



BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR

STE-TL ENGINEERING DEPARTMENT

PRE-QUALIFICATION REQUIREMENT Dirt Catcher

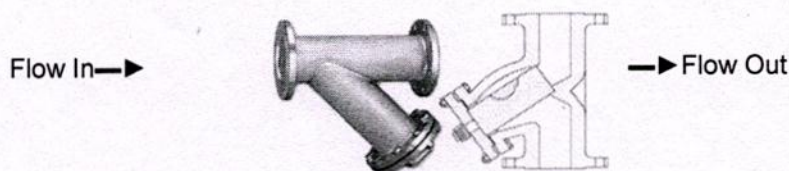
DOCUMENT NO.
PED/DirtC/PQR/20200001
Rev:00 Dt:03.06.2020

The Pre- Qualification Requirements pertaining to Engineering are as follows:

- The vendor should have an experience in Supply of Dirt Catcher (Y Strainer) in at least 2 different power plants/ process Industries having minimum spec condition as mentioned below. Vendor to furnish experience list as per requirement in Table-1

Table-1

	Size (NB mm)	Pressure (ATA)	Flow rate (Kg/Sec)	Apertur e size (mm)	End User /customer name	Contact details, Tel no's & Email id of End user	Execute d PO and date
Minimum acceptance criteria	40	64	2.08	≤0.6			
Project-1							
Project-2							



- The vendor should furnish the following documents satisfying criteria in clause 1 above -
 - Executed Purchase Orders should not be older than 7 years, as on the date of enquiry.
 - Vendor to submit self-certified unpriced purchase order copies (as mentioned at 2a) along with all Technical documents i.e. GA Drawing (Containing Size, pressure, flow rate, aperture size) etc.

Note:-

- BHEL reserves the right to verify the information submitted by vendor. Submission of false/incorrect information shall lead to rejection of offer and shall be taken seriously by BHEL.
- BHEL reserves the right to ask for more pertinent information /documents / clarifications. Vendor shall provide this information to BHEL in a timely manner so that project schedule doesn't hamper.
- All the documents furnished to BHEL shall be in Hindi/English language only. If the documents are not in Hindi/English, then they must be accompanied with duly certified Hindi/English translations of the same.

----End of PQR----

Sh. Dhruv 03/06/2020

Anuj Jain 3/6/2020

Harish 3/6/2020

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Prepared By	Checked BY	Approved By
Sh. DHARUV GARG	Sh. ANUJ JAIN	Sh. S.K. Gupta

PQR requirements for Open Tender of Dirt Catcher (Mat Code W90313166064) of Panki and Patratu Projects.

1. For Indigenous Suppliers: -

Vendor to endorse the enclosed SQP no QA/BE/ QP/002 Rev 01 and submit the same along with offer.

Inspection will be done by BHEL nominated agency M/s BVIL as per BHEL SQP no. QA/BE/QP/002 Rev.01. for Panki & Patratu Projects.

2. For Foreign suppliers: -

Vendor to endorse the enclosed SQP no QA/BE/ QP/002 Rev 01 and submit the same along with offer.

Inspection will be done by third party Inspection agency (TUV/LRS/BV) as per BHEL SQP no. QA/BE/QP/002 Rev.01. for Panki & Patratu Projects.

MANUFACTURER'S NAME AND ADDRESS			STANDARD QUALITY PLAN				Project:					
BHEL	VENDOR'S NAME	ITEM	DIRT CATCHER	QP NO.	QA/BE/QP/002							
				DATED & REV	23.04.2018 01							
		DRG. NO.	AS PER PO									
		SPEC.	ST 46003									
		REV	10									
Page 1 of 1												
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
									M	B	N	
1	2	3	4	5	6	7	8	9	D	10		11

1.0 RAW MATERIAL													
1.1	BODY	CHEMICAL ANALYSIS	MAJOR	CHEMICAL	1/HEAT	BHEL APPD DWG/ BHEL APPD DATASHEET	BHEL APPD DWG/ BHEL APPD DATASHEET	TC	✓	P	V		
1.2	MESH	SIZE	MAJOR	MEASUREMENT	100%	BHEL APPD DWG/ BHEL APPD DATASHEET	BHEL APPD DWG/ BHEL APPD DATASHEET	IR	✓	P	V		FROM RECOGNIZED TEST HOUSE
		CHEMICAL ANALYSIS	MAJOR	CHEMICAL	1/HEAT	BHEL APPD DWG/ BHEL APPD DATASHEET	BHEL APPD DWG/ BHEL APPD DATASHEET	TC	✓	P	V		
2.0 IN- PROCESS INSPECTION													
2.1	FLANGES (MACHINING)	DIMENSION	MAJOR	MEASUREMENT	100%	BHEL APPD DWG/ BHEL APPD DATASHEET	BHEL APPD DWG/ BHEL APPD DATASHEET	IR	-	P	-		
		SURFACE FINISH	MAJOR	VISUAL	100%	BHEL APPD DWG/ BHEL APPD DATASHEET	BHEL APPD DWG/ BHEL APPD DATASHEET	IR	-	P	-		
3.0 FINAL INSPECTION													
3.1	ASSEMBLY	HYDRAULIC TEST	MAJOR	HYDRAULIC	100%	BHEL APPD DWG/ BHEL APPD DATASHEET	NO LEAKAGE	TC	✓	P	W		
3.2		OVERALL DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD DWG/ BHEL APPD DATASHEET	BHEL APPD DWG/ BHEL APPD DATASHEET	IR	✓	P	W		
3.3	PRESERVATION AND PACKING	-	MAJOR	VISUAL	100%	BHEL SPEC	BHEL SPEC	-	-	P	-		

MANUFACTURER/ SUBCONTRACTOR		LEGEND:	FOR CUSTOMER USE
		RECORDS IDENTIFIED WITH '✓' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.	
		M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION	
		ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER	

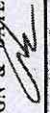
APPROVED BY
(Signature) 16.06.2020
(Signature)
 MGR-QA

SIGN & DATE		PRODUCT STANDARD		ST46003																																																		
		(PROJECT ENGINEERING DEPARTMENT)		Page 1 of 5																																																		
SUPERSEDES INVENTORY NO.	<u>PURCHASE SPECIFICATION FOR DIRT CATCHER.</u> 1. SCOPE: The specification covers the Y-type dirt catcher employed to protect the spray nozzle at downstream. 2. TECHNICAL DATA: <table border="1"> <thead> <tr> <th></th> <th>VAR. I</th> <th>VAR. II</th> <th>VAR. III</th> <th>VAR. IV</th> <th>VAR. V</th> <th>VAR. VI</th> </tr> </thead> <tbody> <tr> <td>SIZE</td> <td>NB 25</td> <td>NB 40</td> <td>NB 40</td> <td>NB 65</td> <td>NB 40</td> <td>NB 40</td> </tr> <tr> <td>PRESSURE RATING</td> <td>40 ata</td> <td>64 ata</td> <td>40 ata</td> <td>40 ata</td> <td>64 ata</td> <td>64 ata</td> </tr> <tr> <td>Medium FLOW RATE</td> <td>Condensate 0.88 kg/sec.</td> <td>Condensate 2.08 kg/sec.</td> <td>Condensate 2.08 kg/sec.</td> <td>Condensate 3.1 kg/sec.</td> <td>Condensate 2.8 kg/sec.</td> <td>Condensate 3.33 kg/sec.</td> </tr> <tr> <td>END CONN. FLANGE ALONG WITH COUNTER FLANGE</td> <td>DIN 2635</td> <td>DIN 2636</td> <td>DIN 2635</td> <td>DIN 2635</td> <td>DIN 2636</td> <td>DIN 2636</td> </tr> <tr> <td>APERTURE SIZE</td> <td>Ø 0.6 mm</td> <td>Ø 0.6 mm</td> <td>Ø 0.6 mm</td> <td>Ø 1.2 mm</td> <td>Ø 0.6 mm</td> <td>Ø 0.6 mm</td> </tr> <tr> <td>WIRE DIA</td> <td>Ø 0.4 mm</td> <td>Ø 0.4 mm</td> <td>Ø 0.4 mm</td> <td>Ø 0.6 mm</td> <td>Ø 0.4 mm</td> <td>Ø 0.4 mm</td> </tr> </tbody> </table> 3. MATERIAL: 3.1 Body with integrally cast flanges along with counter flange -Carbon steel ASTM A216Gr.WCB 3.2 Wire mesh - Stainless steel , AISI 321 3.3 Bolts and nuts - Bolts- 8.8, IS 1367 & Nuts- 8, IS 1367 as per IS 1364 3.4 Washer - IS:3063, Mat:- SPR ST., IS 4072 3.5 Gasket - Grafoil Sheet /Grafoil filled spiral wound as per DIN2690 , thickness 3mm						VAR. I	VAR. II	VAR. III	VAR. IV	VAR. V	VAR. VI	SIZE	NB 25	NB 40	NB 40	NB 65	NB 40	NB 40	PRESSURE RATING	40 ata	64 ata	40 ata	40 ata	64 ata	64 ata	Medium FLOW RATE	Condensate 0.88 kg/sec.	Condensate 2.08 kg/sec.	Condensate 2.08 kg/sec.	Condensate 3.1 kg/sec.	Condensate 2.8 kg/sec.	Condensate 3.33 kg/sec.	END CONN. FLANGE ALONG WITH COUNTER FLANGE	DIN 2635	DIN 2636	DIN 2635	DIN 2635	DIN 2636	DIN 2636	APERTURE SIZE	Ø 0.6 mm	Ø 0.6 mm	Ø 0.6 mm	Ø 1.2 mm	Ø 0.6 mm	Ø 0.6 mm	WIRE DIA	Ø 0.4 mm	Ø 0.4 mm	Ø 0.4 mm	Ø 0.6 mm	Ø 0.4 mm	Ø 0.4 mm
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INVENTORY NO.	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	SIGN & DATE 16/11/13																																																				
		TSX QAX AGREED DEPTT.																																																				
INVENTORY NO.	P-5398	B. CHAUDHARY VIBHUTISHAN		16/11/13 14/01/13																																																		
		NAME DATE & SIGNATURE		WORKED BY CHECKED BY SUPERVISED BY																																																		
		APPROVED : (A.B.GUPTA) AGM.PED		SUDHIR K. GAUTAM UTKARSH GOGIA ANUJ JAIN																																																		
		REV.NO. 10 Dt. 08/01/13		SUPERSEDES PREPARED : PED ISSUED : TSX																																																		
				DATE : 18.12.81																																																		

SIGN & DATE		PRODUCT STANDARD		ST46003	
		(PROJECT ENGINEERING DEPARTMENT)		Page 2	of 5
SUPERSEDES INVENTOR		4. END CONNECTIONS: Dirt Catcher end connections shall be provided by Vendor which includes Flanges, counter flanges, Gaskets, bolt, nuts and washer, all shall be as per Technical Data table given above. 5. DOCUMENTS: A. Documents required along with the tender: The tenderer shall submit the following documents/along with the offer. If any information/documents listed below are missing/ incomplete; the offer shall not be considered by BHEL. 1. Cross sectional drg. of the dirt catcher giving part nos. , description, part material overall dimensions, space required and direction for removal of element & direction of flow. 2. End connection details. 3. Filled in data sheet-1 4. Quality check programme. 5. List of commissioning spares / spare for operation of 3 years and 5 years. 6. Any special requirement. The document submitted along with tender and approved by BHEL shall be the basis of the order and no changes shall be made without approval from BHEL. Examination and approval of documents submitted along with the tender by BHEL shall not release the manufacturer and his sub-contractors of their responsibility under the contract. B. Documents after placement of the order: Supplier shall submit the documents (as given in Clause 5, A.) with Project name & P.O. number in the title block. 1. 10 copies of finalized contract drawing incorporating BHEL comments if any for each station – 8 weeks. 2. 10 copies of Operation / Maintenance / erection Instructions for each station – 12 weeks. 3. 2 copies of Operation / Maintenance / erection Instructions along with dispatch box & soft copies shall be made available to BHEL. 4. Instruction on conservation and deconservation – 12 weeks. 6. INSPECTION & TESTS:			
Inventory No.	The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company Copyright and Confidential	REV. NO.		WORKED BY	UTKASHA
		10		CHECKED BY	ANUJ SHIN

				PRODUCT STANDARD (PROJECT ENGINEERING DEPARTMENT)		ST46003	
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SUPERSEDES INVENTORY NO.		6.1 Hydraulic Test: Hydraulic test shall be carried out on each body using water containing a suitable inhibitor to prevent rusting of the body & internals after test. No leakage shall occur during the test. After the hydraulic test the internals shall be wiped clean & dry. With reference from ANSI/API6D test pressure will be 1.5 times the nominal pressure for duration of 2 minutes. BHEL or BHEL's customer shall have the right to witness the test. However the test certificate shall be furnished to BHEL. The test certificate should specifically mentioned the test pressure & duration of test along with following information: 1. Tag No. 2. Size 3. Name of manufacturer 4. Plant order No. 5. Date of testing.					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company		6.2 Test Certificate of mesh size from recognized test house. 7. IDENTIFICATION: Following information should be engraved on a metal sheet properly fixed at a convenient location of the body or body cover. All inscriptions shall be in two languages i.e. Hindi & English, with Hindi on top. Direction of flow should be engraved on the body. (1) Tag No. (3) Pressure rating (5) Year of manufacturer (2) Size (4) Manufacturer (6) P.O. No.					
SIGN & DATE  16/11/13		8. PROTECTION FOR DESPATCH: 8.1 Ends shall be protected from external damage and sealed against the ingress of dirt. 8.2 A wooden blank should be bolted to the flanges using a minimum of four bolts. 8.3 To prevent any effect of salt laden atmosphere high humidity & moisture during shipment & storage. The dirt catcher and other accessories shall be properly conserved suitable to last for 2 years & covered by polythene sheet before packing in the wooden box.					
		9. GUARANTEE: The supplier shall guarantee trouble free and satisfactory operation of the equipment for a period of 2 years after installation and commissioning or a period of 36 months from the day the equipment leaves the supplier's works whichever is earlier. If during commissioning / erection at site any deficiency in a part is detected, BHEL site representative shall prepare the assessment report and a copy of the same shall be forwarded to the supplier. The supplier shall replace / rectify the concerned items free of charge. The supplier if he so desires may depute his representative to site at his own cost otherwise the findings of BHEL representative shall be final and binding on the supplier of the Dirt catcher.					
INVENTORY NO. P-5396		REV. NO. 10				WORKED BY UTKARSH Gogia	
						CHECKED BY ANUS JAIN	
						 8/11/13	

SIGN & DATE		PRODUCT STANDARD (PROJECT ENGINEERING DEPARTMENT)		ST46003	
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SUPERSEDES INVENTORY	10. SPARES: The supplier shall quote item wise price of recommended spares for 3 years & 5 years operation respectively. Vendor to supply 2 sets of extra gaskets in spare as per clause no. 3.5. 11. QUALITY CHECK PLAN: The supplier shall indicate his production plan & BHEL shall indicate the check hold points for stage checking. BHEL / BHEL's costumer shall have right to witness the checking. 12. STANDARDS: Wherever standards have been quoted the latest issue and amendments shall apply. 13. GENERAL: The tenderer can make suitable offers even if there are minor deviations which do not affect the efficient functioning of the equipment. However the deviation must be clearly spelt out. Suppliers shall also fill the Data sheet-1 and submit the same along with the offer. The offer may not be considered if all the technical particulars and information called for in the specification are not submitted along with the offer. NOTE: - All dimension are given in mm except otherwise specified.				
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SIGN & DATE	 16/1/13				
INVENTORY NO.	REV. NO.	WORKED BY	CHECKED BY	8/1/13 6/1/13	
P-5398	10	UTKASH GOGIA	ANUS JAIN		

SIGN & DATE		PRODUCT STANDARD (PROJECT ENGINEERING DEPARTMENT)		ST46003								
				Page 5 of 5								
SUPERSEDES INVENTORY	<u>DATA SHEET--1</u> Variant No- 1. Nominal pressure rating 2. End connection to DIN 2635 / DIN 2636 3. Nominal size 4. Pressure drop. A) Normal Operation B) 50% choke condition 5. Hole dia. 6. Wire dia. 7. Gross filtering area 8. Net filtering area 9. Documents as envisaged in clause No. 5 Yes / No 10. Test Certificates Yes / No 10.1 Hydraulic Testing of body 11.2 Material composition & Mech. Yes / No Properties of following parts 11.2.1 Body 11.2.2 Cover / Bonnet 11.2.3 Mesh 11.2.4 Seat 11.2.5 Seat ring 12. Mesh size from recognized test house. Yes/No 13. Dirt holding capacity											
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