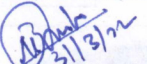

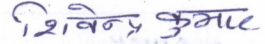
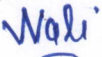
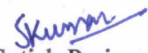
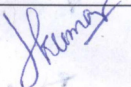
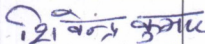

	PRODUCT STANDARD <u>HYDRO TURBINE ENGINEERING</u>	HT 00010
	<p align="center">COPYRIGHT & CONFIDENTIAL</p> <p>The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.</p>	Rev. 01 Page 1 of 2
<u>PURCHASE SPECIFICATION FOR FLEXIBLE HOSE FOR LP SERVICE AIR</u> <u>WITH QUICK RELEASE COUPLING AND ADAPTOR</u>		

1. DESCRIPTION:

Flexible Hose Pipe (size 20 NB) with reinforcement of single braid steel wire and having inner tube and outer tube of synthetic rubber. Both ends should be securely fitted with **quick release couplings** along with **male adaptor** (as per figure-1). This male adaptor will be screwed at one end to a valve / tool/ equipment having ¾" female screwed end and the other end with quick release coupling of 20 NB hose pipe. The couplings should have proper sealing and must comply with the following technical parameters. Each hose pipe shall be hydraulically pressure tested. Filled in check list to be furnished with offer.

Parameter	Description
Hose pipe size	20 NB
Hose pipe length	As specified in enquiry
Quantity of hose pipe	As specified in enquiry
Reinforcement	Single braid steel wire
Inner tube	Resistant synthetic rubber
Outer shell	Oil and weather resistant synthetic rubber
Application	LP compressed Air / Station Service requirement
Compliance with	IS-7651 Type-1
Quick release coupling (Material – SS)	20 NB (as shown in figure-1) on both sides of hose pipe
Size of adaptors on both sides of hose pipe (Material – SS)	One end of adaptor for 20 NB quick release coupling of hose pipe and other end of adaptor size is ¾” (M) BSP (as shown in figure-1)

Rev. No.	Date of Rev.	Remarks	Approved
00	25.10.2014	First issue	V. S. Rao, AGM / HOD (HME,HMX, HPE & HTE)
01	31.03.2022	Adaptor detail & check list modified	Checked
			<div>  Alok Bharti, Sr. Mgr-HTE </div> <div>  Harish Kumar, DGM-HTE </div> <div>  Shivendra Kumar, DGM-HTE </div>
			Prepared
			<div>  Mohammad Waliullah, Mgr-HTE </div> <div>  Satish Prajapati, Mgr-HTE </div> <div>  Harish Kumar, DGM-HTE </div> <div>  Shivendra Kumar, DGM-HTE </div>
			Saved in server as no. 42009900010

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<u>PURCHASE SPECIFICATION FOR FLEXIBLE HOSE FOR LP SERVICE AIR</u> <u>WITH QUICK RELEASE COUPLING AND ADAPTOR</u>		

Parameter	Description
Depth of female screw in valve / tool/ equipment (For designing male adaptor)	10 mm
Design pressure:	11 kg/cm ²
Hydraulic test pressure:	16.5 kg/cm ²
Duration of test pressure	3 min
Working Temperature	(-)10 deg C to (+)60 deg C

2. CHECKLIST:

Offer shall be rejected if the checklist is not completely filled up.

Sl. no.	Requirements	Supplier's Concurrence (YES / NO)
1.	All technical parameters mentioned above shall be complied	
2.	Male adaptors will be provided at both ends of pipe	
3.	Adaptors shall be checked with go/no go gauges	
4.	Hydraulic testing shall be carried out	
5.	Specification shall be written on the hose pipe & tag shall be provided	
6.	TCs & GC will be furnished	
7.	Male adaptor screwed end length (for sealing) on either side suitable for 10mm female end	
8.	Whether hose pipe is suitable for temperature range mentioned	
9.	SS Material of QR coupling and adaptor	
10.	Deviation (if any)	

Name & stamp of Vendor

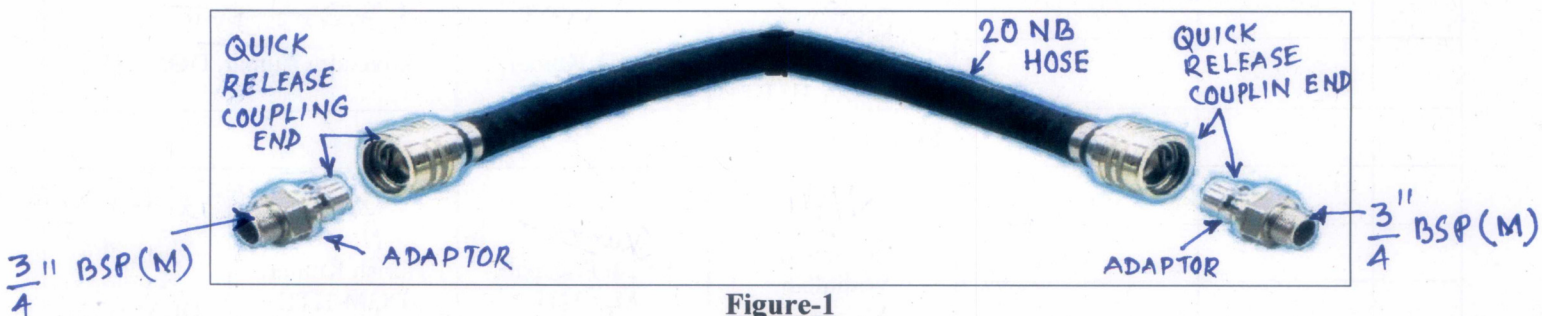

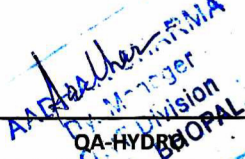


Figure-1

Hose pipe with quick release coupling and male adaptor at both ends

		VENDOR'S NAME AND ADDRESS: 795027/2022/HEP-HTE40206		STANDARD QUALITY PLAN					PO NO. & DATE (To be filled by the vendor): 			
				ITEM : FLEXIBLE HOSE FOR LP SERVICE AIR WITH QUICK RELEASE COUPLING AND ADAPTOR REFERENCE DOCUMENT: HT00010 REV-00			QP NO. : QA/HT (STD)/001 (HT00010) REV.NO. : 00 DATE : 26/02/2022 PAGE : 01 OF 01					
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REF. DOC.	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY		REMARKS
					M	B					M	
1.	2.	3.	4.	5.	6.		7.	8.	9.	10.		11.
1.1	HOSE PIPE	Material compliance	Minor	Chemical	Sample	Sample	HT00010 Rev-00		TC	P	V	*Minimum 4 nos., IR for 100% (V)
1.2		Dimensional check	Minor	Measurement	100%	10%*	-do-		JIR	P	W	
1.3		Visual check	Minor	Visual	100%	10*%	Cracks, uneven surface & broken steel wire reinforcement not allowed		JIR	P	W	
1.4		Hydraulic Pressure test	Major	Test	100%	10*%	HT00010 Rev-00		JIR	P	W	
2.1	SS QR COUPLINGS & ADAPTORS	Material properties	Major	Chemical & mechanical	Sample	Sample	-do-	-do-	TC	P	V	
2.2		Thread check with GO-NOGO gauge & dimensions	Major	Visual / measurement	100%	10*%	-do-	-do-	JIR	P	W	*Minimum 4 nos., IR for 100%(V)
3.0	FINAL PRODUCT	Identification	Major	Visual	100%	100%	HT00010 Rev-00 (Clause 2.5)		JIR	P	W	Agency 'B' to mention a note for observed identification in final report
4.	COMPLIANCE	a) Compliance with HT00010 Rev-00 for suitability of operation for applicable temperature range b) Compliance with HT00010 Rev-00 for any other material used, but not covered in the QAP										CoC to be reviewed by agency 'B'
5.	DOCUMENTATION	Covering index sheet, with co-relating pages numbers to respective QAP clauses, to be prepared by vendor endorsed by Agency 'B'										To be reviewed & endorsed by agency 'B'
 QA-HYDRA		LEGEND: M: VENDOR/SUB-SUPPLIER, B:BHEL / BHEL APPOINTED INSPECTION AGENCY (TPIA) P: PERFORM W: WITNESS AND V: VERIFICATION IR-INSPECTION REPORT (INTERNAL) JIR-JOINT INSPECTION REPORT TC-TEST CERTIFICATE R- REVIEW OF RECORD COC: CERTIFICATE OF COMPLIANCE							ACCEPTED BY (VENDOR'S QC REPRESENTATIVE)			
		H.T.E.		PREPARED & REVIEWED BY (BHEL QA & DESIGN)								

Note 1: Compliance with this QAP does not absolves the vendor from their responsibility of design, manufacture and supply as per BHEL specification so as to give satisfactory performance upon commissioning

Note 2: In case of any discrepancy / interpretational issue, BHEL Specification and Drawing shall be binding.

Hydro Turbine EngineeringStandard Technical PQR for Procurement of Item/ Items through Open Tender (Non GEM)

PI No. 240215539

Date: 19.03.2022

Item Description: 'FLEXIBLE HOSE PIPE 20 NB X 30 M LG AIR APPLICATION WITH SS QUICK RELEASE COUPLING AND SS ADOPTER AT BOTH ENDS' as per Specification HT00010 (Rev.-00).

Following are the minimum eligibility requirements for considering vendors for the supply of above item/items.

Sl. NO	Description of Pre-Qualification Requirements	Vendor response	
		Complied	Bidders to submit following documents in compliance to PQR
1	Manufacturers with experience of design, manufacturing and supply of Flexible Hose Pipes shall be eligible to take part.	Yes / No	Copy of unpriced PO with any one of the following supporting document: <ul style="list-style-type: none"> • Completion Certificate • Invoice copy • Delivery challan
2	Agents / Subsidiaries of manufacturers are also allowed to take part on behalf of their principals. Experience of the principal / main manufacturer which is part of vendor's offer shall be considered for evaluation.	Yes / No	1. Agents / Subsidiaries to furnish valid authorization letter from principal / OEM. 2. Copy of unpriced PO with any one of the following supporting document: <ul style="list-style-type: none"> • Completion Certificate • Invoice copy • Delivery challan
3	Manufacturers or subsidiaries should have a Quality Management System (QMS) of their product / process / supply / service etc. Alternatively, ISO 9001-2015 or compliance with any other norms / standard should be existing.	Yes / No	QMS of manufacturers or subsidiaries with valid a document highlighting their compliance is required at the pre-qualification stage.

Note:

1. Compliance to above Pre-qualification requirements are mandatory. In the absence of compliance of above requirement vendor PQ application is liable to be rejected.
2. BHEL has right to verify information / confirmation furnished by asking additional documents, proofs etc.

Md. Nizamuddin
20/03/22
(Sr. Design Engr / HTE)
Indentor

Alok Bharti
20/3/22
Shri Alok Bharti
(Sr. Mgr.)

Harish Kumar
20/3/22
Shri Harish Kumar
(DGM)

Shivendra Kumar
20/3/22
Shri Shivendra Kumar
(DGM)

V S Rao
20/3/22
Shri V S Rao
(AGM)