

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

شرکت تومدیتروایران





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

NISOC

MECHANICAL DATA SHEETS FOR GLYCOL SUMP DRUM

شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرك	سريال	نسخه
·08 - · 48 - • 184	BK	GCS	PEDCO	120	ME	DT	0036	D02

شماره صفحه: ۱ از ۸

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR GLYCOL SUMP DRUM

نگهداشت و افزایش تولید میدان نفتی بینک

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Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
D00	DEC.2021	IFC	H.Adineh	M.Fakharian	M.Mehrshad	
D01	SEP.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D02	SEP.2023	IFA	S.Salehi	M.Fakharian	A.M.Mohseni	

Class: 2 CLIENT Doc. Number: F0Z-709383

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







شماره صفحه: ۲ از ۸

REVISION RECORD SHEET

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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 GLYCOL SUMP DRUM

صادر کننده پروژه تسهيلات وع مدرك سر يال نسخه شماره سمان: GCS PEDCO 120 ME DT 0036 D02 BK



شماره صفحه: ۱۳ز ۸

General Notes

Rev

- 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.
- Nozzles and flanges shall be suitably supported and reinforced based on nozzle loads provided in project Specification for Pressure Vessels, Document No. BK-GNRAL-PEDCO-000-ME-SP-0001.
- 3. VENDOR shall include for the services of a independent verification body for mechanical design, stage inspection, testing and stamping of the equipment (if possible).
- 4. Access Ladder & Platform to be considered .
- 5. Painting and coating (internal & external) shall be as per project "Specification for Painting, Doc. No. BK-GNRAL-PEDCO-000-PI-SP-0006" and "Specification for Lining (Internal Protection of Equipment by painting), Doc. No. BK-GNRAL-PEDCO-000-PI-SP-0007".
- 6. Flanges shall comply with ANSI B16.5. Series A. Nozzle bolt holes shall stradle the natural centerlines. VENDOR to confirm maximum allowable nozzle loads and moments. RF: Raised Face, WN: Welding Neck
- 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).
- 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 1.5x Safe Working Load (SWL) and shall be marked accordingly.
- 9. Loads at support base, Shall be calculated and determined by vendor.
- 10. Location and number of lifting lugs on vessels shall be specificed on VENDOR drawing.
- 11. All external bolts and nuts shall be hot dip galvanized. Internal bolts and nuts shall be stainless steel.
- 12. All material, corrosion allowance and their suitability for the process fluid at design pressure and temperature to be confirmed by vendor,
- 13. The vendor shall be responsible for mechanical strength of the equipment based on mentioned condition in data sheets.
- 14. All nozzle locations and orientations will be finalized later.
- 15. Instrumentation items are excluded from vendor's scope of supply.
- 16. Any changes in material of construction, location & orientation of the nozzles shall be confirmed by client.
- 17. Structural surfaces of stainless steel internals shall be pickled & passivated.
- 18. All dimensions shown are in mm unless otherwise indicated. All nozzle sizes are in inch.
- 19. All materials shall be new and unused.
- 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 suarfaces. Flange faces shall be protected by wooden or plastic dummy flanges.
- 21. Fabrication tolerances for vessel shall be in accordance with requirement of ASME code.
- 22. All items shall be clearly match marked against vessel drawings to facilitate erection.
- 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.
- 24. Vendor shall supply details of all welding connections and give general specification of used materials.
- 25. Specified accessories and attachments shall be supplied by vendor.
- 26. Gasket shall be spiral wound type, graphite filled with inner ring S.S.316 and outer ring S.S.
- 27. Deleted.
- 28. Deleted.
- 29. Equipment packaging, preparation for shipment and delivery shall be in accordance with the project Packing, Marking, Transportation Procedure Transportation Procedure Doc. No. "BK-GNRAL-PEDCO-000-QC-PR-0045".



نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

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احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

		MECHANICAL DATA SHEETS FOR GLYCOL SUMP DRUM										
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدر ک	سريال	نسخه				
	BK	GCS	PEDCO	120	ME	DT	0036	D02				

شماره صفحه: ۴ از ۸

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-GNRAL-PEDCO-000-ME-DW-0001".
- 31. Elliptical heads shall be Ultrasonic Tested for lamination after forming.
- 32. The projection of equipment's nozzles should be considered as per "Standard Detail Drawing For Pressure Vessels and Heat Exchangers, Doc. No. BK-GNRAL-PEDCO-000-ME-DW-0001". Projection of Horizontal & Vertical nozzles is from tengent line and centerline respectively.
- 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-GNRAL-PEDCO-000-ME-DW-0001".
- 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.
- 36. Nozzle loads shall be in accordance with Specification for Pressure Vessels, Doc. No. BK-GNRAL-PEDCO-ME-SP-0001. 🗵
- 37. All nozzles must be vertical or horizontal and not perpendicular or parallel to vessel center line.
- 38. 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.
- 39. Design pressure specified is at top of vessels. VENDOR design shall include static head for vessels flooded with specific gravity of the handled liquid.
- 40. VENDOR is to maximize shop fabrication based on the following transportation limits: 12
 - Maximum weight: 96 tonnes
 - Maximum load per axle: 12 tonnes
 - Maximum length: 50.0 m
 - Maximum width: 5.0 m
 - Maximum height: 5.2 m

For items with dimensions and weights greater than the road capacity specified above, VENDOR may be required to split the package into several components.

41. All external attachments directly welded to the pressure part shall be the same material as vessel grade.



شماره پیمان:

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR GLYCOL SUMP DRUM

 نسخه
 سریال
 نوع مدر ک
 رشته
 تسهیلات
 صادر کننده
 بسته کاری
 پروژه

 BK
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شماره صفحه: ۵ از ۸

		Mech. Data Sheet For Glycol Su	mp Drum (V-2107) / sheet 1 of 4	
ev		DATA S	SHEET	TF.
1	Description : Glycol	Sump Drum	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
2	Tag No. : V-2107		Quantity : 1 Set	
3		re Vessel	-	
4		Process I	Design Data	
5	Contents	-	Corrosive / Erosive	NO
6	Operating Temp. (°C)	AMB	Liquid Flow (kg/h)	-
1 7	Operating Press. (barg)	0.01	Vap. Molec. Weight (kg/kmol)	143.1
8	Gas Flow (kg/h)	-	Liquid Sp. Gravity	1100
9	Liquid Viscosity (cP)	6.63	Lethal:	No
10			Design Data (1)	
	Design Temp. (°C)	85	Vessel Orientation	Horizontal
	Design Press. (barg)	3.5	LLLL / HHLL (mm)	150 / 800
	Test Press. (barg)	Per Code & Spec. Requirements	Normal Liquid Vol. (m ³)	4
	Internal Vacuum (barg)	F.V.	In. Dia. Of Boots (mm)	N/A
_	In. Dia. of Shell (mm)	1100	Boot Length (mm)	N/A
	Tan/Tan Dim. (mm)	3600	Boot Head Type	N.A
	Vessel Head Type Shell Wall Thk. (mm)	2:1 Elliptical (Note 31)	Corr. Allowance (mm)	3
	` '	*(1)	Joint Efficiency	0.85 (Shell) / 1 (Head)
		*(1)	Ambient Temp. (°C) MDMT (°C)	5 ~ 50
	Seismic Design	Site Class: D, Code: ASCE 7-10		5
21	Wind Design	Speed: 120 Km/hr (Max.), Code: ASCE 7-10	Insulation Required	-
22 23	Code	ASME II /ASTM	terials Internal Welded Supports	A 516 70
24		A 516 70	Nozzle Necks	A 310 / 0 A 106 Gr.B
25		A 516 70	Pipes	A 100 Gr.B A 106 Gr.B
26		P8	Plates	A 516 70
27	Saddles	A 283 Gr. C	Forgings	A 310 70 A 105
28		A 283 Gr. C	Flanges	A 105 A 105
29		A 516 70	Fittings	A 105 A 234 Gr. WPB
30		Note 26	Welded Internals	A 516 70
31		A 516 Gr.70 / A 283 Gr. C	External Bolts / Nuts (Note 11)	A 193 Gr. B7 / A 194 Gr. 2H
32		A 516 GI. 70 A 283 GI. C	Internal Bolts / Nuts (Note 11)	S.S.
33		C.S.	External Welded Clips	A 516 Gr.70
34		Hot Dip Galvanized C.S.	Name Plate	S.S. 316
35			DARDS & DOCUMENTS	5.5. 510
	Mechanical Design Code	1(2, 2, (2, (3, (4, (4, (4, (4, (4, (4, (4, (4, (4, (4		S-G-ME-150 (Latest Edition)
37	Specification for Pressure Ve	essels		CO-000-ME-SP-0001
	Process Basis of Design			CO-000-PR-DB-0001
	Piping & Instrument Diagram	n (P&ID)		CO-120-PR-PI-0025
	Specification for Painting			CO-000-PI-SP-0006
	Specification for Insulation		BK-GNRAL-PED	CO-000-PI-SP-0019
42	Specification For Material Re	equirements in Sour service		OCO-000-PI-SP-0008
	Specification For lining	•	BK-GNRAL-PED	CO-000-PI-SP-0007
44	•	Fabrication and Insi	pection Requirements	
45		TPI & Client	-	
46	Material Certification	In Accordance with BS EN 10204:2004,		taining and Attachments
47		Water	Hydro Test Procedure	Yes;Per Code & Spec. Requirements
48	Post Weld Heat Treatment	Per Code & Spec. Requir.	PT	100%
49		100 % on Lifting Lug Fillet Welds	UT	Yes;Per Code & Spec. Requirements
50	RT	100 % On T-Joints and Head Joint		
51			Circumferential Joints Butt-Welds,	
52			k Fabricated Nozzle Neck Longitudin	*
53		Yes; Per Code & Spec. Requir.	PT Report	Yes;Per Code & Spec. Requirements
54		Yes; Per Code & Spec. Requir.	UT Report	Yes;Per Code & Spec. Requirements
55				Yes
56				Yes
57	Surface Preparation & Coati	ng	Specification for Painting with Doc. No. "BK	
58			Specification For Lining, Doc. No.: "BK-GN	RAL-PEDCO-000-PI-SP-0007"
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شماره پیمان:

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض



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احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

	MECHANICAL DATA SHEETS FOR GLTCOL SUMP DRUM										
پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرك	سريال	نسخه				
BK	GCS	PEDCO	120	ME	DT	0036	D02				

شماره صفحه: ۶ از ۸

Mech. Data Sheet For Glycol Sump Drum (V-2107) / sheet 2	of 4

ACC	ESSORIES , NOZZLE:	S LIST & LOADS @ BASE	F					
	Accessories & Attachments (Note 25)							
Supporting Saddles	Yes	Name Plate Bracket	Yes					
Access Ladder & Platform	Yes	Name Plate	Yes					
Insulation Support		Earthing Lug (Note 30)	Yes					
Insulation		Tailing Lug						
Insulation Cover		Cathodic Protection (Sacrificial Anodes)						
Fireproofing Support	Yes	Anchor Bolts	Yes					
Lifting Lugs	Yes	Instrumentations						
Internal/ External Clips	Yes	Skid						
Tamplate		Support Clips	Yes					
Boot		Vortex Breaker	Yes					
Davit for Manhole	Yes	Rung & Grip	Yes					
Internal Lining (By Painting)		Heating Coil						

	Nozzles List *(Note 1)											
Mark	Qty.	Description		Pipe		Flange			Proj. (mm) Reinforcement		Remarks	
IVIAIK	Qty.	Description	Size	Thk. *	Sch. *	Туре	Rate.	Face	(Note 32)	Thk.	O.D.	Remarks
A	1	Inlet	2"	-	-	WN	#150	RF	SEE DWG			
В	1	Blanketing	1"	-	-	WN	#150	RF	SEE DWG			
V1	1	Vent	2"	-	-	WN	#150	RF	SEE DWG			
M	1	Manhole	20"	-	-	WN	#150	RF	SEE DWG			
S	1	Utility Connection	2"	-	-	WN	#150	RF	SEE DWG			
D	1	Drain	11/2"	-	-	WN	#150	RF	SEE DWG			
P1	1	Pressure gauge	2"	-	-	WN	#300	RF	SEE DWG			
L1,2	2	Level Transmitter	2"	-	-	WN	#300	RF	SEE DWG			
PH	1	Pump Hole	24"	-	-	WN	#150	RF	SEE DWG			
P2	1	Pressure Transmitter	2"			WN	#300	RF	SEE DWG			
PSV	1	Pressure Safety Valve	2"			WN	#300	RF	SEE DWG			
V2	1	Ventilation	4"	-	-	WN	#150	RF	SEE DWG			

	Wind and Seismic Loads at Base * Note(9)									
Load Condition	Empty Condition			Ор	Operating Condition			Testing Condition		
M ← T Load Type	Max. Shear @ Base (Kg)	Max. Moment @ Base (Kg.m)	Weight (Kg)	Max. Shear @ Base (Kg)	Max. Moment @ Base (Kg.m)	Weight (Kg)	Max. Shear @ Base (Kg)	Max. Moment @ Base (Kg.m)	Weight (Kg)	
WIND										
SEISMIC										



نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

المركة وتدية وايران HIRGAN ENERGY

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR GLYCOL SUMP DRUM

صادر کننده بسته کاری شماره پیمان: پروژه تسهيلات رشته نوع مدرك سريال نسخه ·07 - ·YT - 91AF BK GCS PEDCO 120 ME DT 0036 D02

شماره صفحه: ۱ از ۸

Mech. Data Sheet For Glycol Sump Drum (V-2107) / sheet 3 of 4 Sketch Sketch



·07 - · YT - 9114

شماره پیمان:

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



MECHANICAL DATA SHEETS FOR GLYCOL SUMP DRUM

پروژه تسهیلات صادر کننده بسته کاری نوع مدرك رشته سريال نسخه BK GCS PEDCO 0036 D02 ME DT 120



شماره صفحه: ۸ از ۸

			Mech. Data	a Sheet For Glycol Sump	Drum (V-210	7) / sheet 4 o	f 4					
Rev.				WEIGH	łT				Rev.			
1 2 3 4		WEIGHT CONT DATA SHEE SI UNIT *			1/1							
5		Glycol Sump Drum			Location	:	Bushehr (Binai	k Oilfield)	+			
7	Type :	Grycor Sump Drum			Quotatio	n No. :	Busileiti (Bulla	· o igieta)				
8					Serial No	o. :						
9												
1.	Manufacturer:											
12									4			
14	Note: Information to be completed by equipment vendor.											
16				Total weig	ght (kg) *							
17		Erection	(Operation	Hydrosta	tic Test	Removable internal	Ladder & Platform				
19												
20									_			
2.												
23	3		WE	IGHT AND C OF G	DATA REC	UIRED (9)						
24 25		WEIGHT ACCURACY	0/.	WEIGHT (kg)		X	CENTER OF GRAV	/ITY (mm) Z				
20		ACCORACT	/0	(kg)		^						
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5		plan for skid mounted	equipme	nt to be provided by	the Vendor				1			
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