


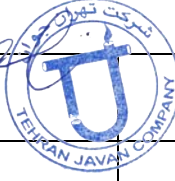
 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تهیلات 120	رشته ME	نوع مدرک DT	سریال 0009	نسخه D02	شماره صفحه: ۸ از ۱

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

### MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER

#### نگهداشت و افزایش تولید میدان نفتی بینک

D02	SEP.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D01	DEC. 2021	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D00	NOV.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-708840

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 NITROGEN RECEIVER



شماره صفحه: ۸ از ۲

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادر کننده

PEDCO

تسهیلات

120

رشته

ME

نوع مدرک

DT

سریال

0009







نسخه

D02

### REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X			65					
2	X	X	X			66					
3	X	X	X			67					
4	X	X	X			68					
5	X	X	X			69					
6	X	X	X			70					
7	X	X	X			71					
8	X		X			72					
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64						128					



Rev	
	1. The Asterisk * denotes information and/or confirmation required from VENDOR. TJ: Confirmed
D02	2. Deleted 
	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). TJ: Confirmed
D02	4. 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 respectively. TJ: Confirmed
D02	5. Flanges shall comply with ASME B16.5. Nozzle bolt holes shall straddle the natural centrelines for horizontal nozzles. VENDOR to confirm maximum allowable nozzle loads and moments (RF: Raised Face, WN: Welding Neck) TJ: Confirmed 
	6. 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". TJ: Confirmed
	7. 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. TJ: Confirmed
	8. All external bolts and nuts shall be hot dip galvanized. Internal bolts and nuts shall be stainless steel. TJ: Confirmed
	9. Loads at support base, Shall be calculated and determined by vendor. TJ: Confirmed
	10. Access Ladder & Platform to be considered . TJ: Confirmed
D02	11. Deleted 
	12. All material, corrosion allowance and their suitability for the process fluid at design pressure and temperature to be confirmed by vendor. TJ: Confirmed
D02	13. Deleted 
D02	14. All nozzle locations and orientations will be finalized later. TJ: Confirmed
	15. Instrumentation items are excluded from vendor's scope of supply. TJ: Confirmed
	16. Any changes in material of construction, location & orientation of the nozzles shall be confirmed by client. TJ: Confirmed
	17. All materials shall be new and unused. TJ: Confirmed
	18. Fabrication tolerances for vessel shall be in accordance with requirement of ASME code. TJ: Confirmed
	19. Location and number of lifting lugs on vessels shall be specified on VENDOR drawing. TJ: Confirmed
	20. All items shall be clearly match marked against vessel drawings to facilitate erection. TJ: Confirmed
D02	21. Deleted 
	22. Vendor shall supply details of all welding connections and give general specification of used materials. TJ: Confirmed
	23. 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). TJ: Confirmed
	24. Equipment packaging, preparation for shipment and delivery shall be in accordance with the project Minimum Requirements for Marking, Packing, Shipment & Storage' Document No. IPS-G-GN-210. TJ: Confirmed
	25. Specified accessories and attachments shall be supplied by vendor. TJ: Confirmed
	26. Gasket shall be spiral wound type, graphite filled with inner ring and outer ring S.S.316 TJ: Confirmed
D02	27. Deleted 
D02	28. Deleted
	29. Two M12 earthing lugs shall be provided on vessel support. Material of Earthing lugs shall be S.S. 316 TJ: Confirmed



نگهداشت و افزایش تولید میدان نفتی بینک  
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MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER



شماره پیمان:

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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". TJ: Confirmed
31. Elliptical heads shall be Ultrasonic Tested for lamination after forming. TJ: RT test will be performed.
- D0 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 tangent line and centerline respectively. TJ: Confirmed
33. The elevation of equipment's nozzles should be specified as follows :  
I. For vertical vessels : from bottom T.L. TJ: Confirmed  
II. For horizontal vessels : from Left T.L.
34. 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. TJ: Confirmed
35. 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. TJ: Confirmed
- D02 36. Minimum requirement for pre-commissioning, commissioning, start up and two years operation and spare parts shall be in accordance with document E&C-QC-SP-1. TJ: Confirmed
37. 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
38. 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
39. VENDOR is to maximize shop fabrication based on the following transportation limits:  
- Maximum weight: 96 tonnes TJ: Confirmed  
- 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. TJ: Confirmed
40. All external attachments directly welded to the pressure part shall be the same material as vessel grade. TJ: Confirmed
- D02 41. The Vendor shall be fully responsible for the complete mechanical design, preparing calculation book and supply of the vessel. TJ: Confirmed
42. All dimensions shown are in mm unless otherwise indicated. All nozzle sizes are in inch. TJ: Confirmed



نگهداشت و افزایش تولید میدان نفتی بینک  
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NISOC

MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER

شماره پیمان:

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شماره صفحه: ۵ از ۸

BK

GCS

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D02

Mechanical Data Sheets For Nitrogen Receiver (V-2204) / sheet 1 of 4

Rev	DATA SHEET					Rev
	1	Description : Nitrogen Receiver				
	2	Tag No. : V-2204		Quantity : 1 Set		
	3	Type : Pressure Vessel				
	4	Process Design Data				
	5	Contents		Corrosive / Erosive		
	6	Operating Temp. (°C)	60	Liquid Flow (kg/h)		
	7	Operating Press. (barg)	8	Vap. Molec. Weight (kg/kmol)		
	8	Gas Flow (kg/h)	32.5	Liquid Sp. Gravity	1	
	9	Liquid Viscosity (cP)		Service:	N/A	
	10	Mechanical Design Data D02				
	11	Design Temp. (°C)	85	Vessel Orientation	Vertical	
	12	Design Press. (barg)	12.5	Liquid Level (mm)	300	
	13	Test Press. (barg)	Per Code & Specification	Nor. Liquid Vol. (m³)		
	14	Internal Vacuum (barg)	-	In. Dia. Of Boots (mm)	N/A	
D02	15	In. Dia. of Shell (mm)	1050	Boot Length (mm)	N/A	
D02	16	Tan/Tan Dim. (mm)	3150	Boot Head Type	N/A	
	17	Vessel Head Type	2:1 elliptical	Corr. Allowance (mm)	1.6	
D02	18	Shell Wall Thk. (mm)	* TJ: 8 mm	Joint Efficiency	0.7 (Skirt)/ 0.85 (Shell) /1(Head)	D02
D02	19	Head Wall Thk. (mm)	* (After Forming) TJ: 4 mm	Ambient Temp. (°C)		
	20	Seismic Design	Site Class: D, Code: ASCE 7-10	MDMT (°C)	5	D02
	21	Wind Design	Speed: 120 Km/hr (Max.), Code: ASCE 7-10	Insulation Required	No	
	22	Materials D02				
D02	23	Code	ASME II / ASTM	Nozzle Necks:		
D02	24	Shell	A 516 Gr. 70	Pipes	A 106 Gr.B	D02
D02	25	Heads	A 516 Gr. 70	Plates	A 516 Gr.70	D02
	26	Lining / Cladding	P3	Forgings	A 105	D02
D02	27	Skirt (Top / Bottom)	A 516 Gr. 70 / A 283 Gr. C	Flanges	A 105	D02
	28	Platform Gratings	Hot Dip Galvanized C.S.	Fittings	A 234 Gr. WPB	D02
	29	Gaskets	Note 26	External Bolts	A 193 Gr. B7 (Note 8)	D02
D02	30	Lifting Lugs	A 516 Gr.70 / A 283 Gr. C	External Nuts	A 194 Gr. 2H (Note 8)	D02
D02	31	Reinforcing Pads	A 516 Gr.70	Internal Bolts / Nuts	S.S.	
	32	Ladder & Platform	C.S.	Name Plate	S.S. 316	
	33					
	34	REFERENCE STANDARDS & DOCUMENTS				
	35	Mechanical Design Code	ASME Sec VIII Div 1, IPS-G-ME-150			
	36	Specification for Pressure Vessels	BK-GNRAL-PEDCO-000-ME-SP-0001			
	37	Process Basis of Design	BK-GNRAL-PEDCO-000-PR-DB-0001			
	38	Piping & Instrument Diagram (P&ID)	BK-GCS-PEDCO-120-PR-PI-0016			
	39	Specification for Painting	BK-GNRAL-PEDCO-000-PI-SP-0006			
	40	Specification for Insulation	BK-GNRAL-PEDCO-000-PI-SP-0019			
	41					
	42					
	43	Fabrication and Inspection Requirements				
	44	Inspection Authority	TPI & Client			
	45	Material Certification	In Accordance with BS EN 10204:2004, Type 3.1, Minimum for Pressure Containing and Attachments			
	46	Hydro Test Medium	Water	Hydro Test Procedure	Yes;Per Code & Spec. Requirements	
	47	Post Weld Heat Treatment	Per Code & Spec. Requirements	PT	100%	
	48	MT	100 % on Lifting Lug Fillet Welds	UT	Yes;Per Code & Spec. Requirements	
	49	RT	100 % On T-Joints and Head Joints Butt-Welds,			
	50		Spot On Shell Longitudinal and Circumferential Joints Butt-Welds,			
	51		100 % On Nozzle Neck to Flange & Fabricated Nozzle Neck Longitudinal Butt-Welds,			
	52	RT Report	Yes; Per Code & Spec. Requir.	PT Report	Yes;Per Code & Spec. Requirements	
	53	MT Report	Yes; Per Code & Spec. Requir.	UT Report	Yes;Per Code & Spec. Requirements	
	54	Fabrication Quality Control Plan (With Offer)	Yes			
	55	Welding Procedure Review / Approval	Yes			
	56	Surface Preparation & Coating	Specification for Painting Doc. No. "BK-GNRAL-PEDCO-000-PI-SP-0006" Specification for Lining Doc. No: "BK-GNRAL-PEDCO-000-PI-SP-0007"			
	57					
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## احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER

شماره پیمان:

• 03 - • 73 - 9184

پروژہ

تهه کاری

صادر کنندہ

## تسهيلات

رشته

ع مدرک

ریال	
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نسخه

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Mechanical Data Sheets For Nitrogen Receiver (V-2204) / sheet 2 of 4

Rev.

1

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ACCESSORIES , NOZZLES LIST & LOADS @ BASE

Accessories & Attachments (Note 25)

Supporting Saddles

Access Ladder & Platform

Insulation Support

Insulation

Insulation Cover

Fireproofing Support

Lifting Lugs

Internal/ External Clips

Template

Boot

Davit for Manhole

Internal Lining (By Painting)

NO

YES

NO

NO

NO

NO

YES

YES

YES

NO

YES

YES

Name Plate Bracket

Name Plate

Earthing Lug (Note 30)

Tailing Lug

Cathodic Protection (Sacrificial Anodes)

Anchor Bolts

Instrumentations

Skid

Support Clips

Vortex Breaker

Rung & Grip

Heating Coil

D02

YES

YES

YES

YES

NO

NO

NO

NO

YES

YES

NO

NO

Nozzles List (Note 1, 3, 5, 9, 12, 41)

Mark

Qty.

Description

Size

Thk.

Sch.

Type

Rate.

Face

Obj. (mm)  
(Note 32)

Reinforcement  
Thk.

O.D.

Remarks

A

1

Inlet

2"

WN

#150

RF

741

B

1

Gas Outlet

2"

WN

#150

RF

See DWG

PSV

1

Pressure Safety Valve

2"

WN

#150

RF

741

V

1

Vent

2"

WN

#150

RF

See DWG

M

1

Manhole

24"

WN

#150

RF

791

\*

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Note 7

P

1

Pressure Gauge

2"

WN

#300

RF

741

D

1

Drain

2"

WN

#150

RF

See DWG

L 1,2

2

Level Gauge

2"

WN

#300

RF

741

Wind and Seismic Loads at Base \* Note(9)

Load Condition

Max. Shear @ Base (Kg)

Max. Moment @ Base (Kg.m)

Weight (Kg)

Empty Condition

Max. Shear @ Base (Kg)

Max. Moment @ Base (Kg.m)

Weight (Kg)

Operating Condition

Max. Shear @ Base (Kg)

Max. Moment @ Base (Kg.m)

Weight (Kg)

Testing Condition

Max. Shear @ Base (Kg)

Max. Moment @ Base (Kg.m)

Weight (Kg)

WIND

SEISMIC

Rev.



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER



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سریال

0009

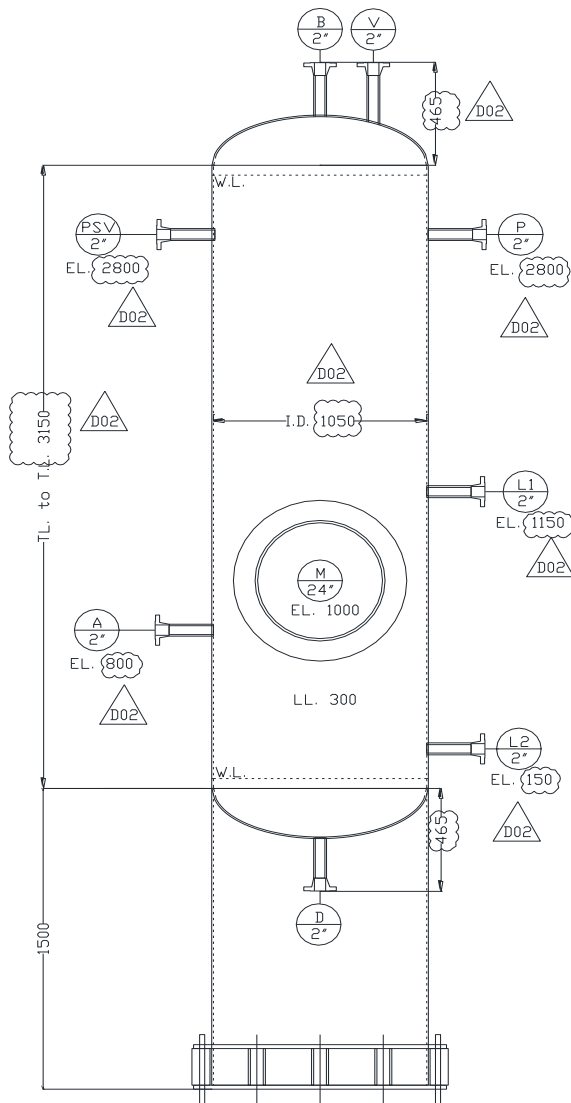
نسخه

D02

شماره صفحه: ۸ از ۷

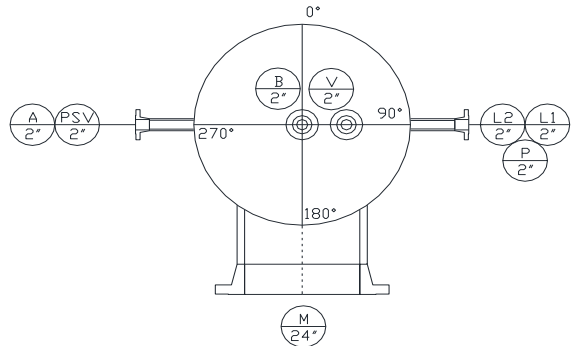
Mechanical Data Sheets For Nitrogen Receiver (V-2204) / sheet 3 of 4

Sketch



ELEVATION VIEW

ELEVATION WILL BE FINALIZED LATER BY PIPING DEPARTMENT.



ORIENTATION VIEW

ORIENTATION WILL BE FINALIZED LATER BY PIPING DEPARTMENT.



نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR NITROGEN RECEIVER



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	PEDCO	120	ME	DT	0009	D02

شماره صفحه: ۸ از ۸

Mechanical Data Sheets For Nitrogen Receiver (V-2204) / sheet 4 of 4

Rev.	WEIGHT						Rev.	
1	<b>WEIGHT CONTROL DATA SHEET SI UNIT *</b>			1/1				D02
2								
3								
4								
5								
6	Service :	Nitrogen Receiver			Location :	Bushehr (Binak Oilfield)		
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							
27								
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29								
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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