



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620 014, INDIA.
QUALITY ASSURANCE DEPARTMENT

STANDARD QUALITY PLAN FOR SPIRAL WOUND GASKET

SQP:SD:22 Rev No: 00

Page: 1 of 3

Prepared By
Quality Assurance

ABDUR RAHMAN SULTAN

Abdur Rahman Sultan
19.12.2016

Reviewed by	Signature
Quality Assurance (G. PANNDEERSELVAN)	<i>G. Panndeerselvam</i> 19/12/16
Engineering (N. KATHIRVEL)	<i>N. Kathirvel</i> 19/12/16
Material Management (SACHIN SANKI)	<i>Sachin Sanki</i> 19.12.16
Quality Control (C.T. CHITHAMBARARAJAN)	<i>C.T. Chithambararajan</i> 19.12.16

Rev No	Date	Approved by	Signature
00	19/12/2016	AGM / QA & BE	<i>Reinoban</i> 19/12/16

Record of Revisions

Rev No	Details of Revision	Remarks
00	Fresh Issue	

		MANUFACTURER'S NAME & ADDRESS: BHEL: TIRUCHIRAPPALLI APPROVED SUPPLIERS	STANDARD QUALITY PLAN								QWI NO:SQP:SD:22 REV NO: 00 DATE: 19/12/2016 PAGE: 2 OF 3			
			PRODUCT: SPIRAL WOUND GASKET											
			SUB-SYSTEM: Steam Generator and Auxiliaries											
SL NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N				D*	M	C	N	
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	

1.0	RAW MATERIAL:													
1.1	Winding Material SS304/SS304L (0.2mm)	Physical & Chemical Properties	A	ASTM A240 AISI 304/304L	Per heat/ Batch No.		ASTM A240 AISI 304/304L	ASTM A240 AISI 304/304L	Material Test Certificate	√	P	V	-	
1.2	Ring Material SS304/SS304L (3.00mm) Centering Ring/Inner	Physical & Chemical Properties	A	ASTM A240 AISI 304/304L	Per heat/ Batch No.		ASTM A240 AISI 304/304L	ASTM A240 AISI 304/304L	Material Test Certificate	√	P	V	-	
1.3	Filler Material Graphite (0.60mm)	Physical & Chemical Properties	A	Manufacturer's Standard	Per heat/ Batch No.		Manufacturer's Standard and BHEL Specification	Manufacturer's Standard and BHEL Specification	Material Test Certificate	√	P	V	-	
2.0	INPROCESS CONTROLS & FINAL INSPECTION:													
2.1	Visual Examination	Visual	A	No damage	100%	10%	BHEL drawing, BHEL Specification and ASME B16.20	BHEL drawing, BHEL Specification and ASME B16.20	Inspection Report	√	P	W	-	
2.2	Dimension Check	Dimensional conformity	A	Measurement	100%	10%	BHEL drawing, BHEL Specification and ASME B16.20	BHEL drawing, BHEL Specification and ASME B16.20	Inspection Report	√	P	W	-	
2.3	Compression and Recovery test	Testing	A	Gasket thickness, No buckling	One Gasket per pressure rating		BHEL drawing, BHEL Specification and ASME B16.20	BHEL drawing, BHEL Specification and ASME B16.20	Test Certificate	√	P	W	-	
2.4	Metal Strip	Chemical composition	A	Conformance to specification	100%	10%	BHEL drawing, BHEL Specification and ASME B16.20	BHEL drawing, BHEL Specification and ASME B16.20	IR	√	P	W	-	

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY THE SUPPLIER IN QA DOCUMENTATION;
**** M:** MANUFACTURER, **C:** BHEL QC/BHEL AIA, **N:** CUSTOMER; **P:** PERFORM. **W:** WITNESS, **V:** VERIFICATION; **CLASS:** A - CRITICAL ; B - MAJOR ; C - MINOR;
MTC- Manufacturer's Test Certificate; IR- Inspection/Test Report; COC: Certificate of Compliance; ALC: Approved Lab Test Certificate

		MANUFACTURER'S NAME & ADDRESS: BHEL: TIRUCHIRAPPALLI APPROVED SUPPLIERS	STANDARD QUALITY PLAN								QWI NO:SQP:SD:22 REV NO: 00 DATE: 19/12/2016 PAGE: 3 OF 3		
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SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY		REMARKS
										M	C	N	
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11

4.0	MARKING, PACKING AND PRESERVATION:												
4.2	Marking/ Identification	Marking & Tagging with Po No., Size, Quantity, Flange size, Pressure class, Material, Manufacturer's name or trademark	A	Visual	100%	100%	BHEL Specification & Purchase Order, ASME B 16.20	BHEL Specification & Purchase Order, ASME B 16.20	IR	√	P	V	-
4.3	Packing & Preservation	Tightness & Stability	A	Visual	100%	100%	BHEL Specification & Purchase Order, ASME B 16.20	BHEL Specification & Purchase Order, ASME B 16.20	IR	√	P	V	-
5.0	CERTIFICATION												
5.1	Data Folder	Completeness of documentation	A	Review of documents	100%	100%	Purchase Order, BHEL Spec, Approved datasheet		IR	√	P	V	-

Notes:

- Customer verification stages specified above shall be followed. Any witness stages shall be as specified/indicated in BHEL PO.
- The construction features of the spiral wound gasket shall be as per BHEL Technical specification and ASME B16.20.

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