

Manufacturer's Name & Address :			QUALITY ASSURANCE PLAN Item : Plug Valve Sub-System : Fuel Oil System Page No.: 2 of 4				Project Contract Contract Sub-Cont						
Sl. No.	Components & Operations	Characteristic/Item	Class	Type of check	Extent of Check	Reference Document	Acceptance Norm	Format of Record	Agency			Remarks	
1	2	3	4	5	6	7	8	9	D	P	W	V	11
2	Fastners	a) Dimension	MA	Dimensional	1/Lot/Size	Appr. Drg	Appr. Drg	...		3	3	1,2	
		b) Tensile Properties	MA	Verification of Supplier TC	100%	Appr. Drg	Relevant Std	Mfg. TC	✓	3	3	1,2	
		c) Chemical Properties	MA	Verification of Supplier TC	100%	Appr. Drg	Relevant Std	Mfg. TC	✓	3	3	1,2	
		d) Heat Treatment	MA	Verification of Supplier TC	100%	Appr. Drg	Relevant Std	Mfg. TC	✓	3	3	1,2	
3	Limit Switch	a) Dimension	MA	Dimensional	1/Lot/Size	PO	Mfg. Drg	Mfg. TC	✓	3	3	3	
		b) Chemical properties	MA	Mfg. TC	1/Lot/Size	Relevant Std	Relevant Std	...		3	3	3	
4	Hand Wheel	a) Dimension		Dimensional	1/Lot/Size	PO	Mfg. Drg	GRR		3	3	1,2	
		b) Surface Defect	MA	Visual	100%	PO	Mfg. Drg	No crack acceptable		3	3	1,2	
BHEL SUB-CONTRACTOR			LEGEND : Records identified with " ✓ " shall essentially be included by Contractor in QA Documents 1 - BHEL 2 - PACKAGE SUPPLIER 3 - Manufacturer CR - Critical Characteristics MA - Major Characteristics MI - Minor Characteristics IR - Inspection Report, MTC - Material/Manufacturer's Test Certificate					CLIENT NO.					
			P - Agency Performing the Test W - Agency Witnessing the Test V - Agency Verifying the Test					REV. 00 CAT.					
			REVIEWED BY					NAME & SIGNATURE OF APPROVING AUTHORITY					
			SIGNATURE					NAME & SIGNATURE OF APPROVING AUTHORITY					

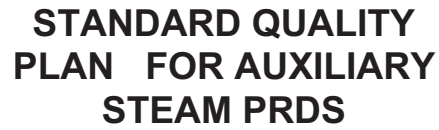
Manufacturer's Name & Address :			QUALITY ASSURANCE PLAN				Project : Contract I Contracto Sub-Contr						
			Item : Plug Valve		Sub-System : Fuel Oil System							Page No.: 3 of 4	
Sl. No.	Components & Operations	Characteristic/Item	Class	Type of check	Extent of Check	Reference Document	Acceptance Norm	Format of Record		Agency			Remarks
1	2	3	4	5	6	7	8	9	D	P	W	V	11
IN PROCESS INSPECTION													
1	Body / Cover	a) Mechined surface	MA	Visual	100%	Mfg. Drg.	No blow holes are acceptable	...		3	3	3	
		b) Dimension	MA	Dimensional	100%	Mfg. Drg.	Mfg. Drg	...		3	3	3	
2	Plug	Mechined surface	MA	Visual	100%	Mfg. Drg.	No blow holes are acceptable	...		3	3	3	
3	Component	Dimension	MA	Dimensional	100%	Mfg. Drg.	Mfg. Std.	...		3	3	3	
4	Assembly	Operational Test	MA	Ful opening / closing test	100%	GA Drg	Mfg. Std.	...		3	3	3	
				Min. Stem Projection	100%	...	Mfg. Drg	...		3	3	3	
				Smooth operation	100%	...	Mfg. Std.	...		3	3	3	
BHEL			LEGEND :					CLIENT NO. _____					
			Records identified with "√" shall essentially be included by Contractor in QA Documents										
MANUFACTURE SUB-CONTRACTOR			CONTRACTOR		1 - BHEL /DVC		P - Agency Performing the Test		REV. 00 CAT.				
					2 - PACKAGE SUPPLIER		W - Agency Witnessing the Test						
SIGNATURE			SIGNATURE		3 - Manufacturer		V - Agency Verifying the Test		REVIEWED BY _____ NAME & SIGNATURE OF APPROVING AUTHORITY _____				
					CR - Critical Characteristics								
SIGNATURE			SIGNATURE		MA - Major Characteristics								
					MI - Minor Characteristics								
SIGNATURE			SIGNATURE		IR - Inspection Report, MTC - Material/Manufacturer's Test Certificate								

Manufacturer's Name & Address :			QUALITY ASSURANCE PLAN Item : Plug Valve Sub-System : Fuel Oil System Page No.: 4 of 4				Project : Contract Contractor Sub-Contractor						
Sl. No.	Components & Operations	Characteristic/Item	Class	Type of check	Extent of Check	Reference Document	Acceptance Norm	Format of Record	Agency			Remarks	
									P	W	V		
1	2	3	4	5	6	7	8	9	10	11	12		
FINAL INSPECTION (Before Painting)													
1	Complete valve	a) Dimension	MA	Fig. Drilling face to face	100%	Relevant Std	Relevant Std	Dimensional Report	✓	3	1, 2	1, 2	100% Inspection by Manufacturer & 10% by Inspection Agency
		b) Operational Test	MA	Full opening / closing test	100%	Relevant Std	PO	Testing Register	✓	3	1, 2	1, 2	
		c) Pressure testing	MA	i) Hydro shell	100%	Relevant Std	Relevant Std	Testing Register	✓	3	1, 2	1, 2	
				ii) Hydro seat	100%	Relevant Std	Relevant Std	Testing Register	✓	3	1, 2	1, 2	
		Fire Safe Testing	MA	Fire Safe	1/prototype	API 607 / BS 6755 P-II	Relevant Std	Testing Register	✓	3	3	1, 2	
2	Paint & Packing	Surface	MA	Visual	Dryness	PO	PO	Testing Register		3	3	3	
				Visual	Two coats of red oxide	PO	PO	Testing Register		3	3	3	
				Visual	One coat of hammer tone dark grey	PO	PO	Testing Register		3	3	3	
				Visual	Anti rust layer at machined surface	PO	PO	Testing Register		3	3	3	
				Visual	Fixing of wooden/plastic end protector	PO	PO	Testing Register		3	3	3	
			LEGEND : Records identified with "✓" Documents 1 - BHEL 2 - PACKAGE SUPPLIER 3 - Manufacturer CR - Critical Characteristics MA - Major Characteristics MI - Minor Characteristics IR - Inspection Report, MTC - Material/Manufacturer's Test Certificate										
			d by Contractor in QA CLIENT NO. _____ REV. 00 CAT. REVIEWED BY _____ NAME & SIGNATURE OF APPROVING AUTHORITY _____										
SIGNATURE													

		STANDARD QUALITY PLAN FOR AUXILIARY STEAM PRDS		CUSTOMER :				SPECIFICATION NUMBR				
				BIDDER/ : AS PER APPROVED VENDOR LIST		SPECIFICATION TITLE : AUXILIARY STEAM P.R.D.S						
		SHEET 1 of 2		SYSTEM ITEM : STEAM DESUPERHEATER		QUALITY PLAN NUMBR		SECTION VOLUME				
SL. NO.	COMPONENT/ OPERATION	CHARACT-ERISTIC CHECK	CAT.	TYPE METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY			REMARKS
									P	W	V	
1	2	3	4	5	6	7	8	9	10			11

1.0	Raw Materials											
1.1	Pipes	Mechanical & Chemical Prop.		Mechanical & Chemical	100%	Appd Specn./ Data Sheet/Drg.	Appd Specn./ Data Sheet/Drg.	TC	3/2	-	1	Correlation required
		Leakproofness		Hydraulic test	100%	-do-	-do-	TC	3/2	-	1	
		Dimensions		Measurement	100%	-do-	-do-	IR	3/2	-	1	
1.2	Forging	Physical & Chemical Prop.		Physical & Chemical Prop.	1/heat	Appd Specn./ Data Sheet/Drg.	Appd Specn./ Data Sheet/Drg.	TC	3/2	-	1	Correlation required
		Dimensions		Measurement	100%	-do-	-do-	IR	3/2	-	1	
		Heat Treatment		Scrutiny	100%	-do-	-do-	HT/SR Chart	3/2	-	1	Correlation required
2.0	In Process											
2.1	Forgings	Internal defects		U.T	100%	ASTMA 435	ASTMA 435	IR	3/2	-	1	
2.2	Machining Body Internals	Dimensions		Measurement	100%	Appd.Drg.	Appd.Drg.	IR	3/2	-	1	Correlation required
2.3	Body	Surface Defects		D.P. Check	100%	ASTME165	ASME-B 16.34 ,Appendix-III	TC	3/2	-	1	

PARTICULARS	CUSTOMER/CONSULTANT	BHEL	BIDDER / VENDOR	BIDDER'S/ VENDOR'S COMPANY SEALS
NAME				
SIGNATURE				
DATE				

SPECIFICATION
NUMBR

SPECIFICATION TITLE : **AUXILIARY STEAM P.R.D.S**

SECTION	VOLUME
---------	--------

2.4	WPS,PQR,WPQ	WPS,PQR,WPQ		Physical	100%	ASME Sec-IX/IBR	ASME Sec-IX/IBR	Format	3/2	-	1	Records to be shown
3.0	Final Inspection											
3.1	Assembly	Completeness and Marking		Visual	100%	Appd Specn./Data Sheet/Drg.	Appd Specn./Data Sheet/Drg.	IR	3/2	1	-	
		Dimensional		Measurement	100%	Appd Specn./Data Sheet/Drg.	Appd Specn./Data Sheet/Drg.	IR	3/2	1	-	
3.2	Pressure Test	Leak Proofness		Hydraulic Test	100%	-do-	-do-	IR	3/2	1	-	
4.0	Painting	Surface Prepn., Uniformity, Shade & Thick.		Visual, Measurement	100%	-do-	-do-	IR	3/2	-	1	
5.0	Packing	Soundness of Packing, Marking		Visual	100%	Appd Specn./Mfr. Standard	Appd Specn./Mfr. Standard	IR	3/2	-	1	
Note:: IBR –Certificate in Form III C shall be submitted.												

PARTICULARS	CUSTOMER/CONSULTANT	BHEL	BIDDER / VENDOR	
NAME				
SIGNATURE				
DATE				
				BIDDER'S/ VENDOR'S COMPANY SEALS



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
5X800MW YADADRI TPS**

SPECIFICATION NO. PE-TS-417-166-A001

SECTION 'I-A'

REVISION 00

DATE: 26.04.2018

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SECTION: I-A

**FUNCTIONAL / PERFORMANCE / DEMONSTRATION / GUARANTEE
TESTS**



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
5X800MW YADADRI TPS**

SPECIFICATION NO. PE-TS-417-166-A001

SECTION 'I-A'

REVISION 00

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Following test to be conducted by vendor on completion of FOHS for ascertaining performance of the system:

- 1) Shop test report shall be considered for pump guaranteed for capacity and total dynamic head.
- 2) Unloading pump vibration and noise within limit at site.
- 3) Drain oil pump and sump pump noise and vibration under limit at site.
- 4) Water filled test on tank and other test as indicated in IS803 / API650 for tank leakage etc. will be carried out for tank stability.
- 5) Tank temperature and suction heater outlet temperature measurement.
- 6) Entire piping and support for smooth operation: Hydro test shall be carried out for checking the weld tightness and support checking.
- 7) Operation of the complete system as per Control philosophy.

Above test will be demonstrated at the time of commissioning of FOHS and based on same system performance will be ascertained.



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
5X800 MW YADADRI TPS**

SPECIFICATION NO. PE-TS-417-166-A001

SECTION 'IA'

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DATE: 26/04/2018

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ANNEXURE-A, FUEL OIL ANALYSIS

HEAVY FUEL OIL (HFO) ANALYSIS AS PER IS 1593, 1982 (GRADE-HV)

Sl no.	Characteristics	Heavy Furnace Oil IS-1593,(Latest Revision)- Grade HV
1.1	Total Sulphur content Max. (By Weight)	4.5% Max
1.2	Gross calorific value (Kcal/kg)	10,000
1.3	Flash point (Min.)	66°C
1.4	Water content by volume (Max.)	1.00%
1.5	Sediment by weight (Max.)	0.25%
1.6	Density at 15° C(Approximate), Kg/m ³	890-950
1.7	Kinematic viscosity in centistokes at 50°C (Max.)	370
1.8	Ash content by weight (Max.)	0.10%
1.9	Pour Point (Max.)	20°C - 25°C (max)
	Total Sulphur percent by mass, Max.	4.5

* - assumed value: to be confirmed by customer / consultant

LIGHT DIESEL OIL (LDO) ANALYSIS AS PER IS 15770: 2008

Sl No.	Characteristics	Light Diesel Oil (LDO)
1.1	Kinematic Viscosity in centistokes at 40° C	2.5 to 15.7
1.2	Acidity (inorganic)	Nil
1.3	Waste content percent by volume (Max.)	0.25
1.4	Sediment percent by mass (Max.)	0.10
1.5	Total Sulphur percent by mass, Max.	1.5
1.6	Ash percentage by mass (Max.)	0.02
1.7	Water Content Max, % Volume	0.25
1.8	Density at 15°C(approximate), Kg/m ³	850-870
1.9	a) Flash point, Min- Pensky Martens b) Pour point:	66°C 21°C in Summer and 12°C in Winter
1.10	Gross calorific value (Kcal/kg)	10000-10500
1.11	Carbon Residue (Ramsbottom) percent by mass (Max.)	1.5

5 X 800MW YADADRI TPS

TECHNICAL SPECIFICATION
FOR
FUEL OIL UNLOADING & STORAGE SYSTEM

ANNEXURE - B
(SUB-VENDOR LIST)



BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR PROJECT ENGINEERING MANAGEMENT
PPEI, NOIDA-INDIA



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
SUB-VENDOR LIST**

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SUB-VENDOR LIST - FUEL OIL UNLOADING AND STORAGE SYSTEM

SL. NO	ITEM	SUB-VENDORS	PLACE	TECHNICAL LIMIT
MECHANICAL				
1	GATE, GLOBE AND CHECK (CARBON STEEL VALVES)	A.V. VALVES LTD	AGRA	
		ATAM VALVES PVT. LTD.	JALANDHAR	
		FLUIDLINE VALVES COMPANY PVT.LTD.	GHAZIABAD	
		M/S GM ENGINEERING	RAJKOT	
		INTERVALVE (INDIA) LTD.	PUNE	A) STEEL GATE VALVES: UPTO 50NB, #800 AND 65NB TO 150NB, #150 B) STEEL GLOBE VALVES: UPTO 50NB, #800 AND 65NB TO 100NB, #150 C) SUPPLIER NOT REGISTERED FOR NR VALVES
		LEADER VALVES LTD.	JALANDHAR	
		NITON VALVE INDUSTRIES PVT LTD	MUMBAI	
		NSSL LIMITED.	NAGPUR	
		STEEL STRONG VALVES (I) PVT.LTD.	MUMBAI	LIMIT AS PER VD FILE AS ATTACHED IN SHEET 2
		VENUS PUMPS AND ENGG. WORKS	KOLKATA	CC/CSS-GATE-BBT-UPTO600NB CL UPTO300,GATE-PSBT UPTO250NB CL 1500,GLV-BBT-UPTO300NB CL UPTO600,SCNRV-BBT-UPTO600NB CL UPTO150,SCNRV-BBT-UPTO300NB CL 300,SCNRV-PSBT-UPTO150NB CL UPTO900
		VALTECH INDUSTRIES	MUMBAI	CAST CARBON & ALLOY STEEL - VALVE/RATING/SIZE- GV/150/900,GV/300/400, GV/600/300, GV/GLV/NRV/900/250, GLV/300/300,GLV/150/350/, SCNRV/150/700, SCNRV/300/350, SCNRV/600/250.
		V.K. VALVES PVT. LTD.,	JALANDHAR	
		WEIR BDK VALVES	NEW DELHI	
		AUDCO -L&T	CHENNAI / COIMBATORE	
		OSWAL INDUSTRIES		
		HITECH	AHMEDABAD	
		KSB WATER PUMPS / VALVES	COIMBATORE	
		KBL	KONDHAPURI	
		HAWA ENGINEERS	AHMEDABAD	
		BHEL	GOINDWAL	
		FOURESS ENGG	MUMBAI	UPTO 600 NB, CL-300 & 300NB CL-600
		FOURESS ENGG	AURANGABAD	



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
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2	CS BALL VALVES	A.V. VALVES LTD	AGRA	
		AKAY INDUSTRIES PVT.LTD.	DHARWAD	
		BELGAUM AQUA VALVES PVT. LTD.	BELGAUN	
		ASIAN INDUSTRIAL VALVES & INSTRUMENTS.	CHENNAI	
		ATAM VALVES PVT. LTD.	JALANDHAR	(1) BALL VALVES: FCS/FSS - 1/2" TO 2" #800 & CCS/CSS - 2.1/2" TO 4" # 150 (2) BALL VALVES: GUN METAL VALVES SIZE 15 NB TO 80 NB - UPTO PN16.0
		DEMBLA VALVES LTD.	THANE	
		M/S GM ENGINEERING	RAJKOT	
		HAWA VALVES (INDIA) PVT. LTD.	THANE	SIZE UP TO 2" & #800 WITH MOC AS FCS & FSS AND FOR SIZE FROM 65 NB TO 150 NB & #150 WITH MOC AS CCS AND CSS.
		INTERVALVE (INDIA) LTD.	PUNE	STEEL BALL VALVES UPTO 50NB, #800 AND 65NB TO 150NB. #150
		LEADER VALVES LTD.	JALANDHAR	CAST STEEL UPTO 200 MM, CLASS 150/300.
		MICROFINISH VALVES PVT LTD.	HUBLI	
		NILON VALVES PRIVATE LIMITED	AHMEDABAD	
		SURYA VALVES AND INSTRUMENTS MFG CO.	CHENNAI	FOR CARBON STEEL/STAINLESS STEEL UPTO SIZE 200NB.
		UNIFLOW	CHENNAI	
		VALTECH INDUSTRIES	MUMBAI	FORGED CARBON & ALLOY STEEL BALL VALVES, SCREWED TYPE BALL VALVES RATING 800, SIZES UPTO 50 & CC& ALLOY STEEL BALL VALVES RATING 150 , SIZES 65 TO 200 FLANGED TYPE.
		VAAS AUTOMATION PVT. LTD.	DELHI	
		WEIR BDK VALVES- A UNIT OF WEIR INDIA PVT. LTD.	DELHI	
		PEC	NASHIK	(UPTO 400 NB CLASS 150)
		L&T VALVES	COIMBATORE	
		L&T VALVES (AUDCO)	CHENNAI	
		FLOW CHEM	AHMEDABAD	(UPTO 350 NB CLASS 150)
		BELGUAM AQUA VALVES	BELGAUM	UPTO 200 NB, CL 150
3	CS PLUG VALVES	FLOWSERVE (AUDCO)	CHENNAI	
		MICROFINISH	HUBLI	
		WEIR BDK	HUBLI	UPTO 150 NB CLASS 300 & UPTO 400 NB CLASS 150
		FISHER XOMOX	CHENNAI	
		LEADER VALVES LTD.	JALANDHAR	
4	SUMP PUMP (VERTICAL	DARLING PUMPS PVT. LTD	INDORE	
		FLOWMORE LTD.	GURGAON	



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
SUB-VENDOR LIST**

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	CENTRIFUGAL)	SU MOTORS PVT. LTD.	MUMBAI	
		VARAT PUMP AND MACHINERY PVT. LTD.	KOLKATA	
		WPIL LIMITED	KOLKATA	
		SAM TURBO INDUSTRY LTD	COIMBATORE	
		KISHORE	PUNE	
		AQUA MACHINERY	AHMEDABAD	
		FLOWMORE PUMP	GHAZIABAD	
		M&P	PUNE	
		B & C ENGG(BECON WEIR)	CHENNAI	
5	SCREW PUMPS	ROTO PUMPS	NOIDA	
		TUSHACO	MUMBAI	
		UT PUMPS	FARIDABAD	
6	API 5L ERW PIPE	TISCO	JAMSHEDPUR	
		SURYA ROSHNI	BAHADURGARH	UP TO 400 NB
		JINDAL	GHAZIABAD	UP TO 350 NB
		MSL	RAIGAD	200 TO 500 NB
		SAIL	ROURKELA	
		RATNAMANI	KUTCH	UP TO 400 NB
7	ASTM A 106, CS SEAMLESS PIPE	ISMT	AHMED NAGAR	UP TO 150 NB
		MSL	RAIGAD	UP TO 350 NB
		JINDAL SAW LTD	NASHIK	
		REMI METAL GUJRAT LTD	BHARUCH	UP TO 150 NB HOT FINISH & UPTO 100NB COLD FINISH
		ISMT	BARAMATI	UP TO 200 NB
8	CS ERW PIPE (IS 1239 / 3589)	SURYA ROSHNI	BAHADURGARH	UPTO 400 NB ERW PIPES AS PER IS 1239/3589 AND SAW AS PER IS 3589
		JINDAL	GHAZIABAD/HISSAR	UP TO 350 NB
		MSL	RAIGAD	200-500 NB ERW PIPES AS PER IS 3589
		SAIL	ROURKELA	
		WELSPUN	ANJAR/BHARUCH	UPTO 400 NB ERW PIPES AS PER IS 1239/3589 AND SAW AS PER IS 3589
		INDUS TUBE	GAUTAM BUDDH NAGAR	UP TO 300 NB
		RATNAMANI	KUTCH /AHMEDABAD / CHHATRAL	UPTO 400 NB ERW PIPES AS PER IS 3589 AND SAW AS PER IS 3589
		TATA TUBE	JAMSHEDPUR	UPTO 150 NB ERW PIPES AS PER IS 1239
		PSL	CHENNAI/VIZAG/ KUTCH/DAMAN	SPIRAL WELD SAW AS PER IS 3589
		LALIT PROFILE	THANE	SPIRAL WELD SAW AS PER IS 3589
		SAMSHI PIPES INDUSTRIES	VADODARA	SPIRAL WELD SAW AS PER IS 3589



**TECHNICAL SPECIFICATION FOR
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		MUKUT PIPES	RAJPURA	LONGITUDINAL SAW (SINGLE SIDE WELD) AS PER IS 3589
		INDUS TUBES	G B NAGAR	UPTO 300 NB ERW PIPES AS PER IS 1239/3589
		MANN IND	INDORE	SPIRAL WELD SAW AS PER IS 3589
		SURENDRA ENGG	RAJPURA	SPIRAL WELD SAW AS PER IS 3589
		PRATIBHA PIPES & STRUCTURE PVT LTD	THANE	SPIRAL WELD SAW AS PER IS 3589
		JCO GAS PIPE	CHINDWARA	SPIRAL WELD SAW AS PER IS 3589
		NUKAT TANKS AND VESSELS	TARAPUR	LONGITUDINAL SAW (SINGLE SIDE WELD) AS PER IS 3589
		DADU PIPES	SIKRANDRABAD	UPTO 300 NB ERW PIPES AS PER IS 1239/3589
		APL APOLLO TUBES LTD	SIKRANDRABAD	IS3589 UPTO 250 NB
9	SUCTION HEATER	PARKAIRE	DELHI	
		MVS	DELHI	
		MELCON	DELHI	
		GASO ENERGY	PUNE	
		INDCON	DELHI	
		TEMASME	NOIDA	
10	PRESSURE REDUCING VALVE & DESUPERHEATER	CIRCOR (EARLIER MAZDA)	AHMEDABAD	
		SPIRAX MARSHALL	PUNE	
		LEADER VALVES LTD.	JALANDHAR	
		SPX CORPORATION, USA	M/S SPX FLOW TECHNOLOGY INDIA PVT. LTD, GUJARAT	
		CONTROL COMPONENT INDIA PVT. LTD.	NOIDA	
		DAUME REGELARMATUREN GMBH,	GERMANY	
		HOLTER REGELARMATUREN GMBH & CO.	GERMANY	
		INSTRUMENTATION LTD.	PALAKKAD	
11	STRAINERS (DUPLEX / SIMPLEX BASKET TYPE)	GENERAL MECHANICAL WORKS PVT LTD	VADODARA	
		GRAND PRIX	FARIDABAD	
		GUJARAT OTOFILT	VATVA , AHMEDABAD	
		FILTRATION ENGRS	MUMBAI	
		JAYPEE INDUSTRIES PVT. LTD.	NEW DELHI	
		MULTITEX FILTRATION ENGINEERS LIMITED,	NEW DELHI	
		OTOKLIN GLOBAL BUSINESS LIMITED	MUMBAI	
		BHATIA ENGINEERING CO.	NEW DELHI	SIMPLEX ONLY
		FILTRATION ENGINEERS (I) PVT. LTD.	MUMBAI	SIMPLEX ONLY
		SUNGOV ENGINEERING PVT. LTD.	CHENNAI	



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
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		SAROJINI ENTERPRISE	HOWRA	SIMPLEX ONLY
		SPX CORPORATION, USA	M/S SPX FLOW TECHNOLOGY INDIA PVT. LTD. (AHMEDABAD)	
		CONTROL COMPONENT INC.	USA	
		DRESSER VALVE INDIA PVT. LTD	COIMBATORE	
		DAUME REGELARMATUREN GMBH,	GERMANY	
		EMERSON PROCESS MANAGEMENT CHENNAI LIMITED	CHENNAI	
		FORBES MARSHALL ARCA PVT.LTD.	PUNE	
		WEIR VALVES & CONTROLS UK LTD.	UK	
		HOLTER REGELARMATUREN GMBH & CO.KG	GERMANY	
		INSTRUMENTATION LTD.	PALAKKAD	
		KOSO INDIA PRIVATE LIMITED,	NASHIK	
		LESLIE CONTROLS, INC	USA	
		MIL CONTROLS LTD.	THRISSUR	
		METSO SINGAPORE PTE. LTD.,	SINGAPORE	
		PARCOL S.P.A	ITALY	
		R.K.CONTROL INSTRUMENTS PVT. LTD.	THANE	
		RINGO VALVULAS S.L,	SPAIN	
		SEVERN GLOCON INDIA PVT. LTD.	CHENNAI	
		SHENJIANG VALVE CO. LTD.	CHINA	
		VALVITALIA S.P.A. ,	ITALY	
		WALDEMAR PRUSS ARMATURENFABRIK GMBH	GERMANY	
12	CONTROL VALVE			
		SPIRAX MARSHALL	PUNE	MAIN CONTRACTOR COC +MANUFACTURER STANDARD TC SHALL BE SUBMITTED FOR ISSUING DESPATCH CLEARANCE
		UNIKLINGER	PUNE	
		LEADER	JULLANDHAR	
		CRECENT VALVE MFG CO LTD	MUMBAI	
		PENNANT ENGINEERING	PUNE	
		GOENKA ROCKWOOL (INDIA) PVT.LTD.	RAIPUR	
		LLOYD INSULATIONS (INDIA) LTD.	NEW DELHI	
		MINWOOL ROCK FIBRES LTD.	RAJNANDGAON	
		POLYBOND INSULATION PRIVATE LIMITED,	BHILAI	
		ROCKWOOL (INDIA) PVT. LTD.	HYDERABAD	
		SHREERAM EQUITECH PRIVATE LIMITED	DURG	
		THERMOCARE ROCKWOOL INDIA PRIVATE LTD.	CHATTISGARH	
13	STEAM TRAP			
14	THERMAL INSULATION			



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		LOPINUS ROCKWOOL	GWALIOR	
15	STRUCTURAL STEEL / MS-PLATE	SAIL		
		ESSAR STEEL		
		TISCO		
		RINL		
		JINDAL		
		M/S UTTAM VALUE STEEL (LLOYDS)		
		ISPAT		
		JSW		
		INDIAN IRON & STEEL CO. LTD		
16	SAFETY RELIEF VALVE	SPIRAX MARSHALL	PUNE	
		FISCHER SANMAR	CHENNAI	
		BHEL	TRICHY	
		KEYSTONE	BARODA	
		LEADER	JULLANDHAR	
17	PAINT	ASIAN PAINT		
		BERGER		
		KANSAI NEROLAC		
		JOTUN		
		SHALIMAR		
		JENSON & NICHOLSON (I) LTD		
		CDC CARBOLINE (I) LTD.		
		ADDISON PAINTS LTD		
		GRAND POLYCOAT		
		BOMBAY PAINTS		
		HEMPLE PAINTS (SINGAPORE)		
18	FITTINGS (MS/SS)	AKZONOBEL COATINGS		
		PIPE FIT ENGINEERS	VADODARA	
		GUJRAT INFRA PIPES	VADODARA	
		MS FITTINGS	KOLKATA	
		TUBE PRODUCT	VADODARA	
		SIDDARTH & GAUTAM	FARIDABAD	
		EBY	MUMBAI	
		NL HAZRA	KOLKATA	
		EXCEL METAL		
		INTERTECH		
		FITTECH		
		METAL LLOYDS	MUMBAI	
		TRUE FORGE	FARIDABAD	
19	OIL HOSE	D WREN & CO	KOLKATA	
		SUDEEP INDUSTRIES	KOLKATA	
		HYDROKRIMP	MUMBAI	
		PRESIDENCY RUBBER	KOLKATA	



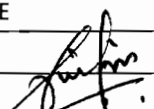
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20	STEAM AND CONDENSATE HOSE	ALLZFLEX ENGINEERS	VADODARA	
		SUDEEP INDUSTRIES	KOLKATA	
21	FLOWMETER (CORIOLIS TYPE)	EMERSON PROCESS MANAGEMENT	CHENNAI	
		E&H	CHENNAI	
		KROHNE MARSHALL	PUNE	
22	ALUMINUM CLADDING	BHARAT ALUMINIUM COMPANY LTD	DELHI	
		CHONGQING LANREN ALUMINIUM CO. LTD., CHINA	CHINA	
		HINDALCO INDUSTRIES LTD	MUMBAI	
		NATIONAL ALUMINIUM COMPANY LTD.	ODISHA	
23	METALLIC EXPANSION BELLOWS	AEROSUN TOLA EXPANSION JOINT CO. LTD.,	CHINA	
		B. D. ENGINEERS	AHMEDABAD	
		FLEXICAN BELLOWS AND HOSES PVT. LTD.	BARODA	
		FLEXATHERM EXPANLLOW PVT. LTD.	VADODARA	
		LONESTAR INDUSTRIES	CHENNAI	
		MB METALLIC BELLOWS PVT. LTD.	CHENNAI	
		METALLIC BELOWS INDIA PVT. LTD.	CHENNAI	
		QINHUANGDAO NORTH METAL HOSE CO. LTD.,	CHINA	
		TEDDINGTON ENGINEERED SOLUTIONS LTD.	UK	
ELECTRICAL AND C&I				
24	LEVEL TRANSMITTER (RADAR AND ULTRASONIC TYPE)	K TEK (ABB)	FARIDABAD	
		E & H	AURANGABAD	
		MEGNETROL	BELGIUM	ONLY RADAR TYPE
		EMERSON PROCESS MGT	PAWANE	
		MOORE INDUSTRIES INTERNATIONAL INC.	USA	
		SIEMENS LIMITED	MUMBAI	
		SMART INSTRUMENTS LTD, BRAZIL	MUMBAI	LD-301 & T-301 TRANSMITTER FROM M/S SMART EQUIPMENTS BRAZIL.
		HONEYWELL AUTOMATION INDIA LIMITED	DELHI	
		TOSHNIWAL INDUSTRIES PVT. LTD.,	AJMER	
		V. AUTOMAT & INSTRUMENTS (P) LTD.	DELHI	
		YOKOGAWA INDIA LIMITED,	BANGALORE	
		SIEMENS MILTRONICS	CANADA	ONLY RADAR TYPE
		NIVELCO	HUNGARY	ONLY RADAR TYPE
		HAWK	AUSTRALIA	ONLY RADAR TYPE
25	LT MOTORS	CROMPTON GREAVES LIMITED	AHMEDNAGAR	
		KIRLOSKAR ELECTRIC COMPANY	BANGALORE /	



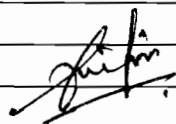
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	LT MOTORS		HUBLI	
		SIEMENS	MUMBAI	
		ABB	BANGALORE / FARADABAD	
		BHARAT BIJLEE	MUMBAI	
		JYOTI	VADODARA	
		MARATHON	KOLKATA	
		NGEF	BANDALORE / HUBLI	
		BHARAT ELECTRIC (BHEL)		
		LHP	SOLAPUR	
26	PRESSURE / DP / TEMP.SWITCH	SOR	USA	
		GIC(GAUGES BOURDON)	PANVEL	
		HERION	GERMANY	
		ITT BARTON	USA	
		DELTA CONTROL	UK	
		ASHCROFT	USA / GERMANY	
		TRAFAG	RANIPET	
		INDFOSS	GHAZIABAD	
		ASHCROFT	GANDHINAGAR	
		SWITZER	CHENNAI	EXCEPT 9000 SERIES
27	LEVEL INDIATOR FLOAT AND BOARD TYPE	FLOW STAR	FARIDABAD	
		SCIENTIFIC DEVICES	MUMBAI	
		GAUGES BOURDEN	PANVEL	
		PUNE TECH TROL	PUNE	
		SBEM	PUNE	
		LEVCON	KOLKATA	
		SIGMA	MUMBAI	
		CHEMTROL		
		DK INSTRUMENT	KOLKATA	
		V AUTOMAT	DELHI	
28	PRESSURER / DP GAUGE / TEMPERATURE GAUGE (DIAL TYPE)	H GURU (SI)	BANGALORE	
		H GURU INDUSTRIES	MUZAFFARPUR / RISHRA	
		AN INSTRUMENT	KOLKATA	
		GOA THERMOSTATIC	GOA	
		WAAREE	VAPI	
		MANOMETER	MUMBAI	
		GLUCK	MUMBAI	
		FORBES MARSHALL	HYDERABAD	
		ASHCROFT	GANDHINAGAR	
		WIKA	PUNE	
		GAGES BOURDON	MUMBAI / GOA	
		BAUMER TECHNOLOGIES INDIA PVT. LTD.	MUMBAI	
				



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		BOSE PANDA INSTRUMENTS PVT.LTD.	KOLKARA	ONLY PRESSURE AND DP GAUGE
		BUDENBERG GUAGE CO.LTD.	UK	ONLY TEMPERATURE GAUGE
		GOA INSTRUMENTS INDUSTRIES PVT.LTD.,	GOA	
29	RTD /THERMOCOUPLE ASSEMBLY	PYROELECTRIC	GOA	
		GIC(THERMAL INSTRUMENTS)	MAHARASHTRA	
		TEMPSENS	UDAIPUR	
		DETRIVE	MUMBAI	
		TECHNO INSTRUMENTS	GUJRAT	
		TEMPSENS INSTRUMENT (I) PVT LTD	UDAIPUR	
		TM TECNOMATIC SPA	ITALY	
		TOSHNIWAL INDUSTRIES PVT. LTD.,	AJMER	
		THERMAL INSTRUMENT INDIA PVT. LTD.	MUMBAI	
		BAUMER TECHNOLOGIES INDIA PVT. LTD.	MUMBAI	
		GOA INSTRUMENTS INDUSTRIES PVT.LTD.,	GOA	
30	ELECTRICAL ACTUATORS	ROTORK	BANGALORE	
		ROTORK	CHENNAI	
		AUMA	BANGALORE	
		LIMITORK	FARIDABAD	
31	LEVEL SWITCH (FLOAT AND DISPLACER TYPE)	TRAC	HYDERABAD	
		LEVCON	KOLKATA	
		DK INSTRUMENTS	KOLKATA	
		SBEM	PUNE	
		SBEM	PUNE	
		FLOW STAR	FARIDABAD	
		SIGMA	MUMBAI	
		V AUTOMAT	DELHI	
32	TEMPERATURE TRANSMITTER	EMERSON PROCESS MGT	PAWANE	
		MOORE	USA	
		ABB	FARIDABAD	
		YOKOGAWA	BANGLORE	MAKE YOKOGAWA, JAPAN
		ABB LIMITED	FARIDABAD	
		ENDRESS + HAUSER (INDIA) PVT. LTD.,	DELHI	
		MOORE INDUSTRIES INTERNATIONAL INC.	USA	
		SIEMENS LIMITED	MUMBAI	
		SMART INSTRUMENTS LTD, BRAZIL	MUMBAI	
		HONEYWELL AUTOMATION INDIA LIMITED	DELHI	
		TOSHNIWAL INDUSTRIES PVT. LTD.,	AJMER	
		YOKOGAWA INDIA LIMITED,	BANGALORE	



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33	AIR FILTER REGULATOR	PLACKA INSTRUMENT	CHENNAI	
		SHAVO NORGEN	MUMBAI	
		FISHER SANMAR	CHENNAI	
34	SOLENOID VALVE	AVCON	MUMBAI	
		ROTEX	BARODA/VV NAGAR	
		SMC	NOIDA	
		NUCON	HYDERABAD	
		ASCO	CHENNAI	
35	LOCAL CONTROL PANEL	PYROTECH	UDAIPUR	
		POSITRONICS	VADODARA	
		JACKSON	NOIDA	
		CONTROL DEVICE	KOLKATA	
		ROCKWELL AUTOMATION INDIA LTD	GHAZIABAD	
		SIEMENS LIMITED	DELHI	
		SCHNEIDER ELECTRIC INDIA PVT.LTD.	DELHI	
		JOSPER	NOIDA	
		I C A	MUMBAI	
		INDIAN SWITCH GEAR	VADODARA	
		SWITCHING CKT	KOLKATA	
36	JUNCTION BOX	PYROTECH	UDAIPUR	
		POSITRONICS	VADODARA	
		JACKSON	NOIDA	
		CONTROL DEVICE	KOLKATA	
		JOSPER	NOIDA	
		I C A	MUMBAI	
		AJMERA INDUSTRIAL & ENGINEERING WORKS	MUMBAI	
		FLEXPRO ELECTRICALS PVT. LTD.	GUJARAT	
		K.S.INSTRUMENTS PVT.LTD.	BANGALORE	
		SUCHITRA INDUSTRIES	BANGALORE	
		SHRENIK & COMPANY,	AHMEDABAD	
		HOFFMAN	BANGALORE	
		RITTAL	BANGALORE	
		SWITCHING CKT	KOLKATA	
37	CABLE LUGS (NON FLAME PROOF)	3D	UMERGAON	
		DOWELL	MUMBAI	
		CHITRA	NASIK	
38	CABLE GLANDS (NON FLAME PROOF)	ARUP	KOLKATA	
		SUNIL	KOLKATA	
		QPIE	KOLKATA	
		COMMET	MUMBAI	
39	CABLE GLAND,	AJMERA	MUMBAI	



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	LUGS, JB (FLAME PROOF)	BALIGA	CHENNAI	
		FLEXPRO	NAVSARI	
40	BATTERY CHARGER FOR PLC	CHLORIDE POWER	KOLKATA	
		CHABBI	JALGAON	
		AMAR RAJA	TIRUPATI	
		STATCON	NOIDA	
		HBL POWER SYSTEM	HYDERABAD	
		JEMA ENERGY	SPAIN	
		MASS-TECH CONTROLS PVT.LTD.	MUMBAI	
		DUBAS	BANGALORE	
		CALDYNE	KOLKATA	
41	DC LEAD ACID / NI- CD BATTERIES	AMCO SAFT INDIA LTD	BANGALORE	NI-CD BATTERIES ONLY
		EXIDE INDUSTRIES LTD	DELHI	LEAD ACID BATTERIES ONLY.
		HBL POWER SYSTEMS LTD	HYDERABAD	NI/CD AND TUBULAR TYPE FOR LEAD ACID
		HOPPECKE BATTERIEN GMBH & CO.KG,	GERMANY	
		AMAR RAJA	TIRUPATI	
		SAFT	FRANCE/SWEDEN	
42	CONTROL / POWER CABLE	CORDS CABLE	BHIWADI	
		RADIANT CABLES	HYDERABAD	
		POLYCAB	DAMAN	
		KEI	BHIWADI	
		NICCO	KOLKATA	
		RAVIN CABLES	PUNE	
		INCAB	PUNE	
		HVPL	FARIDABAD	
		TORRENT CABLE	NADIAD	
		HAVELLS	ALWAR	
		PARAMOUNT	KHUSHKHERA	
		SRI RAM CABLES	BHIWADI	
		THERMOCABLES	HYDERABAD	
		TORRENT CABLE	NADIAD	
		UNIVERSAL CABLES	SATNA	
		GEMSCAB	BHIWADI	
		DELTON	FARIDABAD	
43	PLC BASED PANELS	SIEMENS	NASIK	
		SCHNEIDER	NASIK	
		ROCKWELL	SAHIBABAD	
		GE INTELLIGENT PLATFORM	BANGALORE	
		HONEYWELL AUTOMATION INDIA LIMITED ,	PUNE	
		ABB	BANGALORE	
44	OWS/PC	HP/COMPAQ /DELL/HCL/IBM/LENOVO		



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45	PRINTER	HP/CANNON/EPSON/XEROX/IBM/L EXMARK		
6	INSTRUMENT FITTINGS	AURA INCORPORATED	DELHI	
		ASTEC VALVES & FITTINGS PVT. LTD.,	MUMBAI	
		ARYA CRAFTS & ENGINEERING PVT. LTD.	MUMBAI	
		COMFIT & VALVE PVT. LTD.	NANDASAN	
		FLUIDFIT ENGINEERS PVT. LTD.	MUMBAI	REGISTERED AS PER 22ND ELECTRICAL AND C&I MISCC MEETING DTD. 15.01.2014
		FLUID CONTROLS PVT. LTD.	MUMBAI	NAME CHANGED FROM M/S HYD- AIR VALVES PVT. LTD. TO M/S FLUID CONTROLS PVT. LTD. AS PER 25TH MISCC-ELECTRICAL AND C&I DTD. 20.02.2014
		HP VALVES & FITTINGS INDIA PVT. LTD.	CHENNAI	
		PRECISION ENGINEERING INDUSTRIES	MUMBAI	
		PANAM ENGINEERS,	MUMBAI	
		PERFECT INSTRUMENTATION CONTROL (INDIA) PVT. LTD.	MUMBAI	
		VIKAS INDUSTRIAL PRODUCTS	NOIDA	FINANCIAL LIMIT REVIEWED ON 05.06.2014
47	CABLE TRAY SUPPORT SYSTEM - BOLTABLE	AM-TECH ENGG.SERVICES	PUNE	
		INDUSTRIAL PERFORATION (I) PVT.LTD.	KOLKATA	
		INDMARK FORMTECH PVT. LTD.	PUNE	
		PREMIER POWER PRODUCTS (CAL) PVT. LTD.	KOLKATA	GALVANISATION TO BE DONE AT ITS OWN PLANT OR FROM BHEL- PEM APPROVED GALVANIZERS.
		RATAN PROJECTS & ENGINEERING CO. PVT.LTD.	KOLKATA	
		STEELITE ENGINEERING LTD.	MUMBAI	
48	CABLE TRAY SUPPORT SYSTEM- WELDED(GALV)	ASSOCIATED POWER STRUCTURES PVT. LTD.	G. I. D. C., MAKARPURA, VADODARA- GUJARAT	WORKS ADDRESSES ARE APPLICABLE FOR MANUFACTURING AND GALVANISING.
		INDUSTRIAL PERFORATION (I) PVT.LTD.	DUM DUM KOLKATA-WEST BENGAL	
		INDMARK FORMTECH PVT. LTD.	MIDC BHOSARI PUNE- MAHARASHTRA	GALVANIZING UNIT LOCATED AT PHAS-3, E-11/1, MIDC, PUNE ,
		JAMNA METAL COMPANY	DSIDC, NARLA INDL. AREA DELHI	
		PREMIER POWER PRODUCTS (CAL) PVT. LTD.	KOLKATA,-WEST BENGAL	GALVANISATION TO BE DONE AT ITS OWN PLANT OR FROM BHEL- PEM APPROVED GALVANIZERS.
		PATNY SYSTEMS (P) LTD	SARDAR PATEL	



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	CABLE TRAY SUPPORT SYSTEM- WELDED(GALV)		ROAD SEUNDRABAD	
		PASSIVE INFRA PROJECTS PVT. LTD.	VAISHALI, PITAMPURA DELHI-	
		RUKMANI ELECTRICAL & COMPONENTS PVT LTD	KOLKATA-WEST BENGAL-INDIA	GALVANISATION TO BE DONE AT ITS OWN PLANT OR FROM BHEL- PEM APPROVED GALVANIZERS.
		RATAN PROJECTS & ENGINEERING CO. PVT.LTD.	P.K. TAGORE STREET, MAIN BUILDING KOLKATA-WEST BENGAL	GALVANISATION TO BE DONE AT ITS OWN PLANT OR FROM BHEL- PEM APPROVED GALVANIZERS. ADDITIONAL WORKS AT "SANKRAIL INDUSTRIAL PARK, BHAGABATIPUR MAUJA, DHULAGARH, HOWRAH- 711302" APPROVED
		RABI ENGINEERING WORKS PVT. LTD.	R.N. GUHA ROAD, DUM DUM, KOLKATA- WEST BENGAL	GALVANISATION TO BE DONE AT ITS OWN PLANT OR FROM BHEL- PEM APPROVED GALVANIZERS.
		SARAL INDUSTRIES	INDUSTRIAL AREA-1 SULTANPUR ROAD RAE BARELI-UTTAR PRADESH	REGISTERED IN PERMANENT CATEGORY ALONG WITH GALVANIZER M/S SARAL PROJECTS AND PROCESSORS , ,
		UNITECH FABRICATORS AND ENGINEERS PVT LTD	M.B.RAOD , BIRATI KALABAGAN KOLKATA KOLKATA-WEST BENGAL	GALVANISATION TO BE DONE AT ITS OWN PLANT OR FROM BHEL- PEM APPROVED GALVANIZERS.
49	CABLE TRAY SUPPORT SYSTEM- WELDED(UNGALV)	RASHTRIYA ISPAT NIGAM LIMITED	AMBAWADI AHMEDABAD-	
		STEEL AUTHORITY OF INDIA LTD.	ISPAT BHAWAN LODI ROAD NEW DELHI-	
50	CABLE TERM.& JOINT KITS	3M ELECTRO AND COMMUNICATION INDIA P.LTD	RAJENDRA PLACE, DELHI	
		HARI CONSOLIDATED PVT.LTD.,NEW DELHI	JHANDEWALAN, NEW DELHI-DELHI	HEAT SHRINKABLE TYPE ONLY.
		RAYCHEM RPG PRIVATE LIMITED	JANAKPURI NEW DELHI	
		YAMUNA CABLE ACCESSORIES PVT. LTD.	AMBALA ROAD, JAGADHRI YAMUNANAGAR- HARYANA	
51	LIMIT SWITCH	BCH	NEW DELHI	
		SIEMENS	NEW DELHI	
		JAIBALAJI	NEWDELHI	
52	ANNUNCIATOR	IIC	MUMBAI	
		MINILEC	AHEMDABAD	
		PROCON	CHENNAI	



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53	INTERPOSING RELAY	ECONIX	MUMBAI	
		PHEONIX	DELHI	
54	SELECTOR SWITCH	SCHENIDER	INDIA	
		SIEMENS	INDIA	
		L&T	INDIA	
		KAYCEE	INDIA	
55	INDICATION LAMPS, PUSHBUTTON, AUX. CONTACTOR, AUX. RELAYS	SCHENIDER	INDIA	
		SIEMENS	INDIA	
		ABB	INDIA	
		L&T	INDIA	
56	TIMER	BCH	INDIA	
		EAPL	INDIA	
57	PNEUMATIC ACTUATOR/CYLINDER(METALLIC)	SCHRADDER	MUMBAI	
		NUCON	HYDERABAD	
		ROTEX	MUMBAI	
		VAAS	CHENNAI	

The make of Sub-vendor items shall be generally as indicated above which is subject to customer / BHEL approval during detail engineering.

Make of any unlisted items shall be subject to customer / BHEL approval during detail engineering. For such items, bidder to furnish list of sub-vendors during detail engineering stage for Customer / BHEL's review and approval. Bidder shall furnish following supporting documentation within 1 month of placement of LOI. Thereafter no request for additional sub-vendor shall be entertained.

- Documentation to show that the equipment /system has been supplied for a plant of similar or higher capacity.
- Documentation in the form of certificate that the equipment/system has been operating satisfactorily for two years as on the scheduled date of bid opening.

The successful bidder will get the makes of all items approved from Customer/ Consultant during detail engineering within two months of placement of LOI. The complete list will be necessarily be submitted within one month of placement of LOI to ensure timely placement of order for BOIs

Bidder to assess the capability of their proposed sub-vendors in terms of preparation of drawings, calculations, documents, quality assurance, supply of material etc. as per project schedule before placing the order on them.

Dealers are not acceptable for any item of the package. Bidder shall procure all items including plates, structural, flanges; counter flanges etc. from approved sub vendor only.



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
5 X 800MW YADADRI TPS**

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SECTION 'I-A'

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ANNEXURE-C

DRAWINGS / DOCUMENTS SUBMISSION PROCEDURE



**TECHNICAL SPECIFICATION FOR
FUEL OIL HANDLING SYSTEM
5 X 800MW YADADRI TPS**

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DRAWING/DOCUMENT DISTRIBUTION LIST

All documents & drawings shall be in English and in metric units

SI		DCPL	TSGENCO EC	TSGENCO -SITE/ DCPL SITE	BHEL SITE	PMG BHEL	PEM/ UNITS/ PSSR	REMARKS
1	Master list of drawings / doc (duly indicating sch of submission)	Soft copy	Soft copy	Soft Copy	-	Soft copy	S	
2	Drawings / doc for Approval/Information (First Submission & After major changes)	Soft copy	Soft copy + 1 print	Soft copy + 1 print	-	Soft copy	S	
3	Return with comments/approval	S	Soft copy	Soft copy	-	Soft copy	Soft copy	
4	Drawings / Documents for approval (second & subsequent submissions till approval)	Soft copy	Soft copy	Soft copy	-	Soft copy	S	
5	Drawings / documents for distribution (Approved by TSGENCO)	1 print + Soft copy	1 print + Soft copy	2 print + Soft copy	6 prints + Soft copy	Soft copy	S	
6	Erection Drawings / documents	-	1 print	3 prints	6 prints	-	S	
7	FINAL Erection / Installation Manual for distribution	-	1 print+ Soft copy	2 prints+ Soft copy	3 prints+ Soft copy	Soft copy	S	
8	As built Drawings / documents	-	1 print+ Soft copy	3 prints+ Soft copy	2 prints+ Soft copy	Soft copy	S (As applicable)	
9	Operation & Maintenance Manual	-	1 print + Soft copy	3 prints+ Soft copy	2 prints+ Soft copy	Soft copy	S	
10	Performance & functional Guarantee test reports	Soft copy	1 print + Soft copy	3 prints + Soft copy	2 prints + Soft copy	Soft copy	S	
11	Type Test Certificate	Soft copy	1 print + Soft copy	Soft copy	Soft copy	Soft copy	S	
12	Commissioning & Performance Procedure Manual	Soft copy	1 print+ Soft copy	3 prints+ Soft copy	2 prints+ Soft copy	Soft copy	S	
13	Project Completion Report	Soft copy	1 print+ Soft copy	3 prints+ Soft copy	2 prints+ Soft copy	Soft copy	S	

NOTES:

- The above schedule of submission does not include Docs/Drgs. of quality assurance/inspection and delivery/dispatches.
- Date of submitting soft copy is to be taken as date of submission.
- S – Source for generation of document.

After final approval, BHEL UNITS/ PEM will provide 1 no. hard copy to TSGENCO, Hyderabad Office and 3 nos. hard copies to YADADRI Office.