

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک							  	
	DATA SHEETS FOR PIG TRAPS								
شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	PPL	PEDCO	320	ME	DT	0001	D03	

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR PIG TRAPS

نگهداشت و افزایش تولید میدان نفتی بینک

D03	AUG.2022	AFC	H.Adineh	M.Fakharian	M.Mehrshad	
D02	AUG.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D01	JUN.2022	IFA	H.Adineh	M.Fakharian	M.Mehrshad	
D00	DEC.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-708541

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 خطوط انتقال گاز/هایعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک						 		
	DATA SHEETS FOR PIG TRAPS								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری PPL	صادرکننده PEDCO	تسهیلات 320	رشته ME	نوع مدرک DT	سریال 0001	نسخه D03	شماره صفحه: ۱۱ از ۱۱

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X	X		65					
2	X	X	X	X		66					
3	X	X	X			67					
4	X	X	X			68					
5	X		X	X		69					
6	X	X				70					
7	X	X				71					
8	X	X	X	X		72					
9	X		X	X		73					
10	X	X				74					
11	X	X				75					
12						76					
13						77					
14						78					
15						79					
16						80					
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64						128					

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث خطوط انتقال گاز/مابعات گازی از ایستگاه تقویت فشار گاز بینک تا ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک							 شرکت توسعه و پارس 
	DATA SHEETS FOR PIG TRAPS							
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	PPL	PEDCO	320	ME	DT	0001	D03

Notes

1. The Asterisk * denotes information and/or confirmation required from VENDOR.vendor shall calculated actual thicknesses under mechanical guarantee accordingly and Vendor should be submitted the calculation book.
2. VENDOR/BIDDER shall be fully responsible for the complete mechanical design, supply of the Pig Trap and auxiliaries. The Pig Traps shall be supplied in accordance with the project " Specification for Pig Traps " doc. No. BK-PPL-PEDCO-320-ME-SP-0001.
3. VENDOR/BIDDER shall include for the services of a Independent Verification Body for inspection and mechanical design verification of the equipment.
4. For equipment requiring PWHT, final inspection and acceptance by the CLIENT or its nominated representative shall only be undertaken against NDE after PWHT.
5. Two M12 earthing lugs shall be provided diametrically opposite, one on each saddle.
6. Nozzle flanges shall comply with ASME B16.5. Nozzle bolt holes shall straddle the natural centrelines.
7. 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.
8. Lifting Lugs 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/BIDDER shall provide a suitable, certified, lifting beam.
9. Material shall be selected as related pipeline specification and the material shall be in compliance with NACE MR0175/ISO15156 and Specification For Material Requirements in Sour service Document No. BK-GNRAL-PEDCO-000-PI-SP-0008.
10. Maximum Pig Trap length is limited to 15 m from end closure to minor barrel outlet due to transportation limitation.
11. The Pig Traps shall be suitable for the full range of intelligent pigs currently on the market VENDOR/BIDDER shall confirm that overall length is suitable.
12. Minor barrel's internal diameter shall match with pipeline internal diameter.
13. End closure design shall comply with ASME Sec. VIII, Division 1, Section UG-35.2 (Quick-Actuating Closures).
14. The end closure shall be provided with a locking device to prevent opening of the door when the pig trap is pressurised and failure of any part of the locking device shall leave the door closed.
15. Intrusive type pig signalers shall be provided by Contractor for the indication of pig movement along the pipeline route.
16. VENDOR/BIDDER shall specify/confirm size of required Anchor Bolts.
17. All of mentioned Accessories & Attachments are in the VENDOR/BIDDER's scope of supply.
18. Projection of horizontal & vertical nozzles have been specified from face of flanges to vessel tangent line and center line respectively.
19. All the equipments shall be in accordance with IPS-M-PI-130(1) and "Specification For Pig Launching / Receiving Traps" Doc. No. BK-PPL-PEDCO-320-ME-SP-0001.
20. The orientations of Kicker and Balance Line's nozzles shall be finalized by piping discipline later.
21. Pig Traps Dimension shall be in accordance with "NIOC S4L-6516-B" Std. Dwg. (except for thicknesses).
22. Vendor shall supply mechanical interlock prevents opening of pig launcher/receiver closure while pig launcher/receiver is pressurized.
23. In case of design in accordance with ASME Sec. VIII, Div. 1, pressure design shall be considered equal to maximum allowable pressure of related flanges (in related pressure and temperature) noted in ASME B16.5.
24. All nozzle loads shall not be less than specified values in a "appendix n" of specification for pressure vessels Doc No.: BK-GNRAL-PEDCO-000-ME-SP-0001".
25. All nozzle loads shall not be less than specified values in the "Specification For Atmospheric Above Ground Welded Steel Tanks" , Welded Steel Tanks" , Document No.: "BK-GNRAL-PEDCO-000-ME-SP-0002".



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تکهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

احداث خطوط انتقال گاز/مایعات گازی از ایستگاه تقویت فشار گاز بینک تا

ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

پسته کاری

صادر کننده

تسهیلات

رشته

نوع مدرک

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شماره صفحه: ۴ از ۱۱

DATA SHEETS FOR PIG LAUNCHER (PL-3201) /SHEET 1 OF 4

Description :											
Tag No.		: PL - 3201		Quantity		1		Set			
Type		: Pig Launcher									
Line No.		: GAS-113-0005-FN05-8"-PT									
Fluid Characteristics											
Fluid Handled		NATURAL GAS									
Fluid Density		41.5				H ₂ S % mol		0.054			
Toxic		YES				Sour		YES			
Corrosive/Erosive		YES		Due to		Hazardous Area		Hazardous Area "Zone 2, IIB, T3"			
Operating & Design Condition											
Operating Temp.		57.7~58.3				°C		Operating Pressure		49.4~50.9 barg	
Design Temp.		5~85				°C		Design Pressure		62 barg	
Ambient Temp.		5~50				°C		MDMT		5 °C	
Wind Design		120				Km / hr.		Seismic Design Code		ASCE 7-10, SITE CLASS : D	
Major Barrel Dia.		10				Inch		Minor Barrel Dia.		8 Inch	
Major Barrel Length		3000				mm		Minor Barrel Length		1000 mm	
Corrosion Allow.		3.2				mm		Corrosion Allow.		3.2 mm	
Major Barrel THK.		NOTE (1)				mm		Minor Barrel THK.		NOTE (1) mm	
Type of Pigs						Miscellaneous					
Normal		YES				Design Code:		(Note 23)			
Intelligent		YES				Barrels		ASME B 31.8 (D.F. :0.6)/ IPS-M-PI 130			
Spheres		YES				Closure		ASME VIII			
Foam		YES				Position		Horizontal			
Other						Bidirectional line		No			
						Insulation		No			
Closure Type ☒ Quick Opening ☐ Level/Handwheel Operated ☐ Vertical Hinged											
Materials (Note 9)											
Code		ASTM / API				Quick Open Closure		C.S.			
Barrel		API 5L Gr. X52 PSL2				Gasket		S.S. 316, Spiral Wound-Graphite Filled			
Nozzle		API 5L Gr. X 52				Backing Plate		C.S.			
Flange		ASTM A694 F52				Bolts / Nuts		A193 Gr. B7M / A194 Gr. 2HM			
Fittings		ASTM A860 WPHY 52				Anchor Bolts		C.S.			
Saddle (Wear Plate / Others):		A516 Gr. 70 / A283 Gr. C				Name Plate		S.S.			
Connections											
Mark	No. Req.	Size in	Flange Rating	Typ/ Fac.	Thk. (mm)	Sch.	Thk. (mm)	OD (mm)	Project. (mm) (Note 18)	Description	Remarks
A	1	2		WN/RF			-	-	272	Kicker Line	
B	1	2		WN/RF			-	-	245	Balance Line	
D1/D2	2	2		WN/RF			-	-	472/265	Drain	
E1	1	10		WN/RF			-	-	SEE DWG	Q.O.C.	
E2	1	8		WN/RF			-	-	SEE DWG	Main Pig Outlet	
P	1	1		WN/RF			-	-	243	PG Con.	
V1	1	2		WN/RF			-	-	272	Vent	
Deleted											
PSV	1	1		WN/RF			-	-	243	PRESSURE SAFTY VALVE	
V2	1	2		WN/RF			-	-	245	Vent	
Fabrication and Inspection Requirements											
Fabrication Code		ASME VIII Div. 1				Hydrostatic Test Press.		1.5 Times the Design Pressure			
NDE Code		ASME V & VIII				Impact Test		Acc. To Code			
Welding Code		ASME IX				PWHT		YES			
Radiography		100%				MT, PT & Pneu. Tests		Acc. To Code & The Project Spec.			
Internal & External Coating : Acc. To the Project 'Specification for Painting.', Doc. No. : BK-GNRAL-PEDCO-000-PI-SP-0006											



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

احداث خطوط انتقال گاز/مابغات گازی از ایستگاه تقویت فشار گاز بینک تا

ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک



DATA SHEETS FOR PIG TRAPS

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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PPL

صادرکننده

PEDCO

تسهیلات

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رشته

ME

نوع مدرک

DT

سریال

0001

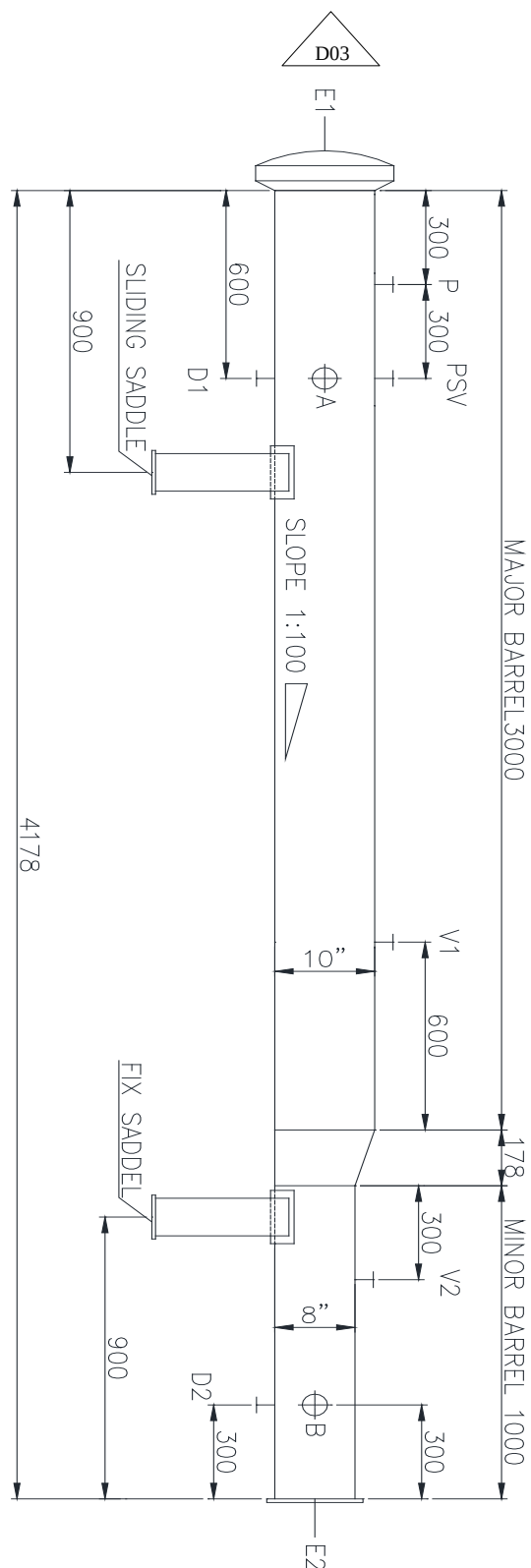
نسخه

D03

شماره صفحه: ۵ از ۱۱

DATA SHEETS FOR PIG LAUNCHER (PL-3201) / SHEET 2 OF 4

SKETCH





NISOC

نگهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

احداث خطوط انتقال گاز/ مایعات گازی از ایستگاه تقویت فشار گاز بینک تا

ایستگاه تزریق گاز سیاهمکان/ واحد بهره برداری بینک



DATA SHEETS FOR PIG TRAPS

شماره پیمان:

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پروژه

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شماره صفحه: ۱۱ از ۱۱

DATA SHEETS FOR PIG LAUNCHER (PL-3201) / SHEET 3 OF 4

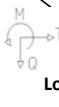
Accessories & Attachments (Note 17)

Supporting Saddles	●	Name Plate Bracket	●
Access Ladder & Platform	○	Name Plate	●
Insulation Support	○	Earthing Lug	●
Insulation	○	Pig Signaler (Note 15)	○
Fireproofing Support	○	Pigs	○
Lifting Lugs	●	Anchor Bolts	○
Tailing Lugs	○	Instrumentations	○
Skid	○	End Closure Interlocking System	●
Pipe Works	○	Valves	○

Reference List

Spec. for Pig Launching / Receiving Traps	BK-PPL-PEDCO-320-ME-SP-0001
Piping & Instrument Diagram (P&ID)	BK-PPL-PEDCO-320-PR-PI-0001
Specification for Painting	BK-GNRL-PEDCO-000-PI-SP-0006

Wind and Seismic Loads at Base (On Each Saddle) *

Load Condition  Load Type	Empty Condition		Operating Condition		Testing Condition	
	Max. Shear @ Base (KN)	Max. Moment @ Base (KN.m)	Max. Shear @ Base (KN)	Max. Moment @ Base (KN.m)	Max. Shear @ Base (KN)	Max. Moment @ Base (KN.m)
WIND						
SEISMIC						



NISOC

تکهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

احداث خطوط انتقال گاز/مابعات گازی از ایستگاه تقویت فشار گاز بینک تا

ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک



DATA SHEETS FOR PIG TRAPS

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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شماره صفحه: ۱۱ از ۲

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D03

DATA SHEETS FOR PIG LAUNCHER (PL-3201) /SHEET 4 OF 4

WEIGHT CONTROL
DATA SHEET
SI UNIT *

1/1

Service Pig LauncherLocation: (Binak) Oilfield

Type:

Quotation No:

No. trains:

Serial no:

No. stages:

Supplier:

Manufacturer:

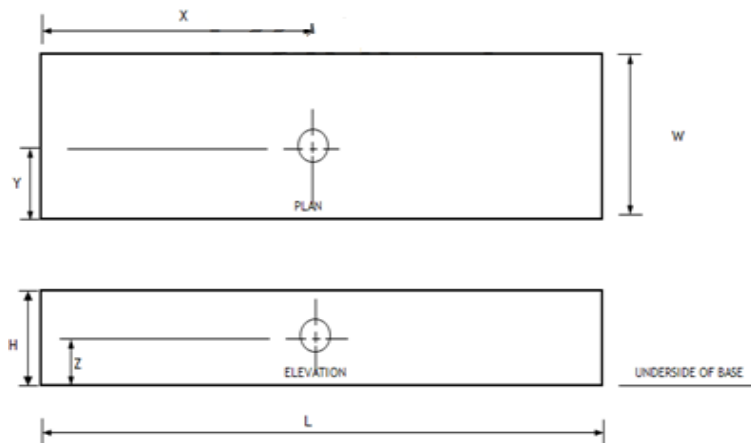
Model:

Note: Information to be completed by: EQUIPMENT VENDOR

WEIGHT AND C OF G DATA REQUIRED *

Major Barrel Length	WEIGHT ACCURACY %	WEIGHT (kg)	CENTER OF GRAVITY		
			X	Y	Z
DRY					
OPERATING					
TEST					

SKETCH



NOTES

1. All lifting points to be load tested and certified.
2. Any spreader beam to be load tested and certified.
3. Lifting / rigging plan for skid mounted equipment to be provided by the Vendor.



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض
احداث خطوط انتقال گاز/مبایعات گازی از ایستگاه تقویت فشار گاز بینک تا
ایستگاه تزریق گاز سیاه‌مکان/واحد بهره‌برداری بینک



شماره صفحه: ۸ از ۱۱

شماره پیمان:

• 03 - • 73 - 9184

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D03	0001	DT	ME	320	PEDCO	PPL	BK

DATA SHEET FOR PIG RECEIVER (PR-3201) / SHEET 1 OF 4

1	Description :											
2	Tag No.		: PR-3201		Quantity		1		Set			
3	Type		: Pig Receiver									
4	Line No.		: GAS-113-0011-FN05-8"-PT									
5	Fluid Characteristics											
6	Fluid Handled		NATURAL GAS									
7	Fluid Density		42.3				H ₂ S % mol		0.054			
8	Toxic		YES				Sour		YES			
9	Corrosive/Erosive		YES		Due to				Hazardous Area		Hazardous Area "Zone 2, IIB, T3"	
10												
11	Operating & Design Condition											
12	Operating Temp.		15~31.3				°C		Operating Pressure		40	barg
13	Design Temp.		5 - 85				°C		Design Pressure		62	barg
14	Ambient Temp.		5~50				°C		MDMT		5	°C
15	Wind Design		120				Km / hr.		Seismic Design		ASCE 7-10, SITE CLASS : D	
16	Major Barrel Dia.		10				Inch		Major Barrel Dia.		8	Inch
17	Major Barrel Length		3000				mm		Major Barrel Length		3000	mm
18	Corrosion Allow.		3.2				mm		Corrosion Allow.		3.2	mm
19	Major Barrel THK.		NOTE (1)				mm		Major Barrel THK.		NOTE (1) mm	
20	Type of Pigs						Miscellaneous					
21	Normal		YES				Design Code:		(Note 23)			
22	Intelligent		YES				Barrels		ASME B 31.8 (D.F. :0.6)/ IPS-M-PI 130			
23	Spheres		YES				Closure		ASME VIII			
24	Foam		YES				Position		Horizontal			
25	Other						Bidirectional line		No			
26							Insulation		No			
27	Closure Type ● Quick Opening ○ Level/Handwheel Operated ○											
28	Materials (Note 9)											
29	Code		ASTM / API				Quick Open Closure		C.S.			
30	Barrel		API 5L Gr. X52 PSL2				Gasket		S.S. 316, Spiral Wound-Graphite Filled			
31	Nozzle		API 5L Gr. X 52				Backing Plate		C.S.			
32	Flange		ASTM A694 F52				Bolts / Nuts		A193 Gr. B7M / A194 Gr. 2HM			
33	Fittings		ASTM A860 WPHY 52				Anchor Bolts		C.S.			
34	Saddle (Wear Plate / Others)		A516 Gr. 70 / A283 Gr. C				Name Plate		S.S.			
35	Connections											
36	Mark	No. Req.	Size in	Flange		Neck		Reinf. Pad		Project. (mm) (Note18)	Description	Remarks
37				Rating	Typ/ Fac.	Thk. (mm)	Sch.	Thk. (mm)	OD (mm)			
38	A	1	2		WN/RF	-		-	-	272	Kicker Line	
39	B	1	2		WN/RF	-		-	-	245	Balance Line	
40	D1	1	2		WN/RF	-		-	-	472	Drain	
41	D2	1	2		WN/RF	-		-	-	265	Drain	
42	E1	1	10		WN/RF	-		-	-	SEE DWG	Q.O.C.	
43	E2	1	8		WN/RF	-		-	-	SEE DWG	Main Pig Outlet	
44	K	1	2		WN/RF	-		-	-	245	Pig Signaler/indicator	
45	P	1	1		WN/RF	-		-	-	243	PG Con.	
46	V1	1	2		WN/RF	-		-	-	272	Vent	
47	Deleted.											
48	PSV	1	1		WN/RF	-		-	-	243	PRESSURE SAFTY VALVE	
49	V2	1	2		WN/RF	-		-	-	245	Vent	
50												
51												
52	Fabrication and Inspection Requirements											
53	Fabrication Code		ASME VIII Div. 1				Hydrostatic Test Press.		1.5 Times the Design Pressure			
54	NDE Code		ASME V & VIII				Impact Test		Acc. To Code			
55	Welding Code		ASME IX				PWHT		YES			
56	Radiography		100%				MT, PT & Pneu. Tests		Acc. To Code & The Project Spec.			
57	Internal & External Coating : Acc. To the Project 'Specification for Painting.', Doc. No. : BK-GNRL-PEDCO-000-PI-SP-0006											
58												
59												
60												
61												
62												
63												
64												



سطح الارض

ایستگاه تزریق گاز سیاه‌مکان/واحد بهره برداری بینک

DATA SHEETS FOR PIG TRAPS



شماره صفحه: ۹ از ۱۱

شماره پیمان:

• 03 - • 73 - 9184

پروژه

کاری

صادرکننده	
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نصیحات

رشته

مع مدرک

ف	پال
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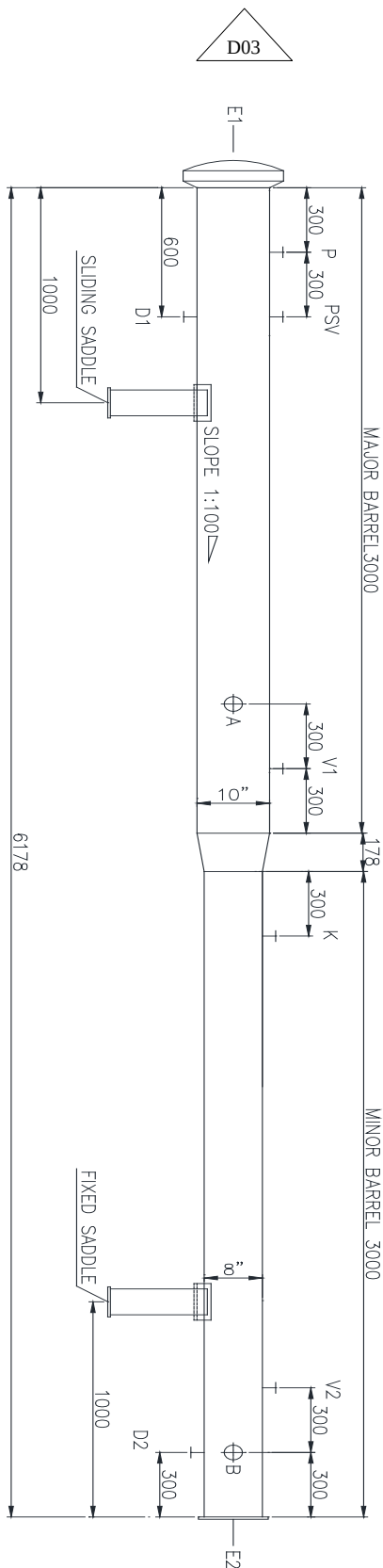
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نسخه

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DATA SHEETS FOR PIG RECEIVER (PR-3201) / SHEET 2 OF 4

SKETCH





NISOC

نگهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

احداث خطوط انتقال گاز/ مایعات گازی از ایستگاه تقویت فشار گاز بینک تا

ایستگاه تزریق گاز سیاهمکان/ واحد بهره برداری بینک



DATA SHEETS FOR PIG TRAPS

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

بسته کاری

صادر کننده

تسهیلات

رشته

نوع مدرک

سریال

نسخه

BK

PPL

PEDCO

320

ME

DT

0001

D03

شماره صفحه: ۱۱ از ۱۰

DATA SHEETS FOR PIG RECEIVER (PR-3201) / SHEET 3 OF 4

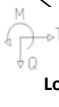
Accessories & Attachments (Note 17)

Supporting Saddles	●	Name Plate Bracket	●
Access Ladder & Platform	○	Name Plate	●
Insulation Support	○	Earthing Lug	●
Insulation	○	Pig Signaler (Note 15)	○
Fireproofing Support	○	Pigs	○
Lifting Lugs	●	Anchor Bolts	○
Tailing Lugs	○	Instrumentations	○
Skid	○	End Closure Interlocking System	●
Pipe Works	○	Valves	○

Reference List

Spec. for Pig Launching / Receiving Traps	BK-PPL-PEDCO-320-ME-SP-0001
Piping & Instrument Diagram (P&ID)	BK-PPL-PEDCO-320-PR-PI-0001-D00
Specification for Painting	BK-GNRL-PEDCO-000-PI-SP-0006

Wind and Seismic Loads at Base (On Each Saddle) *

Load Condition  Load Type	Empty Condition		Operating Condition		Testing Condition	
	Max. Shear @ Base (KN)	Max. Moment @ Base (KN.m)	Max. Shear @ Base (KN)	Max. Moment @ Base (KN.m)	Max. Shear @ Base (KN)	Max. Moment @ Base (KN.m)
WIND						
SEISMIC						



NISOC

تکهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

احداث خطوط انتقال گاز/مابعات گازی از ایستگاه تقویت فشار گاز بینک تا

ایستگاه تزریق گاز سیاهمکان/واحد بهره برداری بینک



DATA SHEETS FOR PIG TRAPS

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

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شماره صفحه: ۱۱ از ۱۱

DATA SHEETS FOR PIG RECEIVER (PL-3201) /SHEET 4 OF 4

WEIGHT CONTROL
DATA SHEET
SI UNIT *

1/1

Service Pig Receiver

Type:

No. trains:

No. stages:

Supplier:

Manufacturer:

Model:

Location:

Quotation No:

Serial no:

(Binak) Oilfield

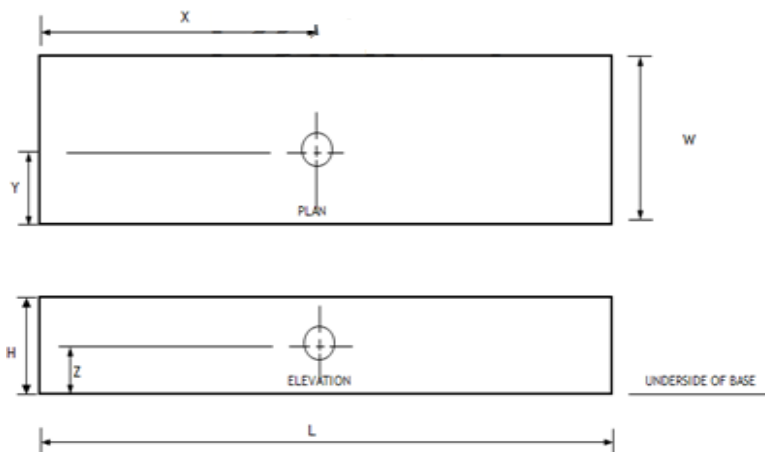
Note: Information to be completed by:

EQUIPMENT VENDOR

WEIGHT AND C OF G DATA REQUIRED *

	WEIGHT ACCURACY %	WEIGHT (kg)	CENTER OF GRAVITY		
			X	Y	Z
DRY					
OPERATING					
TEST					

SKETCH



NOTES

1. All lifting points to be load tested and certified.
2. Any spreader beam to be load tested and certified.
3. Lifting / rigging plan for skid mounted equipment to be provided by the Vendor.