

PROCESS CONNECTIONS			
Code	Name	Size & Rating	Remark
N1	Pump Discharge	1 1/2", 300#, RF	
N2	External Cooling Drain	3/4", 300#, RF	Flange with valve & blind flange
N3	Mechanical Seal Vent	3/4", 300#, RF	Flange with valve & blind flange
N4	Plan 53A Cooler Drain	3/4", 300#, RF	Flange with valve & blind flange
N5	Plan 53A Drain	3/4", 300#, RF	Flange with valve & blind flange
N6	Plan 53A Filling	1/2" Quick Filled	
N7	Plan 53A Vent	3/4", 300#, RF	Flange with valve & blind flange
N8	Coupling Water Inlet	3/4", 150#, RF	Blind Flange
N9	Coupling Water Outlet	3/4", 150#, RF	Blind Flange
N10	N2 Connection	3/4", 300#, RF	Flange with valve

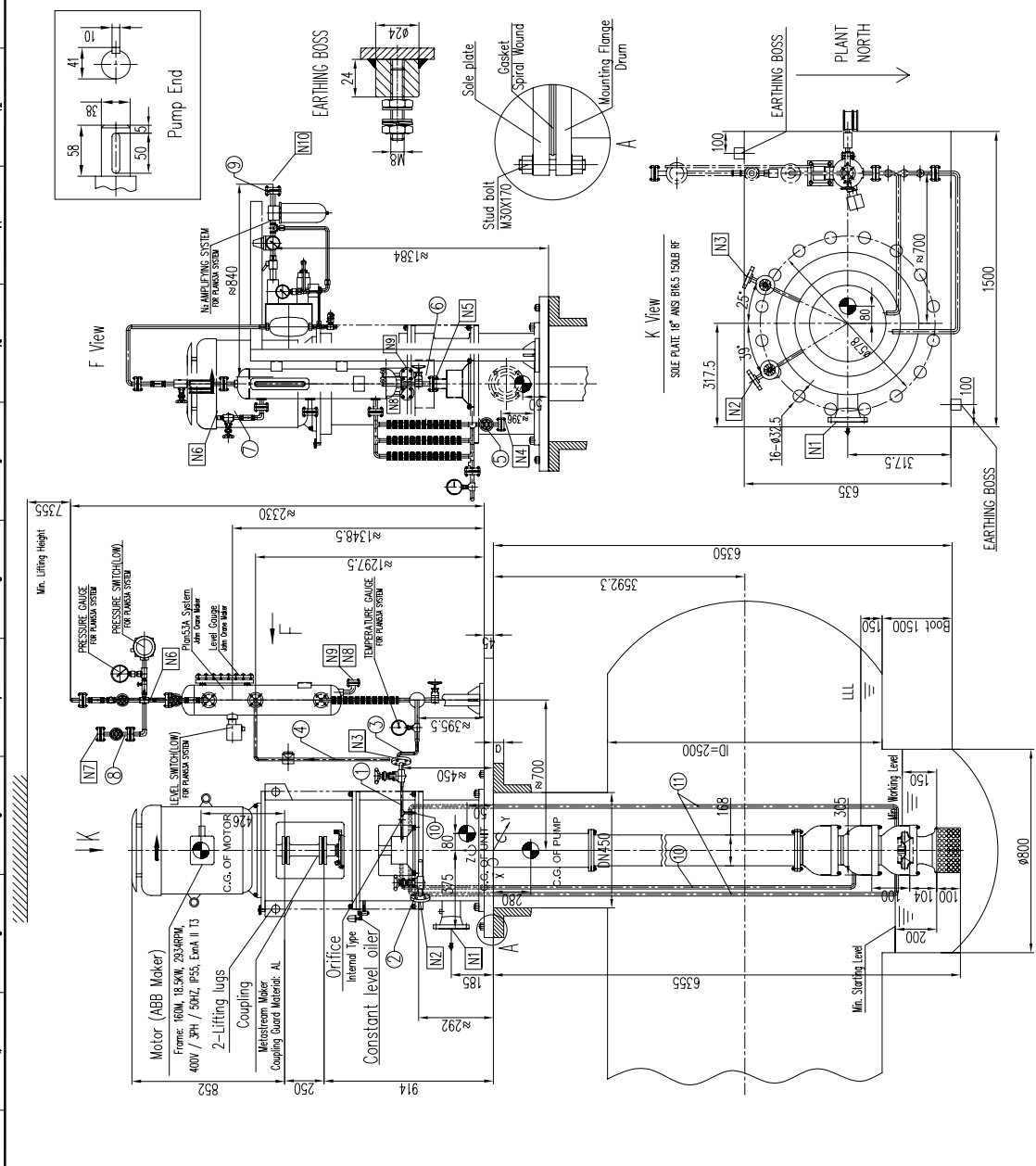
Center of gravity List				
Item	X	Y	Z	
Pump	0	0	-280	
Motor	0	0	1590	
Units	-80	0	50	

MINIMUM CLEARANCE (mm)	
Wear Ring	Second Stage(front) 0.35~0.407
	Second Stage(behind) 0.35~0.399
Balance Disc / Balance Sleeve	Axial 0.1~0.15
	Radial 0.35~0.4
Shaft Bushing / Shaft Sleeve	0.2~0.26
Bearing / Cover	0.1~0.2

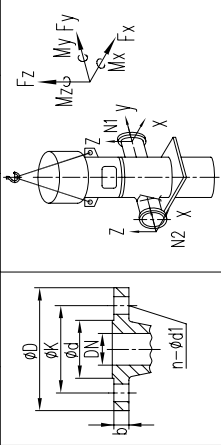
- Pipeline Instruction
- Mechanical Seal Vent
 - External Cooling Drain
 - Plan 53A Flushing Pipeline (to seal chamber)
 - Plan 53A Flushing Pipeline (from seal chamber)
 - Plan 53A Cooler Drain
 - Plan 53A Drain
 - Plan 53A Filling
 - Plan 53A Vent
 - N2 Connection
 - Plan 14 Flushing & Return Pipeline
 - Balance Pipeline

WEIGHT TABLE	
PUMP	1500 KG
MOTOR	227 KG
SEAL SYSTEM	90 KG
MOUNTING PLATE	290 KG
OTHERS	40 KG
TOTAL WEIGHT	2147 KG
ROTOR OF PUMP	98 KG
ROTOR OF MOTOR	31 KG
MAX. MAINTANCE WEIGHT	1500 KG

MAX. ALLOWABLE MISALIGNMENT (mm)		
Outer Diameter	Radial Displacement	Axial Tilt
D ≤ 200	< 0.05	< 0.2 / 1000
200 < D ≤ 300	< 0.08	< 0.3 / 1000
300 < D ≤ 400	< 0.1	< 0.4 / 1000



Name	Upper Shaft	Middle Shaft	Lower Shaft
Length(mm)	2000	1932	1294
Quantity	1	2	1



Nozzle Allowable Force & Moment					
Force (N)	Moment (N.m)				
		Fx	Fy	Fz	
N3	ANSI B86.5 300# RF	±1420	±1780	±1160	4-Ø18
N2	ANSI B86.5 300# RF				4-Ø18
N1	ANSI B86.5 300# RF				4-Ø18
Normal	Standard	DN	ØD	ØK	ØD

GENERAL NOTES

PUMP INFORMATION

Item No.: 109-P-109

Unit: 109

Service: SOUR WATER SUMP PUMP

Model: API610-VB 20-35X3-V

Seal Plan: 14-53A-61

Motor: 18.5KW - 2P

Capacity: 18 m³/h

Head: 84±6.44 m

Note:

- Max. allowable working pressure: 40 barg
- For lifting position, Deep Blue suggest: Through the motor frame.
- For Suction Strainer:
 - mesh size: 8 mm;
 - pressure drop: 0.0046 m;
 - open ratio (open area/suction area): more than 390%.

REFERENCE DRAWINGS

DWG NO.

SEAL SYSTEM DRAWING: WP-SP2021-ON-MA-109-P109-0013

MOTOR OUTLINE DRAWING: WP-SP2021-ON-MA-109-P109-0016

COUPLING DRAWING AND BOM: WP-SP2021-ON-MA-109-P109-0008

ELECTRICAL MOTOR DATASHEET: WP-SP2021-ON-MA-109-P109-0009

PUMP DATASHEET: WP-SP2021-ON-MA-109-P109-0003

Code 1 (Approved) Vendor to submit "For Final" (No comment & release for manufacturing) correct / revise & submit it as "For Final" (Released for manufacturing if change incorporated as indicated)

Code 2 (Approved) Vendor to submit "For Final" (No comment & release for manufacturing) correct / revise & submit it as "For Final" (Released for manufacturing if change incorporated as indicated)

Code 3 (Commented) : Vendor shall correct / revise & resubmit : it as "For Approval" of the date specified : (Corrected documents to be incorporated as indicated)

Code 4 Not Acceptable quality (Reject)

The above checking result by O&E shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing

DATE : 06-04-2014
DEPT: Machinery
Signature : S.Shahmari

O&E-SP 200421

Only for internal review

CV	PI	EL	IN	ME	MA
ST	BU	PR	SA	HW	TL

4 7. Mar. 2014 FOR APPROVAL DBP Eric Tino Ryan

3 31. Feb. 2014 FOR APPROVAL DBP Eric Tino Ryan

2 28. Dec. 2013 FOR APPROVAL DBP Eric Tino Ryan

1 15. Nov. 2013 FOR APPROVAL DBP Eric Tino Ryan

REV. DATE DESCRIPTION ORIG. PREP. CHD. APP'D. Contractor APP'D.

SOUTH PARS GAS FIELD DEVELOPMENT- PHASES 20 & 21, ASSALUYEH-IRAN ONSHORE FACILITIES

PROJECT No.: POGC-572-88-35 DOC CLASS: SCALE :

DEEP BLUE PUMP CO.

DEEP BLUE PUMP CO.

SOUR WATER SUMP PUMP 109-P-109

GENERAL ARRANGEMENT DRAWING

DRAWING No.: WP-SP2021-ON-MA-109-P109-0003 SHEET No.: 1 OF 1 REV. 4