

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض								
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک MECHANICAL DATA SHEETS FOR FIRE WATER STORAGE TANK								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT	سریال 0017	نسخه D02	شماره صفحه: ۱ از ۷

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR FIRE WATER STORAGE TANK

نگهداشت و افزایش تولید میدان نفتی بینک

D02	MAR.2024	IFA	H.Ghadyani	M.Fakharian	S.Faramarzpour	
D01	NOV.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D00	JUN.2022	IFC	H.Adineh	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 1	CLIENT Doc. Number: F0Z-708848
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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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3	X		X		
4	X		X		
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General Notes

- The asterisk * denotes information and/or confirmation required from vendor. the vendor shall be fully responsible for design and supply of the tank. the tank shall be supplied in accordance with project "Specification For Atmospheric Above Ground Welded Steel Tanks.
- The VENDOR/BIDDER shall design and supply the storage tank in accordance with "Specification For Atmospheric Above Ground Welded Steel Tanks" , Document No.: "BK-GNRL-PEDCO-000-ME-SP-0002" and "Standard Detail Drawing For Storage Tanks",
- Document No.: BK-GNRL-PEDCO-000-ME-DW-0002'. VENDOR/BIDDER shall provide completed datasheets with bid.
- Tank height shall be checked based on Freeboard calculation by vendor.
- The VENDOR/BIDDER shall be fully responsible for the complete mechanical design of the tank.
- External and internal surface of tank shall be coated in accordance with BK-GNRL-PEDCO-000-PI-SP-0006 & BK-GNRL-PEDCO-000-PI-SP-0007 respectively.
- All materials for pressure parts shall fulfill the impact test requirements of API-650 standard.
- For standard detail of earth lug execution refer to the project "standard detail drawing for storage tanks Doc. NO. "BK-GNERL-PEDCO-000-ME-DW-0002" and provide minimum two earthing terminals and two cables per tank.
- 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 vessel to 1.5 x Safe Working Load (SWL) and shall be marked accordingly.
- Instrument and piping nozzle flanges shall be in accordance with ASME B 16.5.
- Minimum width of shell courses plates shall be 1.5 m.
- Deleted.
The angle of stairways to horizontal plane shall not exceed 45°.
- If any imposed load (by nozzles or their connections) causes high local stress in any part of shell and roof, the subjected component shall be investigated according to appendix 'P' of API Std. 650.
- Cone roof angle and roof plates joint shall be so selected that tank roof plate thickness will not be greater than 12mm.
- All nozzles equal / greater than 2" shall have reinforcement pad.
- All nozzles connection weld to tank shall be with full penetration.
- Necessity of wind girder and stiffening ring will be finalized by vendor.
- Allowable stress of anchor bolts shall not be greater than those are recommended in API 650 standard.
- The requirement of internal and external cathodic protection shall be considered by VENDOR.
- Seal materials shall have enough resistance against temperature changes, expansion & contraction, fluid weight changes and etc.
- All dimensions are in "mm" unless otherwise specified.
- Vent size and quantity shall be specified/verified by vendor according to API 2000.
- Projection of Horizontal and Vertical nozzles are specified from tank centerline and top of top angle (roof line) respectively.
- For standard detail of earth lug execution refer to the project "standard detail drawing for storage tanks DOC. NO. "BK-GNRL-PEDCO-000-ME-DW-0002" and provide minimum two earthing lugs and two cables per tank.
- All nozzle loads shall not be less than specified values in the "Specification For Atmospheric Above Ground Welded Steel Tanks" , Document No.: "BK-GNRL-PEDCO-000-ME-SP-0002"



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GENERAL INFORMATION (TO BE COMPLETED BY PURCHASER)

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1	1. PURCHASER / AGENT: <i>NISOC</i>									
2	ADDRESS:									
3	CITY: <i>Bushehr</i>		PROV.:		POSTAL CODE:		PHONE:			
4	2. USER:									
5	3. ERECTION SITE:		NAME OF PLANT: <i>Binak</i>							
6	LOCATION: <i>BINAK, 20 km NORTHWEST of GENAVEH CITY</i>									
7	4. TANK NO. <i>TK-2301 A / B</i>		NOMINAL CAPACITY: <i>1260</i>		m ³		NET WORKING CAPACITY: <i>1,040.00</i>		m ³	
8	QTY. REQ'D: <i>2 Sets</i>		OVERFILL PROTECTION (API RP 2350):							
9	5. PUMPING RATES:		IN		m ³ /hr		OUT		m ³ /hr	
10	6. MIN./MAX. OPERATING TEMPERATURE:		<i>AMB.</i>							
11	7. PRODUCT STORED: <i>Fire Water Tank</i>		DESIGN SPEC. GRAVITY: <i>1</i>		AT <i>163</i>		°C			
12	DESIGN TEMPERATURE: <i>85</i>		°C		VAPOR PRESSURE:		kPa			
13	8. CORROSION ALLOWANCE:									
14	SHELL:		<i>1.6</i>		mm		ROOF:		<i>1.6</i> mm	
15	BOTTOM:		<i>1.6</i>		mm		STRUCTURALS:		<i>-</i> mm	
16	9. SHELL DESIGN: BASIC STANDARD API 650		<i>YES</i>		APPENDIX A		<i>NO</i>		APPENDIX F <i>NO</i>	
17	DESIGN PRESSURE :		<i>ATM+Full water +50 mm H₂O</i>		kPa (g)					
18	10. ROOF DESIGN: BASIC STANDARD API 650		<i>YES</i>		IPS-G-ME-100		<i>YES</i>		IPS-G-ME-110 <i>NO</i>	
19	APPENDIX G (ALUMINUM DOME)		<i>NO</i>							
20	FRANGIBLE ROOF JOINT		<i>NO</i>							
21	11. ROOF DESIGN INFORMATION:									
22	UNIFORM LIVE LOAD:		<i>1.2</i>		kPa (g)					
23	SPECIAL LOADS (PROVIDE SKETCH):				kPa (g)					
24	INSULATION LOAD:		<i>-</i>		kPa (g)					
25	MAXIMUM DESIGN ROOF TEMPERATURE:				°C					
26	GASES IN THE VAPOUR SPACE:									
27										
28	12. EARTHQUAKE DESIGN :		(APPENDIX E)		ROOF TIE RODS (5.10.4.5) :					
29	SEISMIC CODE:		<i>(ASCE7-10)</i>		IMPORTANCE FACTOR		<i>1.25</i>		<i>Fa : 1 Fv : 1.33</i>	
30	SITE CLASS:		<i>D</i>				<i>Ss : 1.125</i>		<i>SI : 0.46</i>	
31	13. WIND LOAD:		WIND CODE:		<i>(ASCE7-10)</i>					
32	VELOCITY:		<i>232</i>		km/hr		(DIRECTION: NW TO SE)			
33	PROVIDE INTERMEDIATE WIND GIRDER (5.9.7) :									
34	14. ENVIRONMENTAL EFFECTS:									
35	MAXIMUM RAINFALL				mm/year		TOTAL SNOW ACCUMULATION		mm	
36										
37	15. SIZE RESTRICTIONS:									
38	MAXIMUM DIAMETER		<i>13000</i>		mm		MAXIMUM HEIGHT		<i>9500</i> mm	
39	16. FOUNDATION TYPE:		CONCRETE RINGWALL <i>YES</i>							
40	EARTH		OTHER							
41	17. APPLICABLE STANDARDS:									
42	<i>API 650</i>		&		<i>IPS-G-ME-100 (1)</i>					
43	17. SERVICE TYPE									
44	SOUR		<i>NO</i>		NON-SOUR		<i>NO</i>			
45	LETHAL				NON-LETHAL					
46	18. NACE REQUIREMENT									
47	SSC		<i>NO</i>		HIC		<i>NO</i>			
48	REMARKS:									
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1	1. MANUFACTURER									
2	ADDRESS:									
3	CITY:		PROV.:			POSTAL CODE:			PHONE:	
4	SERIAL NUMBER:									
5	2. FABRICATOR:									
6	ADDRESS:									
7	CITY:		PROV.:			POSTAL CODE:			PHONE:	
8	SERIAL NUMBER:									
9	3. MATERIAL SPECIFICATIONS:									
10	SHELL :					PIPE :				
11	A-283 GR.C					A-106 GR.B				
12	ROOF :					FLANGE :				
13	A-283 GR.C					A-105				
14	BOTTOM / ANNULAR BOTTOM :					EXT. BOLT / NUT :				
15	A-283 GR.C					A-193 GR.B7 / A-194 GR.2H				
16	FIXED INTERNALS :					INT. BOLT / NUT :				
17	C.S.					S.S.				
18	REMOVABLE INTERNALS :									
19	-									
20	STRUCTURALS :					A-36				
21	4. NO. OF SHELL COURSES									
22	5. PLATE WIDTHS AND THICKNESSES (INCLUDING CORROSION ALLOWANCE) (NOTE 11)									
23	1.	1500/8	4.	1500/6	7.	1500/6	10.			
24	2.	1500/6	5.	1500/6	8.		11.			
25	3.	1500/6	6.	500/6	9.		12.			
26	6. TANK BOTTOM: PLATE THICKNESS 8 mm (Note 1) YES LAP BUTT SEAMS									
27	SLOPE 1:120 mm per meter TO YES FROM CENTER									
28	7. MINIMUM WIDTH AND THICKNESS OF BOTTOM ANNULAR PLATES (5.5) : 658/8 mm (Note 1)									
29	8. ROOF-TO SHELL DETAIL (FIGURE F-2 'API-650') : Detail B (Note 14)									
30	9. INTERMEDIATE WIND GIRDER (Note 18) NO TOP WIND GIRDER FOR USE AS WALKWAY : NO									
31	10. ROOF TYPE : CONE (Supported by Rafter) DOME SPHERE									
32	SLOPE OR RADIUS : 1:10 (Note 14)									
33	11. ROOF PLATE: THICKNESS (Note 1) 8 mm YES LAP BUTT JOINT									
34	12. PAINT: (Note 6)									
35	SHELL : EXTERIOR YES					INTERIOR YES				
36	SURFACE PREPARATION									
37	BOTTOM : UNDERSIDE YES					INTERIOR YES				
38	SURFACE PREPARATION									
39	ROOF : EXTERIOR					INTERIOR YES				
40	SURFACE PREPARATION									
41	STRUCTURAL STEEL : EXTERIOR YES					INTERIOR -				
42	SPECIFICATION :									
43	13. TANK BOTTOM COATING: INTERIOR YES					MATERIAL				
44	APPLICATION SPECIFICATION									
45	14. INSPECTION BY: SHOP FILED									
46	15. WELD EXAMINATION: Radiograph (extent of radiography as per IPS-G-ME-100)									
47	Supplementary liquid penetrant or ultrasonic									
48	JOINT EFFICIENCY: As Per Code									
49	16. FILMS : PROPERTY OF									
50	17. LEAK TESTING:									
51	BOTTOM YES					ROOF YES SHELL YES				
52	18. MILL TEST REPORTS: REQUIRED									
53	PLATE STRUCTURAL SHAPES									
54	19. PURCHASER'S REFERENCE DRAWING :									
55	20. TANK SIZE : DIAMETER 13000 mm					HEIGHT 9500 mm				
56	DATE OF STANDARD 650 EDITION/REVISION : 12th Edition Aug 2018									
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APPURTENANCES (TO BE COMPLETED BY MANUFACTURER AND/OR PURCHASER)

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1	1. STAIRWAY STYLE (Note 12)	YES	CIRCULAR	STRAIGHT	ANGLE TO HORIZONTAL	DEGREES
2	2. WALKWAY:		ROLLING LADDER			
3	3. DRAW -OFF SUMP:	YES	STANDARD	SPECIAL		
4	4. BOLTED DOOR SHEET :	NO	(APPENDIX A TANKS ONLY)	RAISED	FLUSH	
5	5. SCAFFOLD HITCH					
6	6. INTERNAL PIPING:		SWING LINE	SUCTION LINE		
7	7. ROOF DRAIN:		HEATING COIL SURFACE AREA		m ²	
8	8. NO. AND SIZE OF SHELL MANHOLES	2 x 24"				
9	9. NO. AND SIZE OF ROOF MANHOLES	1 x 24"				
10	SHELL NOZZLES LIST (Notes 1,15,16, 22)					
11	MARK	QTY.	DESCRIPTION	PIPE	FLANGE	PROJ.
12				Size(in.)	Thk.	Rate.
13				Sch.	Type	Face
14						
15	A1	1	Inlet	3	WN	150 #
16	A2	1	Pressure Relief Valve	10	WN	150 #
17	B1	1	Outlet	12	WN	150 #
18	TL	1	Test Line	12	WN	150 #
19	A3	1	Inlet	3	WN	150 #
20	LS	2	Level Switch	2	WN	300 #
21	B2	1	Over Flow	3	WN	150 #
22	D	1	Drain	4	WN	150 #
23	M1/2	2	Manhole	24	WN	150 #
24	LT1	2	Level Transmitter	2	WN	300 #
25						
26						
27						
28	ROOF NOZZLES LIST (Notes 1, 23)					
29	MARK	QTY.	DESCRIPTION	PIPE	FLANGE	PROJ.
30				Size(in.)	Thk.	Rate.
31				Sch.	Type	Face
32						
33	V	1	Vent	8	WN	150 #
34	L1	1	Level Indicator	6	WN	300 #
35	M3	1	Roof Manhole	24	WN	150 #
36	LT2	1	Level Transmitter	2	WN	300 #
37						
38						
39	TOTAL WEIGHT (kg) (Note 26)					
40	FABRICATION	OPERATION	HYDROSTATIC TEST	REMOVABLE STANDARD	LADDER & PLATFORM	
41	45283	1085283	1305283	200	1500	
42						
43	LOADING (Note 26)					
44	WINDSHEAR (KG)	WIND OVERTURNING MOMENT (KG.M)	EARTHQUAKE SHEAR (KG)	EARTHQUAKE OVERTURNING MOMENT(Ring Wall/Slab) (KG.M)		
45	11272.3	73149.1	117511.6	375446.9	584605.7	
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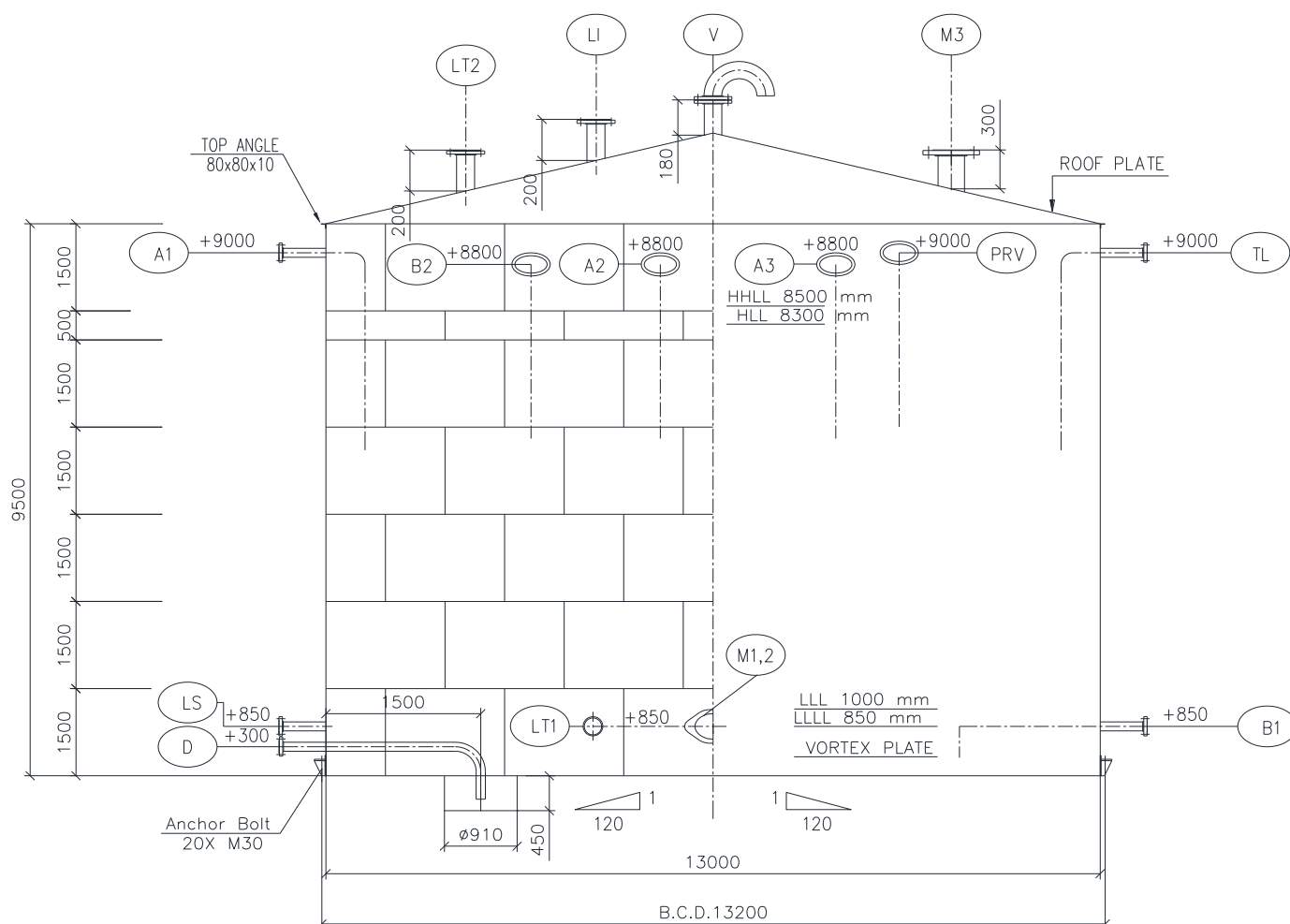
شماره پیمان:

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نسخه	سرپال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
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GENERAL ARRANGEMENT VIEW



ELEVATION VIEW

NOZZLES ELEVATION WILL BE FINALIZED LATER.

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