

Detailed Specification

Enquiry:MM/172/G31241

Contact Details

Name: Binduja Menon

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Email ID: binduja@factltd.com

Please submit your offer for supply of the following items as per the instructions, technical specifications and other terms and conditions specified herein/ attached.

Note:

1. The delivery period mentioned in the BoQ is our indicative requirement. You may offer your earliest delivery period.

Please refer our above referred enquiry number in all correspondence.

SL No.	Material Code	Detailed Specification/s	Quantity	Unit of Measure
1	633875080	Pressure Safety Valve (IBR Certified) As per Tag No. PSV-990/991,, SIZE, Inlet / Outlet : 80NB / 100NB with Flange Rating 600# / 150#	3	Number

PROCESS DATA SHEET	PRESSURE SAFETY VALVE				32756-11-PSV-001	
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GENERAL	1	Tag No.	PSV-990/991			
	2	Service	Superheated Steam			
	3	Quantity	Two			
	4	Nozzle	Full	/	✓ Semi	Full / Semi
	5	Conventional / Bellows / Pilot Operated	✓ C	/	B / P	C / B / P
	6	Bonnet Type	✓ Open	/	Close	Open / Close
CONNECTIONS	7	Size, Inlet & Outlet	3 " / 4" (1)			
	8	Flange Rating ANSI or Screwed	600# / 150#			
	9	Type of Facing	✓ RF	/ Groove	RF / Groove
MATERIALS	10	Body	A217 Gr. WC6			
	11	Seat & Disc	SS (1)			
	12	Resilient seat seal	Mfr. Std.			
	13	Guide & Rings	Mfr. Std.			
	14	Springs	High Temperature Alloy Steel			
	15	Bellows	Not Applicable			
ACCESSORIES	16	Cap Screwed or Bolted	Mfr. Std.			
	17	Lever Plain or Packed	Plain (1)			
	18	Test Gag Required?	✓ Yes	/	No	Yes / No
	19	Weather Hood Spring Covers	✓ Yes	/	No	Yes / No
BASIS	20	Code	✓ IBR / API			
	21	Sizing Basis	IBR			
	22	Relieves to	Atmosphere			
SERVICE CONDITIONS	23	Fluid & State (L/G/.....)	Superheated Steam			
	24	Required Capacity Per Valve	21000 kg/h (2)			
	25	Molecular Weight / Sp. Gr. at. °C	18.02 / 0.0152 @360°C			
	26	Operating Pressure, kg/cm ² g	41			
	27	Set Pressure, kg/cm ² g	46			
	28	Operating Temperature, °C	360			
	29	Relieving Temperature, °C	Ambient			
	30	Back Pressure Constant, kg/cm ² g	0			
	31	Back Pressure Variable, kg/cm ² g	0			
	32	Allowable Over Pressure, %	5%			
	33	Compressibility / Super Heat	/ 0.87 (1)			
	34	Viscosity Factor				
	35	Max. Valve Capacity	VTA			
Office area	36	Area, Calculated / Selected, in ²	1.658/1.838 (1)			
	37	Orifice Designation	3K4 (1)			
	38	Manufacturer's Model No.	VTA (1)			
	39	Manufacturer				

Remarks

1. VTA – Vendor to Advise
2. Vendor to consider design temperature of 400°C and design pressure of 54.5 kg/cm² (g).

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						Project: NEW PIPING FOR TRANSPORTING OF STEAM FROM SO ₂ ACID PLANT TO PETRO PLANTS STEAM HEADER IN UC
1	For Comments	SVA	MR	KVR	11/10/2024	
0	For Comments	SVA	MR	KVR	23/09/2024	
Rev	Details	By	Chkd.	Apprd.	Date	Client: M/s. FACT-UC

FACT ENGINEERING AND DESIGN ORGANISATION



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TECHNICAL PROCUREMENT SPECIFICATION		VENDOR DATA REQUIREMENTS				32756-11-PS-001-VDR		
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TPS No.:		32756-11-PS-001						
Item:		Pressure Safety Valve						
Equipment No.:		PSV-990/991						
Status:		<input checked="" type="checkbox"/> Enquiry <input type="checkbox"/> Commitment		P.O. No.:				
Sl. No.	Group Code	Description	Offer	After Commitment			Final	
			Qty.	Qty.	Lead Time in Weeks			Qty.
					Reqd.	Propd.*	Agrd.	
1.	B	Valve Catalogue	1S+1P	1S+1P	2			1S+4P
2.	A	Valve Data Sheet	1S+1P	1S+1P	1			1S+4P
3.	A	Valve Area Calculation	1S+1P	1S+1P	1			
4.	A	Valve Drawings Within 15 days of TOI/LOI/Order for Approval Prior to Manufacture or Inspection indicating, Order No., Valve Tag No., Quantity, End Connection Details, Set Pressure, Valve Dimensions, Material of Construction, Wall Thickness, Hydrostatic Test Pressure etc.,	1S+1P	1S+4P	2			1S+4P
5.	C	Place & Address of Premises where it is manufactured		1S+1P	2			
6.	B	Test Certificates for Chemical Composition & Mechanical Properties of Valve Material. (Within 3 days after Completion of Testing & Inspection)		1S+1P	5			
7.	B	Pressure Test Certificates as per Scope of Inspection 32756-11-PS-001-INS (Within 3 days after Completion of Testing & Inspection)		1S+1P	5			
Legends:		Group Code: A – For Review & Detailed Engg. B – For Review C – For Information & Record Document Type: P – Print S – Editable Soft in AutoCAD / MS Word / Adobe						
Notes:		* Vendor shall fill in proposed lead time if different from the required lead time ** Each set of final document shall be submitted in a folder. Two such folders shall be packed & despatched with the equipment						
							Project: NEW PIPING FOR TRANSPORTATION OF STEAM FROM SO ₂ ACID PLANT TO PETRO PLANTS STEAM HEADER IN UC.	
0	First Issue	SVA	MR	KVR	25/09/2024	Client: M/s. FACT-UC		
Rev	Details	By	Chkd.	Apprd.	Date			
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TECHNICAL PROCUREMENT SPECIFICATION	SPECIAL REQUIREMENTS OF THE PROJECT		32756-11-PS-001-SPL
			PAGE 1 OF 1 R0
TPS No.:	32756-11-PS-001		
Item:	Pressure Safety Valve		
Equipment No.:	PSV-990/991		
SPECIAL REQUIREMENTS			
<ol style="list-style-type: none"> Pressure Safety Valves are used for Superheated Steam service at FACT- Udyogamandal Complex downstream of Superheater. Direction of flow, pressure rating and size are to be embossed on the valves. Copper or copper alloys shall not be used. Nameplates as per API 526 must be attached to each valve. In addition, the nameplate must indicate the tag number of the valve as indicated in the data sheet. Water used for hydro testing of the valves must be either distilled water or water containing less than 30 ppm chlorine. One no. spring and a set of gaskets each are to be supplied as spares for two years operation. Supply of valves shall be in one lot and shall have the completed data sheet dispatched with the valve. All documents packed inside crates must be protected with polyethylene covers. Inspection to be conducted by IBR authorized personnel. 			

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Rev	Details	By	Chkd.	Apprd.	Date	
FACT ENGINEERING AND DESIGN ORGANISATION						

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TECHNICAL PROCUREMENT SPECIFICATION		SCOPE OF INSPECTION AND TESTS		32756-11-PS-001-INS	
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TPS No.:		32756-11-PS-001			
Item:		Pressure Safety Valve			
Equipment No.:		PSV-990/991			
The following inspection and tests shall be conducted and records submitted.					
Sl. No.	Description	Inspection Required	Witness Required	Remarks	
1.	Visual inspection of assembled valves - 100%	Yes	Yes	IBR Inspection Required	
2.	Physical inspection for dimensions and construction of assembled valves - 100%	Yes	Yes		
3.	Inlet/outlet hydrostatic test, set pressure test & seat tightness test as per procedure enclosed - 100%	Yes	Yes		
4.	For forged valves/components, manufacturer's test certificates for material composition & physical properties.	Yes			
5.	For cast valves, the foundry certificate checked & verified by the supplier.	Yes			
Notes: 1. Witness will be done by either TPI appointed by Client or Client or by FEDO.					

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TEST PROCEDURE FOR SAFETY RELIEF VALVES

1. Inlet/Outlet Hydrostatic Test

- 1.1 All assembled valves covered by this procedure shall have the inlet hydrostatically tested.
- 1.2 Test media shall be clean water for CS valve. For SS valves either distilled water or water containing less than 30 ppm of chlorine must be used.
- 1.3 Testing shall be conducted at room temperature.
- 1.4 Hydrostatic test pressure shall be one and one half (1½) times the inlet/outlet flange rating. Minimum hydrostatic test pressure shall be 7.03 kg/cm²(g)
 - The nozzle ring shall be set at minus two (-2) notches, by raising the ring to level position and then lowering the ring two (2) notches.
 - The test cap and test rod shall then be installed with the test rod "finger-tight".
 - The hydrostatic test pressure shall then be applied.
 - The hydrostatic test pressure shall be maintained for a minimum of three (3) minutes.
 - Examination shall be made at the hydrostatic test pressure.
 - Acceptance criteria – any visible leakage shall be caused for rejection.

2. Set Pressure Test

- 2.1 All valves covered by this procedure shall be tested to verify popping point consistency. Test fluid shall be air.
- 2.2 The nozzle ring shall be set at minus two (-2) notches, by raising the ring to level position and lowering the ring two (2) notches.
- 2.3 Adjust the valve to open at the set pressure or cold differential test pressure specified. Set pressure or cold differential test pressure for valves set on liquids shall be the pressure at which a continuous unbroken stream flows from the valve.
- 2.4 Cycle the valve twice to confirm that the popping point is satisfactory and that the popping point is within the specified tolerance for that set pressure.
- 2.5 Set Pressure (kg/cm²(G)) : Tolerance
 - 4.9 & less : +/- 0.14 kg/cm²
 - Above 4.9 : +/- 3% of set pressure
 - Fire valves : -0%, +10% of set pressure

3. Seat Tightness Test

Test apparatus and procedure as per API 527.

- 3.1 All valves covered by this procedure shall be tested for seat tightness, irrespective of the fluid actually handled by the valve.
- 3.2 Waiting time before observation of leakage

S No.	Inlet Size (Inches)	Waiting Time (minutes)
1	2" & smaller	1
2	2.5", 3" & 4"	2
3	6" to 8"	5

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COMPLIANCE STATEMENT

Sl. No.	Terms	Bidder confirmation
1	All quotations shall be strictly as per the Process Data sheet and TPS attached.	
2	Please mention shortest possible delivery period.	
3	Please confirm : Price Basis – FOR FACT Stores (as per Gem T & C)	
4	Please confirm : Taxes and Duties - The Price offered in GEM is all inclusive of TAX. (as per Gem T & C)	
5	Please confirm : Payment Terms : 100% payment will be released within 10 days of the issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills as per GEM terms and conditions. (as per Gem T & C)	
6	Please confirm : Liquidated Damages: As per GeM – “@ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever”(as per GeM T & C)	

Note : All the above columns shall be filled properly, without leaving blanks. Please upload / return this document duly filled-in, along with your bid.

PRE-QUALIFICATION CRITERIA FOR BIDDERS

The Bidders must satisfy the following pre-qualification criteria for supply of Pressure Safety Valve at FACT-Petrochemical division

Sl.No.	Conditions	Documents required
1	<p>The bidder should have successfully executed orders for supply of Pressure Safety Valve in Government / Central PSU / State PSU / Public limited /LLC/ Private Limited companies during last 07 years ending on date of enquiry.</p> <p>1. One order with value not less than Rs. 13.20 Lakhs.</p> <p>OR</p> <p>2. Two orders with value not less than Rs. 8.25 Lakhs each.</p> <p>OR</p> <p>3. Three orders with value not less than Rs. 6.6 Lakhs each.</p>	<p>A) Purchase Order B) Proof of Completion - such as Invoice/ Despatch documents/ Inspection Release Note/ Completion Certificate from the Client.</p> <p>Note: In case of FACT orders, bidder need to mention only the PO number, submission of documents is not compulsory.</p>
2	Bidder shall be Manufacturers / Authorized Supplier / Authorized Distributor / Dealer of Pressure Safety Valve.	<p>a) Self-Declaration (in case of Manufacturer). b) Copy of authorization issued by the manufacturer (in case of supplier / distributor / dealer) authorizing for the supply / distribution / dealership.</p>
4	<p>a) Average annual turnover of the bidder for the last three financial years ending on 31-03-2024 shall be at least Rs. 33/- Lakhs or above and</p> <p>b) Annual turnover for each year shall be at least Rs. 5 /- lakhs or above during the last three financial years ending on 31-03-2024</p>	Self-attested copies of audited financial statements (Profit & Loss Account, Financial turnover certificate and Balance Sheet) for the last three financial years ending on 31-03-2024

NOTE: -

- 1) All relevant documents for satisfying the pre-qualification criteria shall be enclosed in the techno-commercial bid, without which the offer is liable to be rejected without seeking further clarifications. FACT shall have the liberty to verify the documents/data submitted by the contractor as proof for meeting the prequalification
- 2) IMPORTANT: In case of ambiguity or incomplete or non submission of required relevant documents along with bid, FACT reserves the right, at its option, to reject the Bidders Bid without assigning any reason and without notice.