusted against any amount payable to the bidder under any other work / contract awarded by BHEL HPEP or any other BHEL Units. This is without prejudice to any other action as may be deemed fit by BHEL.
31	The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, will be rejected. The list of firms banned by BHEL is available on BHEL web site: www.bhel.com
32	Ordering and confirmation of order
	The bidder shall send the order acceptance within one week from the date of LOI/Purchase order or such other period as specified/agreed by the Buyer. Buyer reserves the right to revoke the order placed if the order confirmation differs from the original order placed. Buyer shall be legally bound, only if agreed for any deviation explicitly in writing. The acceptance of deliverables or supplies by Buyer as well as payments made in this regard shall not imply acceptance of any deviations. The Purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified /agreed by the Buyer) from the date of P.O. Buyer, is at liberty to send signed P.O. through electronic media such as e-mail and the receipt of which shall be treated as receipt of order.
33	Execution
	The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms.
34	Progress Report
	The bidder shall render such report as to the progress of work and in such form as may be called for by the Buyer from time to time. The submission and acceptance of such reports shall not prejudice the rights of the buyer in any manner. Bidder shall communicate to BHEL immediately, the change of address, ownership, contact person(s), the mobile numbers and e-mail of the dealing person concerned. Milestones shall be periodically updated by bidder through PRADAN Portal (https://hpep.bhel.com/mm/). Non updation will adversely affect service rating of bidder performance.

35	Non-disclosure Obligations
	Drawings, technical documents or other technical information received by one party shall not without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are confidential and binding only to the extent that they are by reference expressly included in the contract. The bidder shall, as per agreed date/s but not later than the date of delivery, provide free of charge any information and/or drawings which are necessary to permit the Buyer to erect, commission, operate and maintain the product. Such information and drawings shall be supplied as specified in technical specification. All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the contract shall continue to be the property of the submitting party. The bidder shall provide Buyer with all information pertaining to the delivery in so far as it could be of importance to Buyer. The bidder shall not reveal confidential information to its own employees not involved with the tender/contract and its execution and delivery or to third parties, unless Buyer has agreed to this in writing beforehand. The bidder shall not be entitled to use the Buyer's name in advertisements and other commercial publications including website without prior written permission from Buyer. In the event of violation of the confidentiality as agreed, BHEL will take legal action as deemed fit. Non-disclosure agreement to be entered as per Annexure- II wherever applicable.
36	Inspection and Testing
A	The goods and stores shall be manufactured by approved quality system and each part/component may be inspected and tested by the Buyer prior to shipment and shall comply with relevant requirements. Buyer has the right to inspect at any stage during manufacture/ delivery.
B	Buyer or his authorized representative shall be entitled at all reasonable times during execution to inspect, examine and test at the bidder's premises the material and workmanship of all stores to be supplied under the contract, and if the part of the stores are being manufactured at other premises, the bidder shall obtain for buyer or his authorized representative permission to inspect, examine and test as if the said stores are being manufactured at the bidder's premises. Such inspection, examination and testing, if made shall not release the bidder from any obligation under the contract. For indigenous bidders all costs related to first inspection request shall be borne by the buyer and the cost of subsequent inspections due to non-readiness of material/rework/ rejections shall be borne by the bidder. In case of imports all inspection charges including third party inspections if any shall be borne by the bidder. The cost of inspection staff/third party specified by the Buyer shall be borne by bidder unless otherwise specifically agreed. If the contract provides for tests on the premises of the bidder or any of his sub-contractor/s, bidder shall be responsible to provide such assistance, labor, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special tests shall be borne by the bidder unless otherwise specifically agreed in the contract. The Bidder shall give the authorized representative of the buyer reasonable notice in writing of the date on and the place at which any stores will be ready for inspection/ testing as provided in the Contract. Annexure – I, may strictly be complied with or the time lines. Any delay in submission of the documents by the bidder will not alter the delivery date.
37	Quality and Condition of the Deliverables
	The bidder shall be responsible for compliance with applicable technical, safety, quality, environmental requirements and other regulations in relation to products, packaging and raw and ancillary materials.
38	Packaging and Dispatch
	The bidder shall package the deliverables safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by sea/air/rail/road to its destination suitably protected against loss, damage, corrosion in transit and the effect or tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied. Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight & net weight, dimensions (Lx B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. & quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.
39	Contract variations; Increase or decrease in the scope of supply
	Buyer may vary the contracted scope during execution due to exigencies of project requirement. If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect. The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication. In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.
40	Rejected/Short shipments/ warranty/guarantee replacements
	In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items.

41	Export Administration Regulations
	If a delivery includes such technology and / or supply that is subjected to the export regulations the bidder shall obtain due permissions, approvals, license etc.
42	Force Majeure
	The bidder shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions. Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the bidder to BHEL by registered letter/courier service immediately without loss of time. In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL. In the event of such cancellation the bidder shall refund any amount advanced or paid to the bidder by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.
43	Non-waiver of Defaults
	If any individual provision of the contract is invalid, the other provisions shall not be affected.
44	Settlement of Disputes
	Except as otherwise specifically provided in the contract, all disputes concerning questions of the facts arising under the contract, shall be decided by the Buyer, subject to written appeal by the bidder to the buyer, whose decision shall be final. Any disputes of differences shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration The bidder shall continue to perform the contract, pending settlement of disputes(s).
45	Conciliation clause
	CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB
46	ARBITRATION
	46.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 45 herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to IAMC (International Arbitration and Mediation Centre, Hyderabad) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the IAMC Rules. 46.2 A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to IAMC. The Notice shall be addressed to the Head of the Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any. 46.3 After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to IAMC and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged. 46.4 The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules. 46.5 The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be Hyderabad. 46.6 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Hyderabad. 46.7 Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor. 46.8 It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the

	value of the dispute is less than Rs. 10 Crores. 46.9 In case the disputed amount Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause. 46.10 In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause 46.9. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction. In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14-12-2022 as amended from time to time.		
47	Applicable Laws and jurisdiction of Courts		
	This contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause 46 of this contract, the Civil Court having original Civil Jurisdiction at Hyderabad, shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract."		
48	BHEL-Fraud prevention policy shall be adhered to.		
	The Bidder along with its associate/ Collaborators/ Sub-contractors/ sub-bidders/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention policy displayed on BHEL Website http://www.bhel.com and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice. List of nodal officers is hosted on BHEL Hyderabad website https://hpep.bhel.com/.		
49	Suspected Cartel Formation		
	The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case , the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies / guidelines .		
50	Treatment of cases regarding conflict of interest: The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations: i) If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly; ii) The bidder (or his allied firm) provided services for the need assessment/procurement planning of the Tender process in which it is participating; iii) Procurement of goods directly from the manufacturers/ suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorized distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate. iv) A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a subcontractor in more than one bid if he is not bidding independently in his own name or as a member of a JV. The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/guidelines.		
51	Escalation Matrix		
	Details	Name	Contact Number
	Authorised representative		
	Technical In-charge		
	Finance and Taxation		
	Escalation for above		



52	Grievance Redressal Mechanism
	To promote transparency and ensure fair treatment of all bidders, a structured Grievance Redressal Mechanism is in place to address any concerns or issues arising during the tendering process or in subsequent business dealings with the company. Suppliers/Contractors are requested to follow the below escalation process for grievance resolution: 1. First Level: Any grievance should initially be addressed to the designated Dealing Officer, whose contact details are provided in the Notice Inviting Tender (NIT)/Contract. 2. Second Level: If the issue remains unresolved, it may be escalated by lodging a formal grievance through the SUVIDHA Portal: https://suvidha.bhel.in/suvidha/. Responses will be provided in accordance with the defined escalation matrix.”

Note: Purchase officer has to fill Annexure-I while sending enquiry

(Attachment to Enquiry No. XXXXXXXXXX Due on Date XX.XX.XXXX					
Special Conditions of Contract (SCC)			Rev 01		
Sl.No	ITB Clause No.	Clause	Available Options	BHEL requirements	Bidder response
1	3	Mode of Submission	Conventional / E-Procurement		
2	5	Type of Bid	Single part / Two Part / Three Part		
3	6	Indigenous purchase - Destination	BHEL, RCPuram, Hyderabad / Site		
4			Destination in case of Site		
		Mode of Shipment	Air / Sea		
5		Imports purchase - Destination	Mumbai / Navasheva / Hyderabad / Others		
6		Freight	Customer / BHEL / Vendor		
7		Insurance	Customer / BHEL / Vendor		
8		Basic Custom Duty	Project Imports/ Concessional Duty / Merit Duty / Nil / Others Duty Structure		
9	9	Price validity	_____ days		
		Optional Spares price validity	_____ Months / years from the date of _____		
10	8	Delivery Period	____ weeks / ____ Months (Staggered delivery to be detailed)		
11	18	Evaluation basis	Itemwise / Total		
12	Others	Quantity Split	Splittable / Non-Splittable		
13			(Tabulation for splitting to be detailed)		
14	9	Price Variation Clouser (PVC)	Applicable / Not applicable		
15	12	Payments Terms	Inland Letter of Credit (ILC) In case Bidder opts for ILC Payment, the LC Usance period shall be 120 days with all charges to bidder's account and loading of 0.50%. Note : Wherever it is felt commercially prudent to include Inland Letter of Credit (ILC) payment term, a separate note, before publishing tender, with proper justification for inclusion of ILC payment terms to be concurred by Head of Finance and approved by Product/Functional Head (not less than GM).		
16		Tender cost	Applicable / Not applicable		
17		Earnest Money Deposit (EMD)	____ % of tender value / Not applicable		
18		E & C Supervision Charges	Applicable / Not applicable		
19			If applicable , max 2% of Total contract value .		
20		Bank Guarantee against milestone payment	(If envisaged to be detailed with %)		
21	Others	Contract execution Bank Guarantee	____ % of PO Value to be submitted after receipt of PO / Not Applicable		
22	17	Performance Bank Guarantee			
	7	Additional documentation for payment	Test / Warranty / Guaranty / O&M Manual etc.,		
24	13	Max Penalty applicable on	Delayed portion / Order value		
25	Others	Contract Specific Penalty Clause	including Documentation delay , Performance , E&C etc., to be detailed , considering Project , Unit , Set , etc.,		
26	16	Guarantee / Warranty Period	Applicable Clause a/b/c		
27		Contract Specific Guarantee / Warranty Period	Specific period if any to be detailed		
28	Others	Expected commissioning period	_____ months from the date of supply		
29	48	Detailed Billing Breakup (BBU)	Applicable / Not applicable		
30			(If applicable , Bidder shall provide detailed billing break-up in respect of the major items/components (stipulated in the tender) as part of offer .)		
31	Others	Customer approval of vendor	Applicable / Not applicable		
32		Drawing approval	Applicable / Not applicable		
33		QAP approval	Applicable / Not applicable		
34	36	Inspection by	BHEL / BHEL TPI / Vendor TPI / Customer		
35	Others	Financial / Commercial PQC	Applicable / Not applicable		
36			if Applicable to be detailed		

Note:

Special Conditions of Contract (SCC) shall be got approved by the Checklist approving authority, for all tenders.

Annexure-I			
Major Activity timelines shall be considered for indigenous purchases			
S No	Activity	Agency	Timeline
1	PO acknowledgement	Vendor	_____ days from PO
2	Submission of Drawings and QP	Vendor	_____ days from PO
3	Approval of Drawings and QP	BHEL/Customer	_____ days from PO
4	Raising of Inspection Call	Vendor	_____ days from PO
5	Inspection completion	Self/BHEL/Third party inspection agency	_____ days from inspection call date
6	Despatch Instructions	BHEL	_____ days from inspection report
7	Reciept of Material	Vendor	_____ days from Despatch instructions

Above is illustrative only. Purchase department can add more activities depending on nature of prodcut/contracts

However absence of this annexure in NIT will entail non processing of delivery extention cases in case of delay in supplies of goods owing to reason attributable to BHEL.

(To be executed on Non- Judicial Stamp Paper for an appropriate value.
To be stamped as an agreement)

(For Suppliers on Unit's / Division's PMD)

ANNEXURE-II

Framework Confidentiality Agreement Cum Undertaking

This Agreement made on this the _____ day of (month) _____ 20 ____ ("Effective Date") by and between M/s. BHARAT HEAVY ELECTRICALS LIMITED, having registered office at "BHEL House", Siri Fort, New Delhi – 110049 (India), acting through its _____ Unit (hereinafter may be referred to as "BHEL" or "the company").

And

M/s. _____ (address) _____
represented by authorized representative Sri _____ (herein after referred to as the "Supplier").

The supplier and the company may, unless the context otherwise requires, hereinafter be collectively referred to as "Parties" or singly as the "Party".

RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL / its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with contract(s) (as defined hereunder) placed or to be placed upon the supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the parties agree as under:

1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- A. **“Contract”** means the contract entered into with a supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
- B. **“Effective Date”** means the date of this Agreement as mentioned in the preamble of this Agreement.
- C. **“Supplier”** includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
- D. **“Technical Information”** includes Drawings, and / or Product Standards and / or Specifications and / or Corporate / Plant Specifications and / or Technological Process Sheets and / or Technical Data Sheets and / or Jigs & Fixtures and / or Pattern & Dies and / or Special Gauges and / or Tools etc. Belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Suppliers.
- E. **“Intended Purpose”** means the purpose for which the Technical Information is provided to the supplier under or in connection with a contract.
- F. **“Improvement”** includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (Whether in terms of effectiveness or in terms of efficiency or both) of the product and / or the service to be provided by the Supplier under a Contract.

2. This Agreement shall come into force / deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the supplier; whichever is earlier.

3. **Agreement deemed to be incorporated in each contract:** Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contract has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.

4. **Ownership:**

4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.

4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of

BHEL or that of the concerned entity from whom BHEL has obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the supplier any license or right of use of such patent, copyright or design or any other intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the contract and / or as directed in writing by the Company, solely for the Intended Purpose under the Contract.

- 4.3 Neither party is obligated by or under this Agreement to purchase from or provide to the other party any service or product and that any such purchase / sale of any product and / or service by one party to the other party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.
- 4.4 The Supplier is / has been made well aware and acknowledges that the Technical Information being / which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.
- 4.5 The supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors /suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the supplier or its employees or sub-contractors / suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.
- 4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights / title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings / documents or other materials connected with such Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvements

in the Technical Information including but not limited to obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question arises whether a modification amounts to improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the supplier.

5. Use and Non – Disclosure:

5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.

5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and / or service to any third party, without the prior written consent of the Company.

5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is / was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.

5.5 This Supplier undertakes and agrees not to make copies or extracts of and not to disclose to other any or all of the Technical Information in its possession, except as follows:

(a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked

clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and non-disclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.

- (b) With the prior written consent of Company, the supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and non-disclosure in respect of such Technical Information.
- (c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the supplier intends to make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The Obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was / is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;
- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
- c) is developed independently of the Disclosing party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
- d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.

- 7. The Obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of _____ years from the date when the complete Technical Information has been returned in portions on different dates, the period of ____ years will be reckoned from the date when the last portion of the Technical Information has been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of _____ years.

8. Warranties & Undertakings:

- a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.
- b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material / documents belonging to him / it or to any other third party.
- c) The Supplier further undertakes that he / it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and / or equipment of the Company, made available to him / it, and undertakes that he / it shall hold the same as a trustee, in capacity of custodian thereof and use / utilise the same solely for the purpose of executing the contract awarded by the Company.
- d) The Supplier further undertakes that he / it shall return all the equipment and / or Technical Information as far as practicable in the same condition in which the same was made available to him / it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope of work or contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and / or Technical Information / improvement thereof. In case any such equipment and / or Technical Information or thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or improvement thereto shall continue to be governed by this Agreement.
- e) The Supplier undertakes to indemnify the Company for all the direct, indirect and / or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and / or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the forgoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take

any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 9 (f) hereinabove, the Company shall have a right to withhold, recovery and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him / it by any department / office / unit/ division of the said Company.

10. Arbitration & Conciliation:

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, penalty deduction, validity or execution of the Contract; time extension, or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration. Sole arbitrator to be appointed by Head of the Unit - BHEL, HPEP.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause.

The seat of arbitration shall be Sangareddy / Hyderabad, Telangana. The language of arbitration shall be English and the documents shall be submitted in English.

The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator.

Subject to the arbitration in terms of clause 46 of ITB (clause 27 of ATC GeM), the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

ARBITRATION FOR CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No 4(1)/2013-DPE(GM/FTS 1835 dated 22-05-2018

CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB

11. Governing Law & Jurisdiction:

This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.

SIGNATURE

WITNESSES

1

Name:

Address:

2

Name:

Address:

Annexure - III

Proforma for self-certification by Supplier for minimum local content on their letter head for tender value less than Rs 10 Crore

"We _____ (Name of Manufacturer) undertake that we meet the mandatory minimum Local Content (LC) requirement i.e. _____ (to be filled as notified in the policy) for claiming Purchase Preference linked with Local Contents under the Govt. policy against tender no. _____."

Auditor's certification with respect to minimum local content on the letter head of Statutory Auditor/Cost Auditor for tender value above Rs.10 crore

"We _____ the statutory auditor/Cost Auditor of M/s _____ (name of the bidder) hereby certify that M/s _____ (name of manufacturer) meet the mandatory Local Content requirements of the Goods and/or Services i.e. _____ (to be filled as notified in the policy) quoted vide offer No. _____ dated _____ against BHEL's tender No. _____ by M/s _____ (Name of the bidder).=

Annexure - IV

Proforma for self-certification by Supplier for Compliance to Clause No 20 (B)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and I certify that M/s.... (Name of firm) is **not from such a country/is from such a country** (delete whichever is NOT applicable) and has been duly registered with the Competent authority (delete if NOT applicable) . I hereby certify M/s fulfills all requirements in this regard and is eligible to be considered . (where applicable , valid registration by the competent authority shall be attached)

Sd/-

Authorised Signatory with Stamp

Annexure V

(On Company Letter Head)

FORM NO. 10F

[See sub-rule (1) of rule 21AB]

Information to be provided under sub-section (5) of section 90 or sub-section (5) of section 90A of the Income-tax Act, 1961

I..... son/daughter of Mr in the capacity of.....
(Designation) do provide the following information, relevant to the previous year **2021-22** in case of for the purposes of sub-section (5) of section 90/section 90A:-

Sl.No.	Nature of information	Details
(i)	Status (individual; company, firm etc.) of the assessee	Company
(ii)	Permanent Account Number (PAN) of the assessee if allotted	
(iii)	Nationality (in the case of an individual) or Country or specified territory of incorporation or registration (in the case of others)	
(iv)	Assessee's tax identification number in the country or specified territory of residence and if there is no such number, then, a unique number on the basis of which the person is identified by the Government of the country or the specified territory of which the assessee claims to be a resident	

(v)	Period for which the residential status as mentioned in the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A is applicable	<u>2022-23</u>
(vi)	Address of the assessee in the country or territory outside India during the period for which the certificate, mentioned in (v) above, is applicable	

I have obtained a certificate to in sub-section (4) of section 90 of sub-section (4) of section 90A from the Government of..... (name of country or specified territory outside India)

Signature:.....

Name:.....

Address:.....

Email ID:.....

Contact Number.....

Permanent Account Number:.....

Verification

I..... do hereby declare that to the best of my knowledge and belief what is stated above is correct complete and is truly stated. Verified today the..... day of.....

In case the M/s Bharat Heavy Electricals Limited, HPEP, Ramachandrapuram, Hyderabad is declared as an assessee in default due to any misstatement or incorrect declaration, we indemnify M/s Bharat Heavy Electricals Limited from any ensuing consequences thereunder.

Signature of the person providing the information

Place:.....

(On Company Letter Head)

No Business Connection or Permanent Establishment Certificate

Date

To

Bharat Heavy Electricals Limited
Ramachandrapuram, Hyderabad
India - 502032

Sir,

Sub: No Business Connection or Permanent Establishment declaration for FY **2021-22**

This is to certify that (Name of the supplier) is a company incorporated in(country) and does not have any business connection in India as per the provision of Section 9 of the Income Tax Act 1961 or any Permanent Establishment as defined in Article 5 of the India and(country) DTAA.

We hereby certify that we will notify BHEL in case of any change in the status as certified above.

For

Authorised Signatory

(Note – Please refer definition of the Business Connection on reverse and Permanent Establishment in the relevant DTAA)

"Business connection" as defined in Section 9 of the Income Tax Act shall include any business activity carried out through a person who, acting on behalf of the non-resident,—

- (a) has and habitually exercises in India, an authority to conclude contracts on behalf of the non-resident or habitually concludes contracts or habitually plays the principal role leading to conclusion of contracts by that non-resident and the contracts are—
 - (i) in the name of the non-resident; or
 - (ii) for the transfer of the ownership of, or for the granting of the right to use, property owned by that non-resident or that non-resident has the right to use; or
 - (iii) for the provision of services by the non-resident; or
- (b) has no such authority, but habitually maintains in India a stock of goods or merchandise from which he regularly delivers goods or merchandise on behalf of the non-resident; or
- (c) habitually secures orders in India, mainly or wholly for the non-resident or for that non-resident and other non-residents controlling, controlled by, or subject to the same common control, as that non-resident:

Provided that such business connection shall not include any business activity carried out through a broker, general commission agent or any other agent having an independent status, if such broker, general commission agent or any other agent having an independent status is acting in the ordinary course of his business :

Provided further that where such broker, general commission agent or any other agent works mainly or wholly on behalf of a non-resident (hereafter in this proviso referred to as the principal non-resident) or on behalf of such non-resident and other non-residents which are controlled by the principal non-resident or have a controlling interest in the principal non-resident or are subject to the same common control as the principal non-resident, he shall not be deemed to be a broker, general commission agent or an agent of an independent status

For the removal of doubts, it is hereby clarified with explanation-2A, that the significant economic presence of a non-resident in India shall constitute "business connection" in India and "significant economic presence" for this purpose, shall mean—

- (a) transaction in respect of any goods, services or property carried out by a non-resident in India including provision of download of data or software in India, if the aggregate of payments arising from such transaction or transactions during the previous year exceeds such amount as may be prescribed; or
- (b) systematic and continuous soliciting of business activities or engaging in interaction with such number of users as may be prescribed, in India through digital means:

Provided that the transactions or activities shall constitute significant economic presence in India, whether or not,—

- (i) the agreement for such transactions or activities is entered in India; or
- (ii) the non-resident has a residence or place of business in India; or
- (iii) the non-resident renders services in India:

Thresholds for the purposes of significant economic presence.

11UD. (1) For the purposes of clause (a) of Explanation 2A to clause (i) of sub-section (1) of section 9, the amount of aggregate of payments arising from transaction or transactions in respect of any goods, services or property carried out by a non-resident with any person in India, including provision of download of data or software in India during the previous year, shall be two crore rupees;

(2) For the purposes of clause (b) of Explanation 2A to clause (i) of sub-section (1) of section 9, the number of users with whom systematic and continuous business activities are solicited or who are engaged in interaction shall be three lakhs.

INTEGRITY PACT**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract(s) for _____

_____ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

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- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process, terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above , the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be-entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee , whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Suspension of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

- 8.5 The role of IEM is advisory and the advice of IEM is non-binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.

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- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as per the terms & conditions of the Contract.

For & On behalf of the Principal
(Office Seal)

Place _____

Date _____

Witness: _____
(Name & Address) _____

For & On behalf of the Bidder/ Contractor
(Office Seal)

Witness: _____
(Name & Address) _____

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____ hereinafter referred to as the 'Vendor / Contractor / Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated valued at Rs..... (Rupees -----)/FC.....(in words.....) for (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs ----- (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance Hyderabad ee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

WeBANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Guarantee shall remain in force upto and including..... and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before thewe shall be discharged from all liabilities under this guarantee thereafter.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at Hyderabad shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....
- b) This Guarantee shall be valid up to
- c) Unless the Bank is served a written claim or demand on or before _____ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR/ CONTRACTOR/ SUPPLIER

³ DETAILS ABOUT THE NOTICE OF AWARD/ CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/ SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Notes:

1. It is advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Contractor/sub-contractor /vendor/ Bank issuing the guarantee.

3. **In Case of Bank Guarantees submitted by Foreign Vendors-**

a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)

can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.