

Annexure-2

Technical Datasheet for Knock Out Drum (Pressure Vessel)

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A) SCOPE OF SUPPLY

Design, fabrication, inspection, testing, painting & supply of following Knock Out Drum (Pressure Vessel) along with its accessories to site are in Bidder's scope

- a) **1 No. of Knock Out Drum(Pressure Vessel) along with its accessories as per Annexure-1:** P&ID for Knock Out Drum and technical details indicated in S.No. B below.
- b) **Commissioning Spares:** Applicable. Refer Annexure-4, Price Bid Format.
- c) **Mandatory Spares:** Applicable. Refer Annexure-4, Price Bid Format.

B) TECHNICAL DETAILS OF KNOCK OUT DRUM

S.No.	Description	Unit	Knock Out Drum(Pressure Vessel)
1	General		
1.1	Type of Tank		Vertical, Cylindrical pressure vessel Dished Ends: 2:1 Ellipsoidal
1.2	Capacity of Tank		
1.3	Quantity of Tanks	No.	1
1.4	Design Code for Manufacturing and Testing		ASME Section VIII Div. I
1.5	Fluid stored		Water and Air
2	Design Features		
2.1	Tank Design Code		ASME SECTION-VIII, DIV. 1
2.2	Design Liquid		Water and Air
2.3	Dimension of Tank(Dia x Height)		Dia. = 10" T-T Distance = 1.2m
2.4	Net Capacity of Tank	cu.m.	Bidder to Indicate
2.5	Design Metal Temperature	°C	100
2.6	Operating Pressure		06 kg/cm ² g
2.7	Design Pressure		10 kg/cm ² g
2.8	Density of Design liquid	kg/cu.m	1000 (Water) & 1.225(Air) @ 15 deg C
2.9	Thickness provided for		
2.9.1	Shell	mm	9.27 (Minimum Including Corrosion Allowance)
2.9.2	Dished Ends	mm	12 (Min.).
2.10	Corrosion Allowance	mm	3.0(min.)
2.11	Joint Efficiency of weld joints		For shell = 0.85
			For dished ends = 1
3	Material of construction		

3.1	Shell, Dished ends		SA 516 Gr 70/A106GrB
3.2	Support Structural		SA 516 Gr 70
3.3	Nozzle necks		A 106 GR. B
3.4	Flanges and counter-flanges		ASTM A 105
3.5	Bolts & Nuts		BOLT:A193 GR.B7, NUT:A194 GR.2H
3.6	Shell & Roof appurtenances		
a	For Manholes	-	1 No.
b	For Nozzles		
	No. and size of Shell, Roof, Vent and Drain Nozzles		Refer Annexure-1
	No. and size of spare nozzles		Refer Annexure-1.
c	Fittings		
	Dimensional standard		As per relevant Standard
	End connection		As per relevant Standard
	Gaskets		SP.WOUNDED SS316+GRAFIL
	Foundation bolts & Nuts		IS1367 Cl 4.6/4, Galvanized.
	Earthing lugs & Nameplate		Austenitic Stainless Steel (SS304)
4	Accessories		
4.1	Foundation bolts		Yes
4.2	Ladder		NA
4.3	Platform for accessing instruments and PSV.		NA
4.4	Handrail to platform		NA
4.5	Valves		Not in Bidder's scope of supply.
4.6	Pressure gauge		Yes
	(Socket weld)		Only Nozzle, flange, counter flange, studs/nuts/ gaskets are in Bidder's scope.
4.7	Pressure Safety Valve		Yes, Conventional Type
4.8	Earthing lugs		Yes, 2 No's
4.9	Automatic Drain trap along with isolation valves & piping		Yes as per PID
5	Inspection and Testing		Shall be as per QAP. However Min. following tests shall be conducted
5.1	Radiography Test		Dished End: Full and Shell: T Joints
6	Pressure Safety Valve		
6.1	Type		Conventional Type(Spring Loaded)
6.2	Design Pressure		As Per Annexure-1
	Accessories		Manual Lifting Lever
	Other		Safety Valve shall be of pop type

	Set Pressure		10% excess design pressure
	Reset Pressure		Shall not less than 2.5% and more than 5% of the set pressure
7	Painting		Sl. No. 6.2 of Table -6 of Annexure 12

Note: Any data required for designing the equipment, bidder may ask prior to the submission of bid.