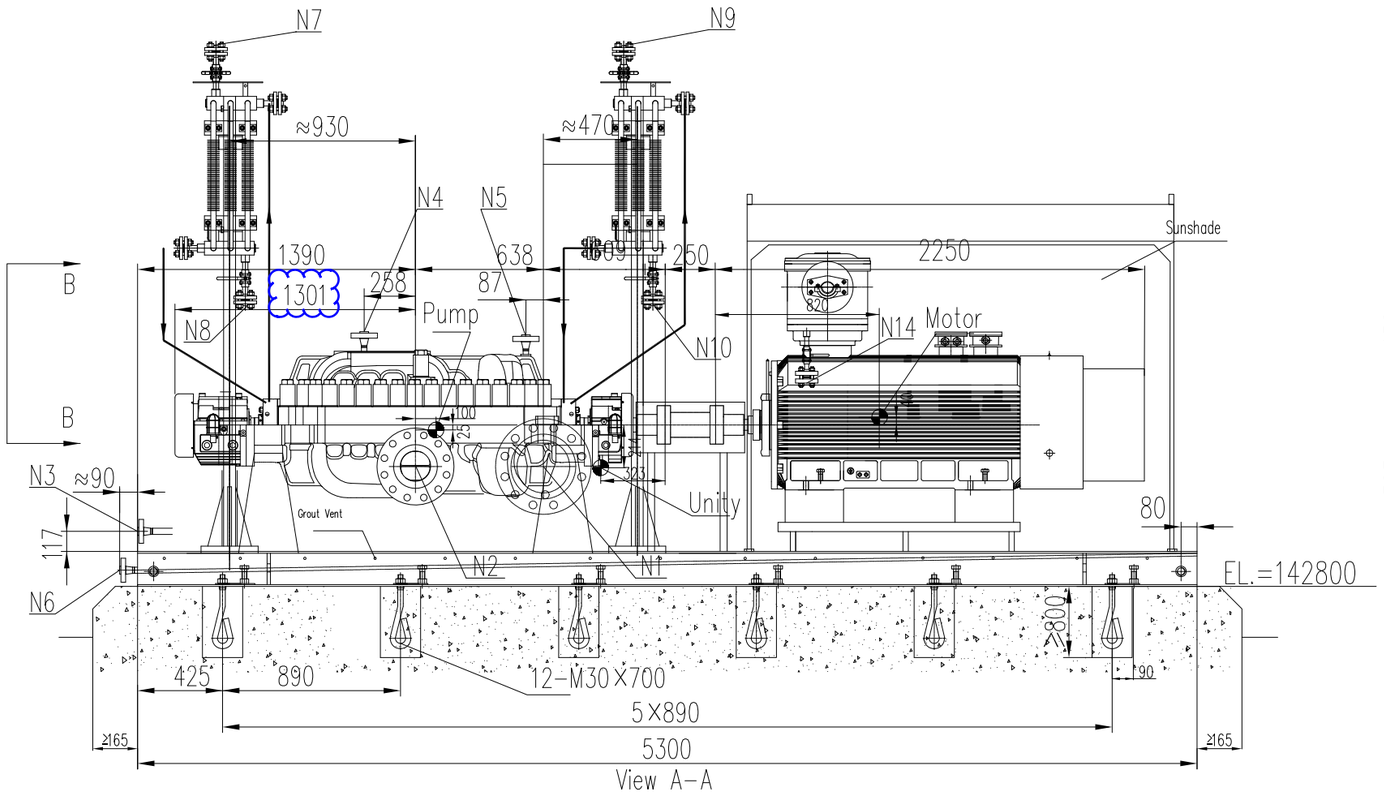
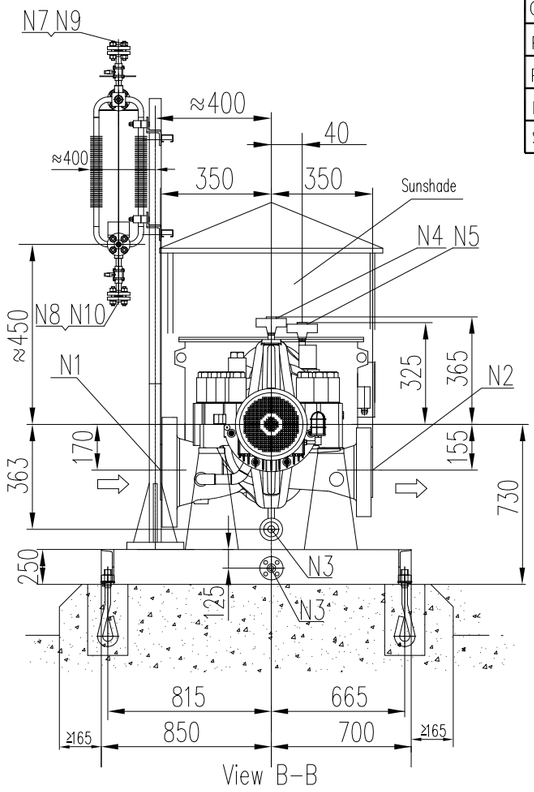
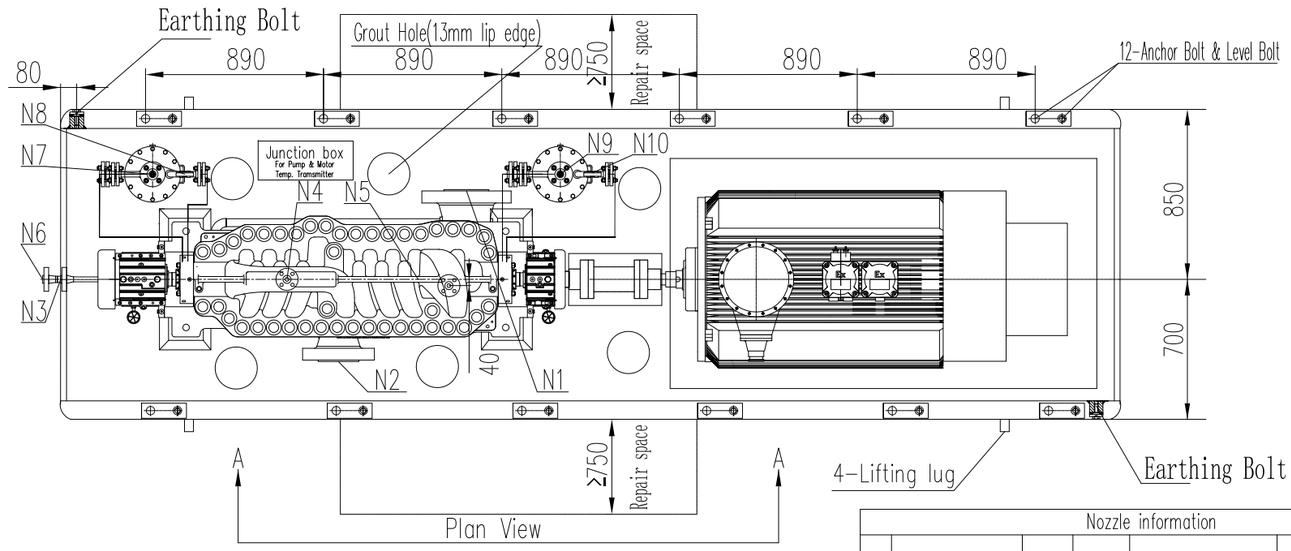
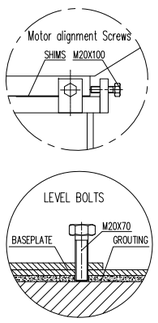
Plant North









REFERENCE DRAWING	DWG. NO.
MOTOR OUTLINE DRAWING	NGL-V-2014-ME-DW-3018
COUPLING DRAWING	NGL-V-2014-ME-DW-3016
PUMP DATA SHEET	NGL-V-2014-ME-DT-3003
PUMP CROSSSECTION DRAWING	NGL-V-2014-ME-DW-3005
PUMP P&ID	NGL-V-2014-ME-PD-3006
Seal System Drawing and BOM	NGL-V-2014-ME-DW-3013

PUMP INFORMATION	
Item No.:	P-3181-03 A/B/S
Service:	HP Boiler Feed Water Pumps
Model:	SCSK 25-50x13
Seal Plan:	23+61
Flow/Head	48m3/h & 580m
Motor:	160KW - 2P
Rotation:	Clockwise viewed from the drive-end
No of Stages:	13
Pump speed:	2975 rpm

Code1	☐ (Approved): No comment and release for Manufacturing (Document to be stamped as Final for considering in Vendor Data Book)
Code2	☐ (Approved with Comments): VENDOR/Sub-Contractor shall correct/revise document and issue it as "FOR APPROVAL" (Work May Be Proceeded)
Code3	☐ (Commented): VENDOR/Sub-Contractor shall correct /revise and resubmit it as "FOR APPROVAL" of the date documents specified (Corrected to be resub-mitted before starting to manufacture.
No Code	☐ CONSULTANT and PURCHASER check results on Class 2 documents will be returned without any CODE. VENDOR/Sub-Contractor shall correct/revise document and issue it as "FOR INFORMATION"

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

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DATE :

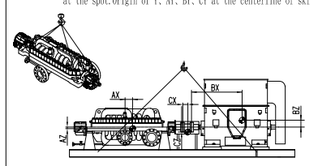
DEPT:

Signature :

Note:
1. The weight of maximum maintenance part is 900 kg(assembled pump casing)
2. Leveling pads(SS) willl be supplied by vendor (qty.=anchor bolt qty)
3. Grout material shall be non-shrinkage cement mottar or epoxy mortar.

LIFTING INFORMATION

Note:While the weight of the machine more than 10 tons. The base,pumphead,motor must be hoisted alone and install at the spot.Origin of X, AY, BY, CY at the centerline of skid



Pump	AX	100
	AY	0
	AZ	25
Motor	BX	820
	BY	0
	BZ	40
Unity	CX	-323
	CY	0
	CZ	214

Static loading calculation results		
FXstatic=	4260/4260	N
FYstatic=	5340/5340	N
FZstatic=	-52045/59005	N
MXstatic=	7815/7815	N*m
MYstatic=	21041/-6778	N*m
MZstatic=	8648/8648	N*m

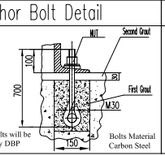
Dynamic loading calculation results		
FXdynamic=	0/0	N
FYdynamic=	467/467	N
FZdynamic=	467/467	N
MXdynamic=	855/-172	N*m
MYdynamic=	579/579	N*m
MZdynamic=	579/579	N*m

Note:
Location of Loads & Moments Calculation is the geometric center of baseplate lower surface.

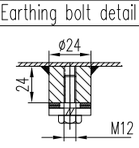
Maximum Allowable Amplitude For Foundation	
Velocity (Peak)	4 mm/s
Displacement	25.4 μm

WEIGHT(Kg)	
Total	5550
Skid weight	2060
Aux. weight	140
Motor weight	1350
Pump weight	2000

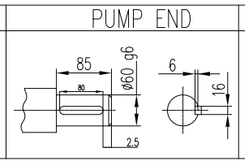
Anchor Bolt Detail



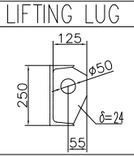
Earthing bolt detail



PUMP END

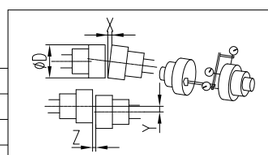


LIFTING LUG



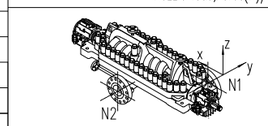
Nozzle information

10	Plan 23 drain	N10	1/2"	ASME B16.5-09	Class600	RF
9	Plan 23 vent	N9	1/2"	ASME B16.5-09	Class600	RF
8	Plan 23 drain	N8	1/2"	ASME B16.5-09	Class600	RF
7	Plan 23 vent	N7	1/2"	ASME B16.5-09	Class600	RF
6	Baseplate drain	N6	1"	ASME B16.5-09	Class150	RF
5	Pump vent	N5	3/4"	ASME B16.5-09	Class600	RF
4	Pump vent	N4	3/4"	ASME B16.5-09	Class600	RF
3	Pump drain	N3	3/4"	ASME B16.5-09	Class600	RF
2	Pump Discharge	N2	2"	ASME B16.5-09	Class600	RF
1	Pump Suction	N1	4"	ASME B16.5-09	Class600	RF
NO.	Nozzle	Sign	NPS	Standard	Rating	Face



D≤200	X	≤0.05
	Y	≤0.05
	Z	Z±0.1
200<D≤300	X	≤0.08
	Y	≤0.08
	Z	Z±0.15
300<D≤400	X	≤0.10
	Y	≤0.10
	Z	Z±0.2

Nozzle load,Force(N)/Moment(N.m)



		Fx	Fy	Fz
DN1		2840	3560	2320
		Mx	My	Mz
		2660	1360	2000
DN2		Fx	Fy	Fz
		1420	1780	1160
		Mx	My	Mz
		920	460	700

NGL-CT-1-0000-ME-PO-0014-D0

REV.	DATE	DESCRIPTION	PREP.	CHECK	APPROVAL	OIEC APP.
D3	20.09.03	ISSUED FOR APPROVAL	R.X	T.H	R.C	A.A.
D2	20.07.15	ISSUED FOR APPROVAL	R.X	T.H	R.C	A.A.
D1	20.06.02	ISSUED FOR APPROVAL	R.X	T.H	R.C	A.A.
D0	20.04.30	ISSUED FOR APPROVAL	R.X	T.H	R.C	A.A.

Contractor

Project Title:

NGL 3100 PROJECT

Contractor:

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STATUS CODE: A=Comment/Review B=Approval C=Final Issue

Pump General Arrangement Drawing For HP Boiler Feed Water Pumps P-3181-03 A/B/S

OWNER DRAWING NUMBER

Project Name	Originator	PO Serial No.	Disc.	Doc. Type	Seq No.	Rev.	Sheet No.	Status	Class	Size
NGL	V	2014	ME	DW	3002	D3	1 OF 1	B	1	A3

OIEC DRAWING NUMBER

Project Code	Source	Unit & Section	Phase	Disc.	Doc. Type	Serial No.	Rev.

Contract No.:

Date: