

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT	سریال 0008	نسخه D01	شماره صفحه: ۸ از ۱

طرح نگهداشت و افزایش تولید ۲۷ مخزن

MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER

نگهداشت و افزایش تولید میدان نفتی بینک

D01	SEP. 2022	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-708839

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

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض						 		
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک DT	سریال 0008	نسخه D01	شماره صفحه: ۸ از ۲

REVISION RECORD SHEET

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



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

بسته کاری

صادر کننده

تسهیلات

رشته

نوع مدرک

سریال

نسخه

شماره صفحه: ۸ از ۳

BK

GCS

PEDCO

120

ME

DT

0008

D01

General Notes

D01

- | Rev | Description |
|-----|---|
| | 1. The Asterisk * denotes information and/or confirmation required from VENDOR. |
| D01 | 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). |
| D01 | 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. |
| D01 | 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) |
| | 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". |
| | 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. |
| | 8. All external bolts and nuts shall be hot dip galvanized. Internal bolts and nuts shall be stainless steel. |
| | 9. Loads at support base, Shall be calculated and determined by vendor. |
| | 10. Access Ladder & Platform to be considered . |
| D01 | 11. Deleted |
| | 12. All material, corrosion allowance and their suitability for the process fluid at design pressure and temperature to be confirmed by vendor. |
| D01 | 13. The vendor shall be responsible for mechanical strength of the equipment based on mentioned condition in data sheets. |
| D01 | 14. All nozzle locations and orientations to 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 materials shall be new and unused. |
| | 18. Fabrication tolerances for vessel shall be in accordance with requirement of ASME code. |
| | 19. Location and number of lifting lugs on vessels shall be specified on VENDOR drawing. |
| | 20. All items shall be clearly match marked against vessel drawings to facilitate erection. |
| D01 | 21. Deleted |
| | 22. Vendor shall supply details of all welding connections and give general specification of used materials. |
| | 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). |
| | 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. |
| | 25. Specified accessories and attachments shall be supplied by vendor. |
| | 26. Gasket shall be spiral wound type, graphite filled with inner ring and outer ring S.S.316 |
| D01 | 27. Deleted |
| D01 | 28. Deleted |
| | 29. Two M12 earthing bosses shall be provided on vessel support. Material of Earthing Bosses shall be S.S. 316 |



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

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120

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D01




شماره صفحه: ۴ از ۸

General Notes (Cont'd)

D01

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.
- D01 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.
33. 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.
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.
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.
- D01 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.
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.
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.
39. VENDOR is to maximize shop fabrication based on the following transportation limits:
- 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.
40. All external attachments directly welded to the pressure part shall be the same material as vessel grade.
- D01 41. The Vendor shall be fully responsible for the complete mechanical design, preparing calculation book and supply of the vessel.
42. All dimensions shown are in mm unless otherwise indicated. All nozzle sizes are in inch.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER						 			
		شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴						شماره صفحه: ۵ از ۸			
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	PEDCO	120	ME	DT	0008	D01		
Mechanical Data Sheets For Instrument Air Receiver (V-2203) / sheet 1 of 4											
Rev	DATA SHEET										Rev
	1	Description : <i>Instrument Air Receiver</i>									
	2	Tag No. : <i>V-2203</i>		Quantity : <i>1 Set</i>							
	3	Type : <i>Pressure Vessel</i>									
	4	Process Design Data D01									
	5	Contents		Corrosive / Erosive							
	6	Operating Temp. (°C)	<i>65</i>		Liquid Flow (kg/h)						
	7	Operating Press. (barg)	<i>8</i>		Vap. Molec. Weight (kg/kmol)						
	8	Gas Flow (kg/h)			Liquid Sp. Gravity						
	9	Liquid Viscosity (cP)			Service:	<i>N/A</i>					
	10	Mechanical Design Data D01									
	11	Design Temp. (°C)	<i>85</i>		Vessel Orientation	<i>Vertical</i>					
D01	12	Design Press. (barg)	<i>12.5</i>		HHLL (mm)	<i>300</i>					D01
	13	Test Press. (barg)	<i>Per Code & Spec Requirements</i>								
	14	Internal Vacuum (barg)	<i>-</i>		In. Dia. Of Boots (mm)	<i>N/A</i>					
D01	15	In. Dia. of Shell (mm)	<i>1500</i>		Boot Length (mm)	<i>N/A</i>					
D01	16	Tan/Tan Dim. (mm)	<i>5000</i>		Boot Head Type	<i>N/A</i>					
	17	Vessel Head Type	<i>2:1 elliptical</i>		Corr. Allowance (mm)	<i>1.6</i>					
D01	18	Shell Wall Thk. (mm)	<i>*</i>		Joint Efficiency	<i>0.7 (Skirt)/0.85 (Shell) / 1 (Head)</i>					
D01	19	Head Wall Thk. (mm)	<i>*(After forming)</i>		Ambient Temp. (°C)						
	20	Seismic Design	<i>Zone: III, Code: ASCE 7-10</i>		MDMT (°C)	<i>5</i>					D01
	21	Wind Design	<i>Speed: 110 Km/hr (Max.), Code: ASCE 7-10</i>		Insulation Required	<i>-</i>					
	22	Materials D01									
D01	23	Code	<i>ASME II / ASTM</i>		Nozzle Necks:						
D01	24	Shell / Heads	<i>A 516 Gr. 70</i>		Pipes	<i>A 106 Gr.B</i>					D01
D01	25	Heads	<i>A 516 Gr. 70</i>		Plates	<i>A 516 Gr.70</i>					D01
	26	Lining / Cladding	<i>Epoxy Coating</i>		Forgings	<i>A 105</i>					D01
D01	27	Skirt (Top / Bottom)	<i>A 516 Gr. 70 / A 283 Gr. C</i>		Flanges	<i>A 105</i>					D01
	28	Platform Gratings	<i>Hot Dip Galvanized C.S.</i>		Fittings	<i>A 234 Gr. WPB</i>					D01
	29	Gaskets	<i>Note 26</i>		External Bolts	<i>A 193 Gr. B7 (Note 8)</i>					D01
D01	30	Lifting Lugs	<i>A 516 Gr.70 / A 283 Gr. C</i>		External Nuts	<i>A 194 Gr.2H (Note 8)</i>					D01
D01	31	Reinforcing Pads	<i>A 516 Gr.70</i>		Internal Bolts / Nuts	<i>S.S.</i>					
	32	Ladder & Platform	<i>C.S.</i>		Name Plate	<i>S.S. 316</i>					
	33	REFERENCE STANDARDS & DOCUMENTS									
	34	Mechanical Design Code	<i>ASME Sec VIII Div 1, IPS-G-ME-150</i>								
	35	Specification for Pressure Vessels	<i>BK-GNRAL-PEDCO-000-ME-SP-0001</i>								
	36	Process Basis of Design	<i>BK-GNRAL-PEDCO-000-PR-DB-0001</i>								
	37	Piping & Instrument Diagram (P&ID)	<i>BK-GCS-PEDCO-120-PR-PI-0015</i>								
	38	Specification for Painting	<i>BK-GNRAL-PEDCO-000-PI-SP-0006</i>								
	39	Specification for Insulation	<i>BK-GNRAL-PEDCO-000-PI-SP-0019</i>								
	40	Specification For Material Requirements in Sour service	<i>BK-GNRAL-PEDCO-000-PI-SP-0008</i>								
	41										
	42	Fabrication and Inspection Requirements									
	43	Inspection Authority	<i>TPI & Client</i>								
	44	Material Certification	<i>In Accordance with BS EN 10204:2004, Type 3.1, Minimum for Pressure Containing and Attachments</i>								
	45	Hydro Test Medium	<i>Water</i>		Hydro Test Procedure	<i>Yes; Per Code & Spec. Requirements</i>					
	46	Post Weld Heat Treatment	<i>Per Code & Spec. Requirements</i>		PT	<i>100%</i>					
	47	MT	<i>100 % on Lifting Lug Fillet Welds</i>		UT	<i>Yes; Per Code & Spec. Requirements</i>					
	48	RT	<i>100 % On T-Joints and Head Joints Butt-Welds,</i>								
	49		<i>Spot On Shell Longitudinal and Circumferential Joints Butt-Welds,</i>								
	50		<i>100 % On Nozzle Neck to Flange & Fabricated Nozzle Neck Longitudinal Butt-Welds,</i>								
	51	RT Report	<i>Yes; Per Code & Spec. Require.</i>		PT Report	<i>Yes; Per Code & Spec. Requirements</i>					
	52	MT Report	<i>Yes; Per Code & Spec. Require.</i>		UT Report	<i>Yes; Per Code & Spec. Requirements</i>					
	53	Fabrication Quality Control Plan (With Offer)	<i>Yes</i>								
	54	Welding Procedure Review / Approval	<i>Yes</i>								
	55	Surface Preparation & Coating	<i>Specification for Painting Doc. No. BK-GNRAL-PEDCO-000-PI-SP-0006</i>								
	56		<i>Specification for Lining Doc. No. BK-GNRAL-PEDCO-000-PI-SP-0007</i>								
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احداث ردیف تہ اکم گاز در ایستگاه جمع آوری سنک

MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER



شماره پیمان:

• 03 - • 73 - 9184

شماره ۵ صفحه: ۶ از ۸

Mechanical Data Sheets For Instrument Air Receiver (V-2203) / sheet 2 of 4

Rev.

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ACCESSORIES , NOZZLES LIST & LOADS @ BASE

Rev.

Accessories & Attachments (Note 25)

D01

Supporting Saddles

NO

Name Plate Bracket

YES

Access Ladder & Platform

YES

Name Plate

YES

Insulation Support

NO

Earthing Lug (Note 30)

YES

Insulation

NO

Tailing Lug

YES

Insulation Cover

NO

Cathodic Protection (Sacrificial Anodes)

NO

Fireproofing Support

NO

Anchor Bolts

NO

Lifting Lugs

YES

Instrumentations

NO

Internal/ External Clips

YES

Skid

NO

Template

YES

Support Clips

YES

Boot

NO

Vortex Breaker

NO

Davit for Manhole

YES

Rung & Grip

NO

Internal Lining (By Painting)

YES

Heating Coil

NO

Nozzles List (Note 1)

D01

Mark

Qty.

Description

Pipe

Size

Thk.

Sch.

Flange

Type

Rate.

Face

Proj. (mm)

(Note 32)

Reinforcement

Thk.

O.D.

Remarks

A

1

Inlet

2"

WN

#150

RF

965*

B

1

Gas Outlet

2"

WN

#150

RF

See DWG

PSV

1

Pressure Safety Valve

2"

WN

#150

RF

965*

V

1

Vent

2"

WN

#150

RF

See DWG

M

1

Manhole

24"

WN

#150

RF

115

*

*

Note 7

P

1

Pressure Gauge

2"

WN

#300

RF

965

D

1

Drain

2"

WN

#150

RF

See DWG

L 1,2

2

Level Gauge

2"

WN

#300

RF

965



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

پسته کاری

GCS

صادر کننده

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تسهیلات

120

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نوع مدرک

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0008

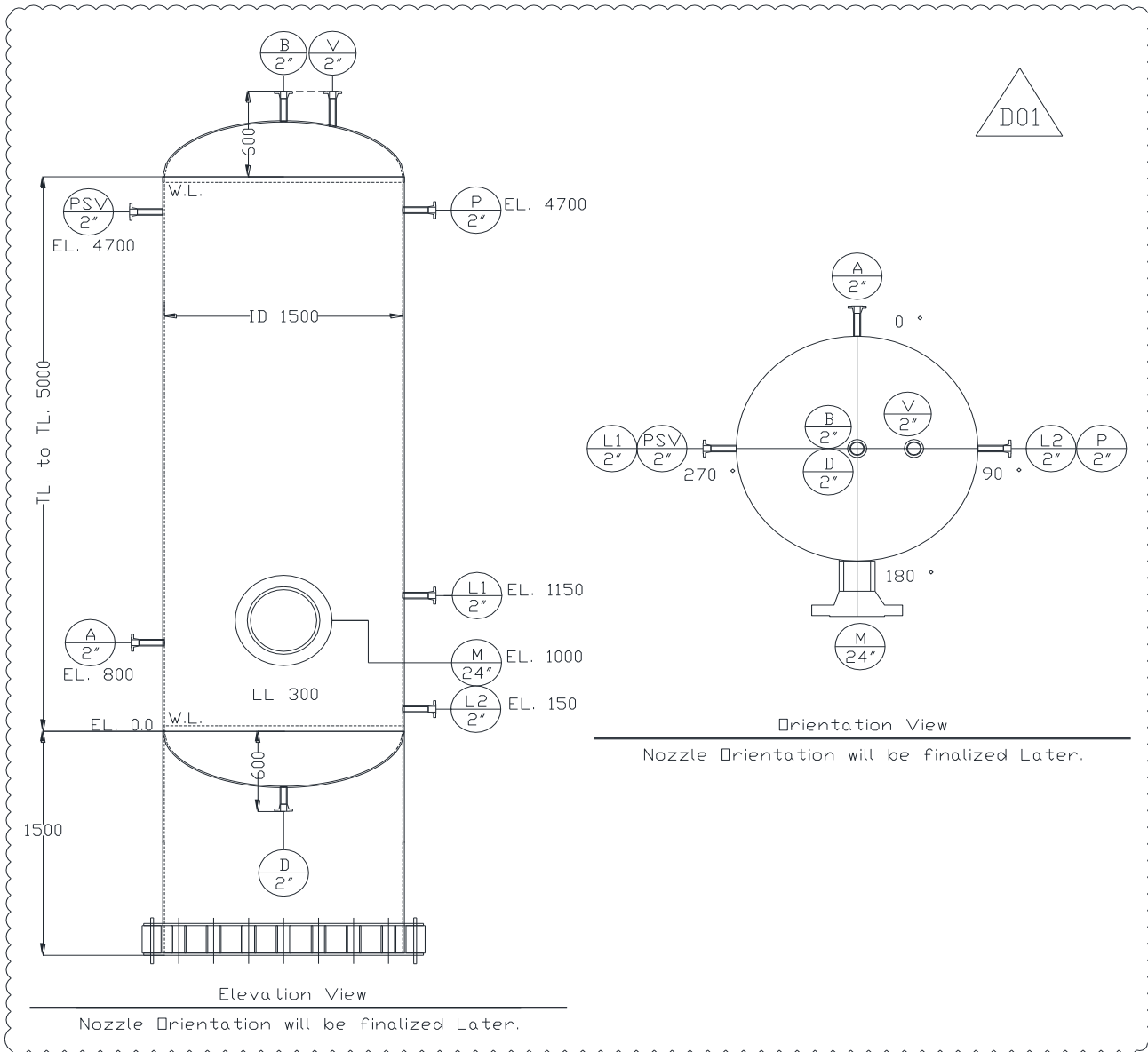
نسخه

D01

شماره صفحه: ۸ از ۷

Mechanical Data Sheets For Instrument Air Receiver (V-2203) / sheet 3 of 4

Sketch





نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

MECHANICAL DATA SHEETS FOR INSTRUMENT AIR RECEIVER



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	PEDCO	120	ME	DT	0008	D01

شماره صفحه: ۸ از ۸

Mechanical Data Sheets For Instrument Air Receiver (V-2203) / sheet 4 of 4

Rev.	WEIGHT						Rev.					
1	WEIGHT CONTROL DATA SHEET SI UNIT *					D01	1/1	D01				
2												
3												
4												
5												
6	Service :	Instrument Air 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	Total weight (kg) *											
17	Fabrication		Erection		Operation		Hydrostatic Test		Removable internal		Ladder & Platform	
18												
19												
20												
21												
22												
23	WEIGHT AND C OF G DATA REQUIRED *											
24	CONDITION		WEIGHT ACCURACY %		WEIGHT (kg)		CENTER OF GRAVITY (mm)					
25							X		Y		Z	
26	Dry											
27												
28												
29												
30	SKETCH											
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51												
52	NOTES											
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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