

Mandatory Pre-Qualification requirements for PRESSURE SWITCH as per specification TG60128 Rev. 03

Description:

Pressure switch is mechanical device used for starting of emergency oil pump directly through MCC bypassing DCS. It comprises of dual diaphragm sealed piston actuator, two change over contacts.

- 1.0 The vendor should be a regular manufacturer or dealer of such pressure switch with following requirements-

Sr. No.	Parameter	Value
(i)	Range (Kg/cm ²)	0.1-20
(ii)	Set point	Adjustable
(iii)	End connection range	Threaded
(iv)	Sensing element	Sealed diaphragm/Bellow piston actuated type
(v)	Repeatability	±0.5% of full scale range or Better
(vi)	Contact type & rating	2 no. change over contacts suitable for 5A at 240 V AC and 220V DC or equivalent

In case of dealer, vendor shall submit the OEM certificate as proof of authorization.

- 2.0 In support of above sl. no. 1, vendor shall furnish technical details in below mentioned format for at least five (5) nos. of pressure switch for the P.O. executed in past 10 years (from date of enquiry) along with P.O. copies.

S. No.	Brief technical details	Application	Name & address of customer	Date of supply
	<ul style="list-style-type: none"> - Application fluid - Working pressure and temperature - Measuring range, repeatability 			

- 3.0 Vendor to furnish the test certificate for accuracy, calibration test and type test as per BS: 6134 against any one of the P.O. submitted as per clause 2. Test certificates must be clearly correlated with P.O.
- 4.0 Vendor to furnish acceptance certificate from one of the end users of pressure switch against any one of the P.O. submitted as per clause 2. (Original Certificate or through e-mail directly from the customer). Acceptance certificate should contain information like item details and its application or correlation with P.O.
MDCC or third party quality clearance certificate shall also be considered as acceptance certificate.

Note: BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false / incorrect, the offer shall be rejected.



ASSESSMENT OF SUPPLIER

Name of item/equipments for which assessment is required:-----

1.0 GENERAL INFORMATION :-

1.1) Name of the company	
1.2) Address of their Regd. office with telephone No., Fax No.& E-Mail	
1.3) Address of the Supplier's factory / works with telephone No., Fax No.& E-Mail a) Weekly off :- b) Shift working per day:-	a) ----- b) One/Two/Three
1.4) Address of the Supplier's Branch offices with telephone No., Fax No.& E-Mail	
1.5) Nature of the firm: (Govt. Undertaking / State Govt. Undertaking / Private Company / Co-operative society / Partnership Firm / Proprietorship / Any other)	
1.6) Nature of Business (Manufacturing Unit / Agent / Distributor / Stockiest)	
1.7) Year of establishment	
1.8) Year of commencement of manufacturing	
1.9) Name of the Chief Executive/ Proprietor & Plant Manager	
1.10) Contact Person	



ASSESSMENT OF SUPPLIER

(Name, Designation, Address, Telephone no. , Mob. No. Fax & Email)	
1.11) Total Nos. of employees (Attach organization chart)	i) Administration & Commercial ----- ii) Engineering & Technology ----- iii) Manufacturing ----- iv) Quality ----- v) Maintenance ----- vi) Site Management ----- vii) Other ----- viii) Total -----
1.12) Total area of the Factory a) Covered b) Uncovered	
1.13) Electrical Power and alternative arrangement for power: (Give Details)	

2.0 FINANCIAL INFORMATION:-

	Year 1	Year 2	Year 3
2.1) Share Equity Capital			
2.2) Long Term Debt			
2.3) Investment in :- i) Land & building ii) Plant & Equipment iii) Other Fixed Assets			
2.4) Net Current Assets			
2.5) Net Current Liabilities			
2.6) Sales			
2.7) Profit before tax			
NOTE:- Copies of annual Balance Sheet for the last three years along with audit report to be submitted.			

3.0: TECHNICAL INFORMATION :-



ASSESSMENT OF SUPPLIER

3.1 Manufacturing Capacity for the item / equipment for which approval is required

Sl. No	Name of Product	Licensed Capacity	Installed Capacity

3.2 Brief details of the item / equipment manufactured in the past three years:-

Sl. No.	Item Description	Specn/Grade/Size	Annual Production in the last three Years		

3.3 Manufacturing facilities including material handling facilities:-

Sl. No.	Description of machines used for manufacturing	Capacity, Size	Make	Yr of installation	Limitations	Remarks

3.4 Measuring, inspection, testing and heat treatment facilities (in house):-

Sl.No.	Description of equipment	Size, range, Capacity & accuracy	Make	Last date of calibration

3.5 Measuring, inspection, testing and heat treatment facilities (out sourced):

Sl. No.	Description of test	Name of the agency carrying out the test

3.6 Foreign collaboration, if any:



ASSESSMENT OF SUPPLIER

Product	Name & address of the Collaborator	Year of Collaboration	Whether current or not

3.7 Details same/ similar item supplied in the last three years:-

Item description	Specn.& size	Major Customer Name	Project Name	Po. No. & date	Qty	Year of Supply	Remark

3.8 Source of raw materials:-

Description of raw materials	Name & address of the suppliers

3.9 Copies of Qualification Approval / Type Test certificates / Test Reports for the item / equipment witnessed by any independent agency may be attached.

3.10 Furnish process flow chart including inspection stages

3.11 Details and experience of technical personnel (Head of various departments)

3.12 Performance feed back if any – Attach feed back certificates.

4.0 QUALITY MANAGEMENT SYSTEM:-

4.1 Furnish organization chart of Quality department including NDT (non destructive test) personnel

4.2 Whether QA system is certified as per ISO- 9001? If yes then attach a copy of the certificate.

4.3 Incoming material control:-

A formalized supplier rating, evaluation & certification programme which includes quality performance criteria.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Verification of incoming material prior to storage	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.4 Process control:-

Work instructions have been documented by the sub supplier and followed by the worker.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Required tools, jigs & fixtures are identified and used.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Procedure for qualification & revalidation of qualification of welder and NDT operator or any other special processes	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Testing facilities for Chemical, Mechanical, Electrical and NDT tests. Trained personnel carry out the tests and records are maintained.	i)Whether such procedure exist? ii) Whether system is effective? iii) Whether records are available? iv) Whether details of trained personnel submitted?	Yes/No Yes/No Yes/No Yes/ No
Preventative maintenance activities are performed critical machines and records maintained.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Material identification and acceptance status is maintained throughout the manufacturing process and storage.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Identification / Preservation, & Packing procedures	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.5 Control of non-conformance:-



ASSESSMENT OF SUPPLIER

Record of rework /rectification	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
System of review and analysis of repeated non-conformities/ failures and their prevention in future.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.6 Calibration of measuring & testing equipments:-

System of calibration of gauges, fixtures and instruments	i) Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Master gauges / standards are traceable to recognized national standards.	i) Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.7 Inspection & testing of finish product:-

System of inspection and testing of finished product exits.	i)Whether such procedure exists? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
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4.8 System of recording, attending and monitoring customer complaint & corrective action.

System of recording, attending and monitoring customer complaint and corrective action exits.	i) Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
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4.9 Any other information:-

Enclosures:-

Place:

Signature

Date:

Name and Designation

Seal

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN					TO BE FILLED BY BHEL		TO BE FILLED BY BHEL				
BHEL	VENDOR'S NAME	ITEM			QP NO.									
					REV									
		DRG. NO.	AS PER PO											
		SPEC.	AS PER PO											
		REV				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

Note 1: BHEL approved NDT procedure should be obtained by vendors before performing NDT , if the same is not already available with the vendor for the job.

Note 2: All page of inspection documents shall be numbered in chronology with the QAP clause , dully mentioning the corresponding QAP clause nos. at the top of each page. One index page containing the documents descriptions, their page no & QAP clause shall be attached upfront the inspection documents.

MANUFACTURER/SUBCONTRACTOR		LEGEND:	FOR CUSTOMER USE	APPROVED BY
		! RECORDS IDENTIFIED WITH 'TICK' 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		