

شرکت توسعه شروایران





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

NISOC

MECHANICAL DATA SHEETS FOR DISCHARGE GAS K.O. DRUM

شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرك	سريال	نسخه
٤٨١٤ - ٣٧٠ - ٣٥٠	BK	GCS	PEDCO	120	ME	DT	0006	D04

شماره صفحه: ۱ از ۸

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR DISCHARGE GAS K.O. DRUM

نگهداشت و افزایش تولید میدان نفتی بینک

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	JAN.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D02	SEP.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D03	JUL.2023	IFA	H.Adineh	M.Fakharian	A.M.Mohseni	
D04	SEP.2024	IFA	V.Amjadi	M.Fakharian	M. Sadeghian	

Class: 1 CLIENT Doc. Number: F0Z-708837

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

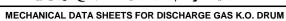
IFI: Issued For Information

AB-R: As-Built for CLIENT Review

AB-A: As-Built -Approved



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک







شماره صفحه: ۲ از ۸

REVISION RECORD SHEET

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شماره بیمان:

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR DISCHARGE GAS K.O. DRUM

صادر کننده تسهيلات ن...**خ**ه پروژه يسته کاري ر شته نوع مدرك سريال BK GCS PEDCO 120 ME DT 0006 D04



شماره صفحه: ۱۳ از ۸

General Notes

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- 1. The Asterisk * denotes information and/or confirmation required from VENDOR. The Vendor shall be fully responsible for the complete mechanical design, preparing calculation book and supply of the vessel. The vessel shall be supplied in accordance with project 'Specification for Pressure Vessels', Doc. No. BK-GNRAL-PEDCO-000-ME-SP-0001. The manufacturer shall calculate thickness and loads 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', Doc. No. BK-GNRAL-PEDCO-000-PI-SP-0007.
- 6. Flanges shall comply with ANSI B16.5. Nozzle bolt holes shall straddle the natural centerlines for horizontal nozzles. VENDOR to confirm maximum allowable nozzle loads and moments. (RF: Raised Face, WN: Welding Neck, LWN: Long Weld 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 1.5 x 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. All dimensions shown are in mm unless otherwise indicated. All nozzle sizes are in inch.
- 18. All removable internals should be passed through manhole.
- 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 surfaces. 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 and outer ring S.S 316.
- 27. Deleted
- 28. deleted
- 29. Equipment packaging, preparation for shipment and delivery shall be in accordance with the project Packing, Marking, Transportation Procedure Doc. No. "BK-GNRAL-PEDCO-000-QC-PR-0045".



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نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL D	ATA SHEETS FOR DI	SCHARGE GAS K O	DRIIM

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 سریال
 نوع مدر ک
 رشته
 تسهیلات
 صادر کننده
 بسته کاری
 پروژه

 BK
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شماره صفحه: ٤ از ٨

General Notes (Cont'd)

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- 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.

شماره پیمان:

- 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 spare parts operation spare parts shall be I in accordance with document E&C-QC-SP-1.
- 36. Two M12 earthing lugs shall be provided on vessel support. Material of earthing lugs shall be S.S. 316. 2
- 37. DEMISTER specification will be finilized latter.
- 38. Welded carbon and carbon manganess steels for vessel shall comply with the following:

Carbon content shall not exceed 0.23%.

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.
- 40. The material shall be in compliance with NACE MR0175/ISO15156 and Specification for Material Requirements in Sour Service, Doc.No. BK-GNRAL-PEDCO-000-PI-SP-0008.
- 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.
- 42. Design pressure specified is at top of vessels. VENDOR design shell include static head for vessels flooded with specific gravity of the handled liquid.
- 43. 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.

- 44. All external attachments directly welded to the pressure part shall be the same material as vessel grade.
- 45. VENDOR to advise (VTA) internal for inlet nozzle.

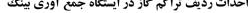


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شماره پیمان:

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک







شماره صفحه: ٥ از ٨

		Made By St. 15 St. 1	- V.O. D (V.O.CO.) / 1	
		Mech. Data Sheet For Discharge Gas	s K.O. Drum (V-2103) / sheet 1 of 4	
Rev		DATA S	HEET	F
1		rge Gas K.O. Drum		
2	Tag No. : V-2103		Quantity : 1 Set	
3 4	Type : Pressur	re Vessel	Design Data	
5	Contents	Wet Sour HC (CO2, H2S)	Corrosive / Erosive	Yes
6	Operating Temp. (°C)	60	Liquid Flow (kg/h)	-
7	Operating Press. (barg)	54.1	Vap. Molec. Weight (kg/kmol	-
8	Gas Flow (kg/h)	-	Liquid Sp. Gravity	0.055
9		-	Lethal:	No
10			Design Data D04	
	Design Temp. (°C) Design Press. (barg)	130 62	Vessel Orientation HHLL (mm)	Vertical 1100
	Test Press. (barg)	Per Code & Spec. Requirements	HHLL (mm) Nor. Liquid Vol. (m³)	1100
	Internal Vacuum (barg)	F.V.	In. Dia. Of Boots (mm)	N/A
	In. Dia. of Shell (mm)	900	Boot Length (mm)	N/A
16	Tan/Tan Dim. (mm)	3000	Boot Head Type	N.A
17	Vessel Head Type	2:1 Elliptical (Note 31)	Corr. Allowance (mm)	-
	Shell Wall Thk. (mm)	*	Joint Efficiency	1 (Shell)/ 1 (Head)/ 0.7 (Skirt)
19	Head Wall Thk. (mm)	(After Forming)*	Ambient Temp. (°C)	-
D04 20	Seismic Design	Site Class: D, Code: ASCE 7-10 Fa=1,FV=1.33,S1=0.46,Ss=1.125,I=1.25	MDMT (°C)	5
004 21	Wind Design	Speed: 232 Km/hr (Max.), Code: ASCE 7-10	Insulation Required	Personal Protection
22			erials	·
23		ASME II / ASTM	Internal Welded Supports	S.S.
24		A 516 70N + 3mm Clad 316L	Nozzle Necks	A 106 Gr.B N + 3mm Clad 316L
25		A 516 70N + 3mm Clad 316L	Pipes Plates	A 106 Gr.B N + 3mm Clad 316L A 516 70N
26	Skirt (Top/ Bottom)	-/S.S. 316L (3 mm) A 516 Gr. 70N	Forgings	A 310 70N $A 105N + 3mm Clad 316L$
28		A 516 70N	Flanges	A 105N + 3mm Clad 316L $A 105N + 3mm Clad 316L$
29		A 516 70N	Fittings	A 234 Gr. WPB
30		Note 26	Welded Internals	S.S.
31	Lifting Lugs	J Lugs A 516 Gr.70N/A 283 Gr. C		A 193 Gr. B7 / A 194 Gr. 2H (Note 11)
32		A 516 70N	Internal Bolts / Nuts	S.S. (Note 11)
33		C.S.	Insulation	-
34		Hot Dip Galvanized C.S.	Name Plate	S.S. 316
35 36		A 516 Gr.70N	ARDS & DOCUMENTS	
37	Mechanical Design Code	REPERENCE STAND		Div 1, IPS-G-ME-150
	Specification for Pressure Ve	essels		OCO-000-ME-SP-0001
39	Process Basis of Design			OCO-000-PR-DB-0001
	Piping & Instrument Diagram	(P&ID)		CO-120-PR-PI-0012
	Specification for Painting			DCO-000-PI-SP-0006
	Specification for Insulation			DCO-000-PI-SP-0019
	Specification For Material Re			-000-PI-SP-0008 (Note 40)
44		TPI & Client	ection Requirements D04	
46		In Accordance with BS EN 10204:2004, Ty	ppe 3.1, Minimum for Pressure Conto	tining and Attachments
47	Hydro Test Medium	Water	Hydro Test Procedure	Yes; Per Code & Spec. Requirements
	Post Weld Heat Treatment	Per Code & Spec. Requirements	PT	100%
	MT	100 % on Lifting Lug Fillet Welds	UT	Yes;Per Code & Spec. Requirements
50		100 % On T-Joints and Head Joints		
51			rcumferential Joints Butt-Welds,	l Putt Wolds
52 53		Yes; Per Code & Spec. Requir.	Fabricated Nozzle Neck Longitudina. PT Report	Yes; Per Code & Spec. Requirements
54		Yes; Per Code & Spec. Requir.	UT Report	Yes; Per Code & Spec. Requirements Yes; Per Code & Spec. Requirements
55				Yes
56				Yes
57	Surface Preparation & Coatin	• • • • • • • • • • • • • • • • • • • •	Specification for Painting Doc. No.BK	
58		'Y	Specification for Linning Doc. No.BK-	GNRAL-PEDCO-000-PI-SP-0007
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Rev.

نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



MECHANICAL DATA SHEETS FOR DISCHARGE GAS K.O. DRUM تسهیلات صادر کننده بسته کاری پروژه شماره پیمان: نوع مدرک سريال نسخه BK GCS PEDCO 120 ME DT 0006 D04



شماره صفحه: ٦ از ٨

Mech. Data	Sheet For	Discharge	Gas K O	Drum	(V-2103)	/ sheet 2 of	f 4
WECH. Data	Sileet i Oi	Dischar ye	Gas N.O.	Dium	(V-Z 103)	/ SHEEL Z O	, 4

ACCE	SSORIES , NOZZLI	ES LIST & LOADS @ BASE	R
	Accessories & A	Attachments (Note 25)	
Supporting Saddles	No	Name Plate Bracket	Yes
Access Ladder & Platform (Note 4)	Yes	Name Plate	Yes
Insulation Support	Yes	Earthing Lug (Note 30)	Yes
Insulation	Yes	Tailing Lug	Yes
Insulation Cover	Yes	Cathodic Protection (Sacrificial Anodes)	No
Fireproofing Support	No	Anchor Bolts	No
Lifting Lugs	Yes	Instrumentations	No
Internal/ External Clips	Yes	Skid	No
Tamplate	Yes	Support Clips	Yes
Boot	No	Vortex Breaker	Yes
Davit for Manhole	Yes	Rung & Grip	No
Internal Lining (By Painting)	Yes	Heating Coil	No
Internal Demister Pad (Note 37)	Yes		

				Noz	zles Lis	t (Note 1)						
Mark	Qty.	Description		Pipe			Flange		Proj. (mm)	Reinfo	rcement	Remarks
Walk	Qty.	y. Description	Size	Thk.	Sch.	Туре	Rate.	Face	(Note 32)	Thk.	O.D.	Remarks
A	1	Inlet	6"	*		FWN	#600	RF	750*			Integral Type
B1	1	Gas Outlet	6"	*		FWN	#600	RF	420*			Integral Type
B2	1	Liquid Outlet	2"	-		LWN	#600	RF	350*			
V	1	Vent	2"	-		LWN	#600	RF	350*			
M	1	Manhole	20"	*		FWN	#600	RF	750*			Integral Type
S	1	Utility Connection	2"	-		LWN	#600	RF	680*			
Deleted												
L 1,2	2	Stand Pipe	3"	*		FWN	#600	RF	700*			Integral Type
L 3,4	2	Level Transmitter	2"	-		LWN	#600	RF	680*			
PSV	1	Pressure Safety Valve	3"	-		LWN	#600	RF	680*			
P1	1	Pressure gauge	2"	-		LWN	#600	RF	680*			
T	1	Temperature gauge	2"	-		LWN	#600	RF	680*			
P 2,3	2	PDIT	2"	-		LWN	#600	RF	680*			

	Wind and Seismic Loads at Base * Note(9)								
Load Condition	on Empty Condition		Оре	erating Condition	on	Testing Condition			
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									





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Note: All Dimensions are in mm except otherwise noted.

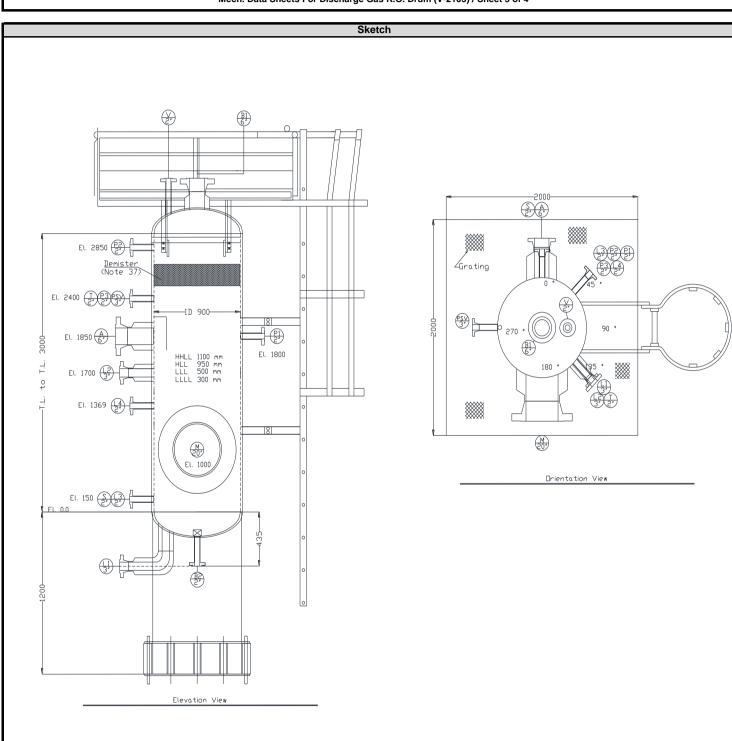
احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR DISCHARGE GAS K.O. DRUM

شماره پیمان: پروژه بسته کاری صادر کننده تسهيلات نوع مدرك سريال نسخه ٤٨١٤ - ٣٧٠ - ٣٥٠ GCS PEDCO 0006 D04

شماره صفحه: ۷ از ۸

Mech. Data Sheets For Discharge Gas K.O. Drum (V-2103) / Sheet 3 of 4





احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR DISCHARGE GAS K.O. DRUM



شماره پیمان: ۹۱۸۶ – ۷۲۰ – ۰۵۳
 نسخه
 سریال
 نوع مدر ک
 رشته
 تسهیلات
 صادر کننده
 ببته کاری
 پروژه

 BK
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شماره صفحه: ۱ از ۸

				neet For Discharge ga		•		
1 2 3 4		WEIGHT CONT DATA SHEE SI UNIT *	-	WEI	1/1			
	Service : Type : No. trains : No. stages : Supplier : Manufacturer :	Discharge Gas K.O.	Drum		Location Quotation Serial No		Bushehr (Bina)	k Oilfield)
12 13 14 15	Model : Note: Information to	be completed by eq	uipment v					
16					eight (kg) *			
17 18 19 20 21 22	Fabrication Erection Operation		Operation	Hydrostat	ic Test	Removable internal	Ladder & Platform	
23			w	EIGHT AND C OF	G DATA REC	UIRED *		
24 25	CONDITION	WEIGHT ACCURACY	' 0/	WEIG (kg)		Х	CENTER OF GRAV	/ITY (mm)
26 27 28	Dry	ACCORACT	70	(kg)		^	'	
29 30					ETCH			
32 33 34 35 36 37 38 39 40 41	Y		X	ag 	e 1		w w	
42 43 44 45 46 47 48 49 50	H	Z		ELEVATION L			UNDERSIDE OF BASE	<u> </u>
51								
52 53	All lifting points to	be load tested and	certified	N	DTES			
54 55 56 57 58 59	Any spreader bea Lifting / rigging pla	am to be load tested	d and cert	ified. nt to be provided I	by the Vendor.			
60 61								