

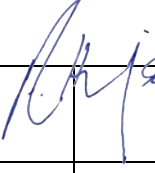

 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	MECHANICAL DATA SHEETS FOR CLOSE DRAIN DRUM								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه: BK	بسته کاری: GCS	صادر کننده: PEDCO	تسهیلات: 120	رشته: ME	نوع مدرک: DT	سریال: 0010	نسخه: D01	شماره صفحه: ۱ از ۸

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR CLOSE DRAIN DRUM

نگهداشت و افزایش تولید میدان نفتی بینک

 						
D01	SEP.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D00	DEC.2021	IFC	H.Adineh	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 2      CLIENT Doc. Number: F0Z-708841

status:

IDC: Inter-Discipline Check  
 IFC: Issued For Comment  
 IFA: Issued For Approval  
 AFD: Approved For Design  
 AFC: Approved For Construction  
 AFP: Approved For Purchase  
 AFQ: Approved For Quotation  
 IFI: Issued For Information  
 AB-R: As-Built for CLIENT Review  
 AB-A: As-Built –Approved



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نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR CLOSE DRAIN DRUM



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## REVISION RECORD SHEET

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 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض								
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک MECHANICAL DATA SHEETS FOR CLOSE DRAIN DRUM								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۸ از ۳
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	PEDCO	120	ME	DT	0010	D01	

Rev	General Notes	
	D01	
	<p>1. The Asterisk * denotes information and/or confirmation required from VENDOR. The Vendor shall be fully responsible for the complete mechanical design and supply of the vessel. The vessel shall be supplied in accordance with project 'Specification for Pressure Vessels', Doc. No. BK-GNRL-PEDCO-000-ME-SP-0001. <b>TJ: Confirmed</b></p> <p>2. Nozzles and flanges shall be suitably supported and reinforced based on nozzle loads provided in project Specification for Pressure Vessels, Document No. BK-GNRL-PEDCO-000-ME-SP-0001. <b>TJ: Confirmed</b></p> <p>3. VENDOR shall include for the services of an independent verification body for mechanical design, stage inspection, testing and stamping of the equipment (if possible). <b>TJ: Confirmed</b></p>	
D01	<p>4. Access Ladder &amp; Platform to be considered . <b>TJ: Confirmed</b></p>	
	<p>5. Painting and coating (internal &amp; external) shall be as per project 'Specification for Painting', Doc. No. BK-GNRL-PEDCO-000-PI-SP-0006 and Specification for Lining (Internal Protection of Equipment by painting), Doc. No. BK-GNRL-PEDCO-000-PI-SP-0007. <b>TJ: Confirmed</b></p>	
D01	<p>6. Flanges shall comply with ANSI B16.5. Nozzle bolt holes shall straddle the natural centerlines. VENDOR to confirm maximum allowable nozzle loads and moments. RF: Raised Face, WN: Welding Neck <b>TJ: Confirmed</b></p>	
	<p>7. For equipment requiring PWHT, final inspection and acceptance by the CLIENT or its nominated representative shall only be undertaken against NDE after PWHT. All weldings shall be made before vessel heat treatment (if any). <b>TJ: Confirmed</b></p> <p>8. Manways shall be supplied complete with blind flange, external grab handles, internal grab handle and ladder rungs, nuts, bolting, gasket and proof load test davits. Davits shall be proof load tested on the vessels to 1.5 x Safe Working Load (SWL) and shall be marked accordingly. <b>TJ: Confirmed</b></p> <p>9. Loads at support base, Shall be calculated and determined by vendor. <b>TJ: Confirmed</b></p>	
D01	<p>10. Location and number of lifting lugs on vessels shall be specified on VENDOR drawing. <b>TJ: Confirmed</b></p>	
	<p>11. All external bolts and nuts shall be hot dip galvanized. Internal bolts and nuts shall be stainless steel. <b>TJ: Confirmed</b></p> <p>12. All material, corrosion allowance and their suitability for the process fluid at design pressure and temperature to be confirmed by vendor. <b>TJ: Confirmed</b></p>	
D01	<p>13. The vendor shall be responsible for mechanical strength of the equipment based on mentioned condition in data sheets. <b>TJ: Confirmed</b></p>	
D01	<p>14. All nozzle locations and orientations will be finalized later. <b>TJ: Confirmed</b></p>	
	<p>15. Instrumentation items are excluded from vendor's scope of supply. <b>TJ: Confirmed</b></p> <p>16. Any changes in material of construction, location &amp; orientation of the nozzles shall be confirmed by client. <b>TJ: Confirmed</b></p> <p>17. Structural surfaces of stainless steel internals shall be pickled &amp; passivated. <b>TJ: Confirmed</b></p>	
D01	<p>18. All dimensions shown are in mm unless otherwise indicated. All nozzle sizes are in inch. <b>TJ: Confirmed</b></p>	
	<p>19. All materials shall be new and unused. <b>TJ: Confirmed</b></p> <p>20. Prior to sealing the vessel for shipping and storage, the inside surface of the equipment shall be 100% visually inspected. Internal surfaces shall be clean and thoroughly dried. The CLIENT or its nominated representative shall witness the cleanliness of internal surfaces. Flange faces shall be protected by wooden or plastic dummy flanges. <b>TJ: Confirmed</b></p> <p>21. Fabrication tolerances for vessel shall be in accordance with requirement of ASME code. <b>TJ: Confirmed</b></p> <p>22. All items shall be clearly match marked against vessel drawings to facilitate erection. <b>TJ: Confirmed</b></p>	
	<p>23. The elevation of equipment's nozzels should be specified as follows : I. For vertical vessels : from bottom T.L. II. For horizontal vessels : from Left T.L. <b>TJ: Confirmed</b></p>	
	<p>24. Vendor shall supply details of all welding connections and give general specification of used materials. <b>TJ: Confirmed</b></p>	
	<p>25. Specified accessories and attachments shall be supplied by vendor. <b>TJ: Confirmed</b></p>	
	<p>26. Gasket shall be spiral wound type, graphite filled with inner ring S.S.316 and outer ring C.S. <b>TJ: Confirmed</b></p>	
D01	<p>27. deleted</p>	
D01	<p>28. deleted</p>	
D01	<p>29. Equipment packaging, preparation for shipment and delivery shall be in accordance with the project Packing, Marking, Transportation Procedure Doc. No. "BK-GNRL-PEDCO-000-QC-PR-0045". <b>TJ: Confirmed</b></p>	



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




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### General Notes (Cont'd)

Rev	
	30. For standard detail of Earth lug execution refer to the Project "Standard Detail Drawing For Pressure Vessels and Heat Exchangers Doc. No. BK-GNRL-PEDCO-000-ME-DW-0001". TJ: Confirmed
	31. Elliptical heads shall be Ultrasonic Tested for lamination after forming. TJ: RT test will be performed.
	32. The projection of equipment's nozzles should be considered as per 'Standard Detail Drawing For Pressure Vessels and Heat Exchangers', Doc. No. BK-GNRL-PEDCO-000-ME-DW-0001". Projection of Horizontal & Vertical nozzles is from tangent line and centerline respectively. TJ: Confirmed
D01	33. Deleted 
	34. All reinforcement pads shall have 1/4" (6mm) tell-tale hole and 1/8" (3mm) vent hole as per Standard Detail Drawing For Pressure Vessels and Heat Exchangers', Doc. No. BK-GNRL-PEDCO-000-ME-DW-0001". TJ: Confirmed
D01	35. Minimum requirement for pre-commissioning, commissioning, start up and two years operation spare parts shall be in accordance with document E&C-QC-SP-1. TJ: Confirmed
	36. Nozzle loads shall be in accordance with Specification for Pressure Vessels, Doc. No. BK-GNRL-PEDCO-ME-SP-0001. TJ: Confirmed 
	37. The material shall be in compliance with NACE MR0175/ISO15156 and Specification for Material Requirements in Sour Service, Doc.No. BK-GNRL-PEDCO-000-PI-SP-0008. TJ: Confirmed
	38. Welded carbon and carbon manganese steels for vessel shall comply with the following : Carbon content shall not exceed 0.23%. TJ: Confirmed Based on the ladel analysis, below equation shall be satisfied. $Ceq. = C+Mn/6+(Cr+Mo+V)/5+(Cu+Ni)/15 < 0.42 \%$
	39. All carbon steel material shall be fully killed, fine grain treated and supplied in the normalized condition. TJ: Confirmed
	40. All nozzles must be vertical or horizontal and not perpendicular or parallel to vessel center line. TJ: Confirmed 
D01	41. Lifting Lugs / trunnions shall be provided to facilitate a single point lift. If a single point lift cannot be achieved without the use of a lifting beam, then VENDOR shall provide a suitable, certified, lifting beam. TJ: Confirmed
D01	42. Design pressure specified is at top of vessels. VENDOR design shall include static head for vessels flooded with specific gravity of the handled liquid. TJ: Confirmed
D01	43. VENDOR is to maximize shop fabrication based on the following transportation limits:  <ul style="list-style-type: none"> <li>- Maximum weight: 96 tonnes</li> <li>- Maximum load per axle: 12 tonnes</li> <li>- Maximum length: 50.0 m</li> <li>- Maximum width: 5.0 m</li> <li>- Maximum height: 5.2 m</li> </ul> TJ: Confirmed For items with dimensions and weights greater than the road capacity specified above, VENDOR may be required to split the package into several components.
D01	44. All external attachments directly welded to the pressure part shall be the same material as vessel grade. TJ: Confirmed 



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Mech. Data Sheet For Close Drain Drum (V-2202) / sheet 1 of 4

Rev	DATA SHEET	Rev
1	Description : <i>Close Drain Drum</i>	
2	Tag No. : <i>V-2202</i> Quantity : <i>1 Set</i>	
3	Type : <i>Pressure Vessel</i>	
4	<b>Process Design Data</b>	
5	Contents <i>Hydro-Carbon (HC, H<sub>2</sub>O)</i>	Corrosive / Erosive <i>Yes</i>
6	Operating Temp. (°C) <i>AMB</i>	Liquid Flow (kg/h) <i>-</i>
7	Operating Press. (barg) <i>0.5</i>	Vap. Molec. Weight (kg/kmol) <i>-</i>
8	Gas Flow (kg/h) <i>-</i>	Liquid Sp. Gravity <i>0.49~1.0</i>
9	Liquid Viscosity (cP) <i>-</i>	Lethal: <i>No</i>
10	<b>Mechanical Design Data</b> <span style="float: right;">D01</span>	
11	Design Temp. (°C) <i>85</i>	Vessel Orientation <i>Horizontal</i>
12	Design Press. (barg) <i>7.5</i>	HHLL (mm) <i>2300</i>
13	Test Press. (barg) <i>Per Code &amp; Spec. Requirements</i>	Nor. Liquid Vol. (m <sup>3</sup> ) <i>-</i>
14	Internal Vacuum (barg) <i>F.V.</i>	In. Dia. Of Boots (mm) <i>N/A</i>
15	In. Dia. of Shell (mm) <i>2600</i>	Boot Length (mm) <i>N/A</i>
16	Tan/Tan Dim. (mm) <i>7800</i>	Boot Head Type <i>N.A</i>
17	Vessel Head Type <i>2:1 Elliptical (Note 31)</i>	Corr. Allowance (mm) <i>6</i>
18	Shell Wall Thk. (mm) <i>* TJ: 14mm</i>	Joint Efficiency <i>0.85 (Shell) / 1 (Head)</i>
19	Head Wall Thk. (mm) <i>(After Forming) * TJ: 10mm</i>	Ambient Temp. (°C) <i>-</i>
20	Seismic Design <i>Site Class: D, Code: ASCE 7-10</i>	MDMT (°C) <i>5</i>
21	Wind Design <i>Speed: 120 Km/hr (Max.), Code: ASCE 7-10</i>	Insulation Required <i>-</i>
22	<b>Materials</b> <span style="float: right;">D01</span>	
23	Code <i>ASME II / ASTM</i>	Internal Welded Supports <i>S.S.</i>
24	Shell <i>A 516 70N</i>	Nozzle Necks <i>A 106 Gr.B</i>
25	Heads <i>A 516 70N</i>	Pipes <i>A 106 Gr.B</i>
26	Lining <i>PI (Note 5)</i>	Plates <i>A 516 70N</i>
27	Saddles <i>A 283 Gr. C</i>	Forgings <i>A 105N</i>
28	Wear Plate <i>A 516 70N</i>	Flanges <i>A 105N</i>
29	Stiffening Rings <i>A 516 70N</i>	Fittings <i>A 234 Gr. WPB</i>
30	Gaskets <i>Note 26</i>	Welded Internals <i>S.S.</i>
31	Lifting Lugs <i>A 516 Gr.70 / A 283 Gr. C</i>	External Bolts / Nuts (Note 11) <i>A 193 Gr. B7 / A 194 Gr. 2H</i>
32	Reinforcing Pads <i>A 516 70N</i>	Internal Bolts / Nuts (Note 11) <i>S.S.</i>
33	Ladder & Platform <i>C.S.</i>	Insulation <i>-</i>
34	Gratings <i>Hot Dip Galvanized C.S.</i>	Name Plate <i>S.S. 316</i>
35	External Welded Clips <i>A 516 Gr.70N</i>	
36	<b>REFERENCE STANDARDS &amp; DOCUMENTS</b>	
37	Mechanical Design Code	<i>ASME Sec VIII Div 1, IPS-G-ME-150</i>
38	Specification for Pressure Vessels	<i>BK-GNRAL-PEDCO-000-ME-SP-0001</i>
39	Process Basis of Design	<i>BK-GNRAL-PEDCO-000-PR-DB-0001</i>
40	Piping & Instrument Diagram (P&ID)	<i>BK-GCS-PEDCO-120-PR-PI-0017</i>
41	Specification for Painting	<i>BK-GNRAL-PEDCO-000-PI-SP-0006</i>
42	Specification for Insulation	<i>BK-GNRAL-PEDCO-000-PI-SP-0019</i>
43	Specification For Material Requirements in Sour service	<i>BK-GNRAL-PEDCO-000-PI-SP-0008 (Note 37)</i>
44	Deleted	
45	<b>Fabrication and Inspection Requirements</b>	
46	Inspection Authority <i>TPI &amp; Client</i>	
47	Material Certification <i>In Accordance with BS EN 10204:2004, Type 3.1, Minimum for Pressure Containing and Attachments</i>	
48	Hydro Test Medium <i>Water</i>	Hydro Test Procedure <i>Yes; Per Code &amp; Spec. Requirements</i>
49	Post Weld Heat Treatment <i>Yes</i>	PT <i>100%</i>
50	MT <i>100 % on Lifting Lug Fillet Welds</i>	UT <i>Yes; Per Code &amp; Spec. Requirements</i>
51	RT <i>100 % On T-Joints and Head Joints Butt-Welds,</i>	
52	<i>Spot On Shell Longitudinal and Circumferential Joints Butt-Welds,</i>	
53	<i>100 % On Nozzle Neck to Flange &amp; Fabricated Nozzle Neck Longitudinal Butt-Welds,</i>	
54	RT Report <i>Yes; Per Code &amp; Spec. Requir.</i>	PT Report <i>Yes; Per Code &amp; Spec. Requirements</i>
55	MT Report <i>Yes; Per Code &amp; Spec. Requir.</i>	UT Report <i>Yes; Per Code &amp; Spec. Requirements</i>
56	Fabrication Quality Control Plan (With Offer)	<i>Yes</i>
57	Welding Procedure Review / Approval	<i>Yes</i>
58	Surface Preparation & Coating	<i>Per Specification for Painting with Doc. No. "BK-GNRAL-PEDCO-PI-SP-0006"</i>
59		<i>Specification for Linning Doc. No. BK-GNRAL-PEDCO-000-PI-SP-0007</i>
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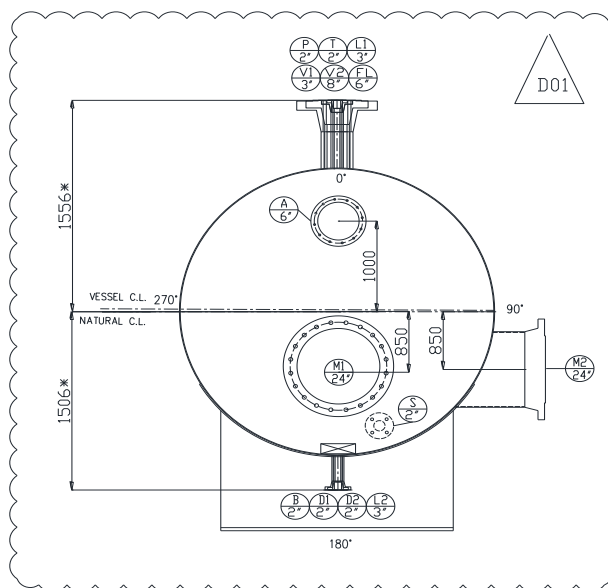
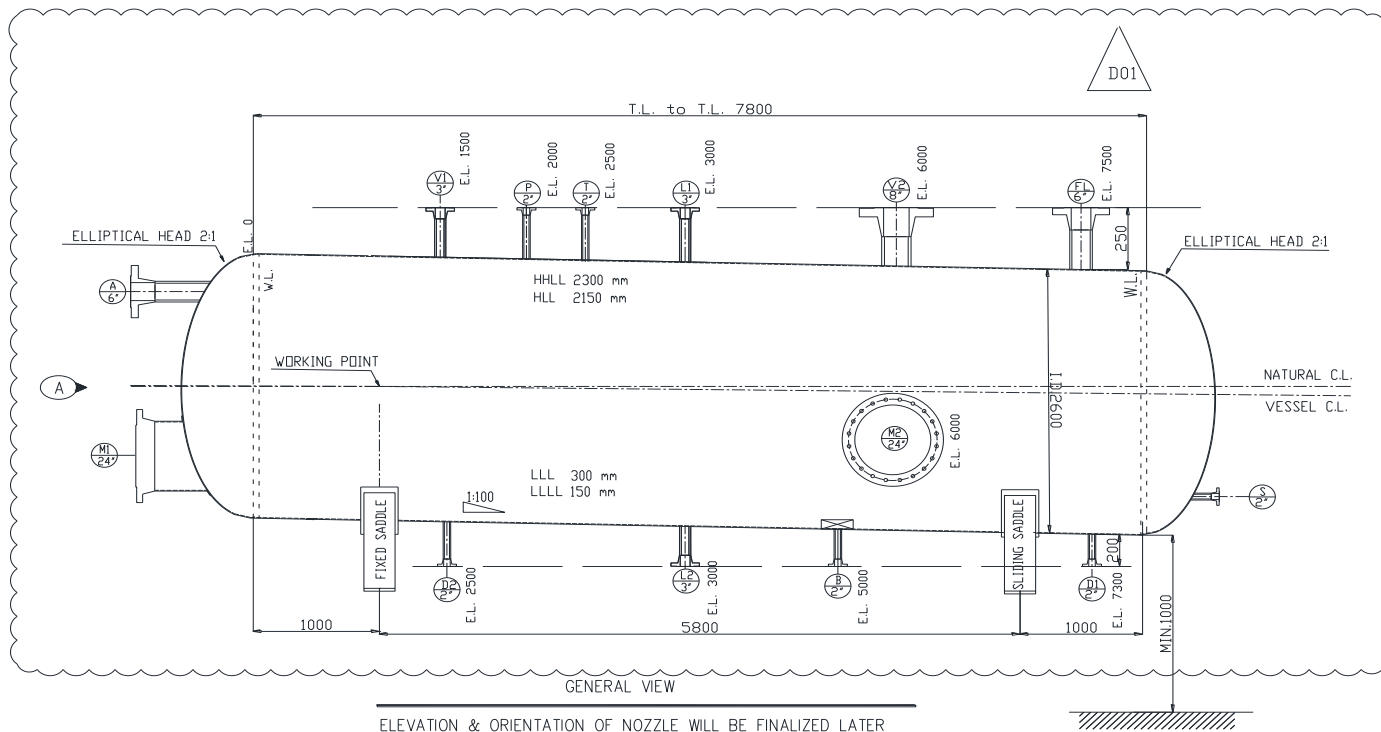
نسخه

D01

شماره صفحه: ۸ از ۷

Mechanical Data Sheets For Close Drain Drum (V-2202) / sheet 3 of 4

Sketch



All Dimensions are in mm.  
The close drain drum is located in pit.



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شماره صفحه: ۸ از ۸

Mech. Data Sheet For Close Drain Drum (V-2202) / sheet 4 of 4

Rev.	WEIGHT						Rev.
1	<b>WEIGHT CONTROL DATA SHEET</b> <b>SI UNIT *</b>						<b>1/1</b>
2							
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5							
6	Service : <i>Close Drain Drum</i>			Location : <i>Bushehr (Binak Oilfield)</i>			D01
7	Type :			Quotation No. :			
8	No. trains :			Serial No. :			
9	No. stages :						
10	Supplier :						
11	Manufacturer :						
12	Model :						
13							
14	Note: Information to be completed by equipment vendor.						
15							
16	<b>Total weight (kg) *</b>						
17	Fabrication	Erection	Operation	Hydrostatic Test	Removable internal	Ladder & Platform	
18							
19							
20							
21							
22							
23	<b>WEIGHT AND C OF G DATA REQUIRED *</b>						
24	CONDITION	WEIGHT ACCURACY %	WEIGHT (kg)	CENTER OF GRAVITY (mm)			
25				X	Y	Z	
26	Dry						
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30	<b>SKETCH</b>						
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52	<b>NOTES</b>						
53	1) All lifting points to be load tested and certified.						
54	2) Any spreader beam to be load tested and certified.						
55	3) Lifting / rigging plan for skid mounted equipment to be provided by the Vendor.						
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