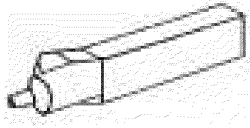
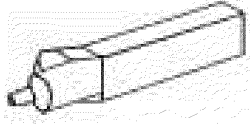
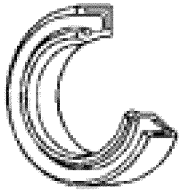
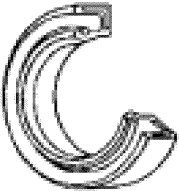


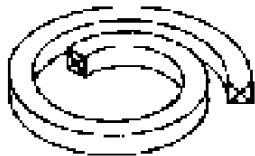
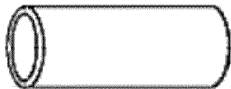



TOSHIBA



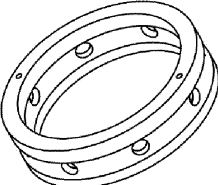
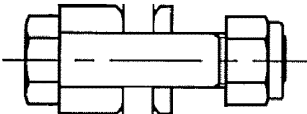
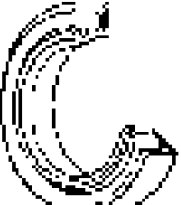
Strategic Spare Parts List

EQ/SYS.		USE		
CONDENSER VACUUM PUMP A/B #5&6				
No.	Description	OUTLINE	QUANTITY	REMARKS
1	LIQUID GASKET		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	No.1215
2	LIQUID GASKET		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	No.1207B
3	OIL SEAL		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	SB11014014
4	OIL SEAL		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	SB15518515


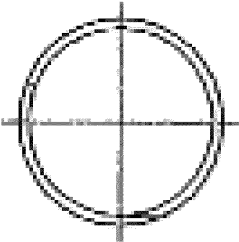

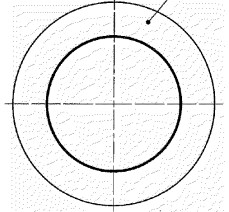

TOSHIBA

5	O RING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	G180
6	O RING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	Gs160
7	GLAND PACKING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	□22 × L11000
8	SHAFT SLEEVE		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	SUS304
9	ROLLER BEARING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	NU324

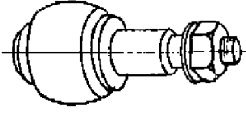
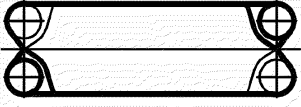
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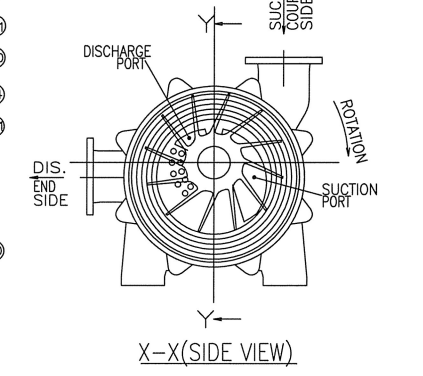
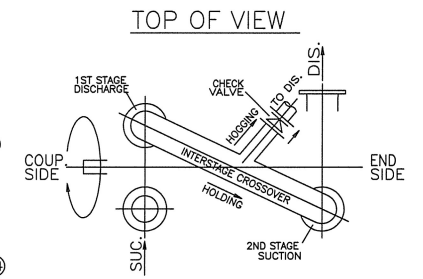
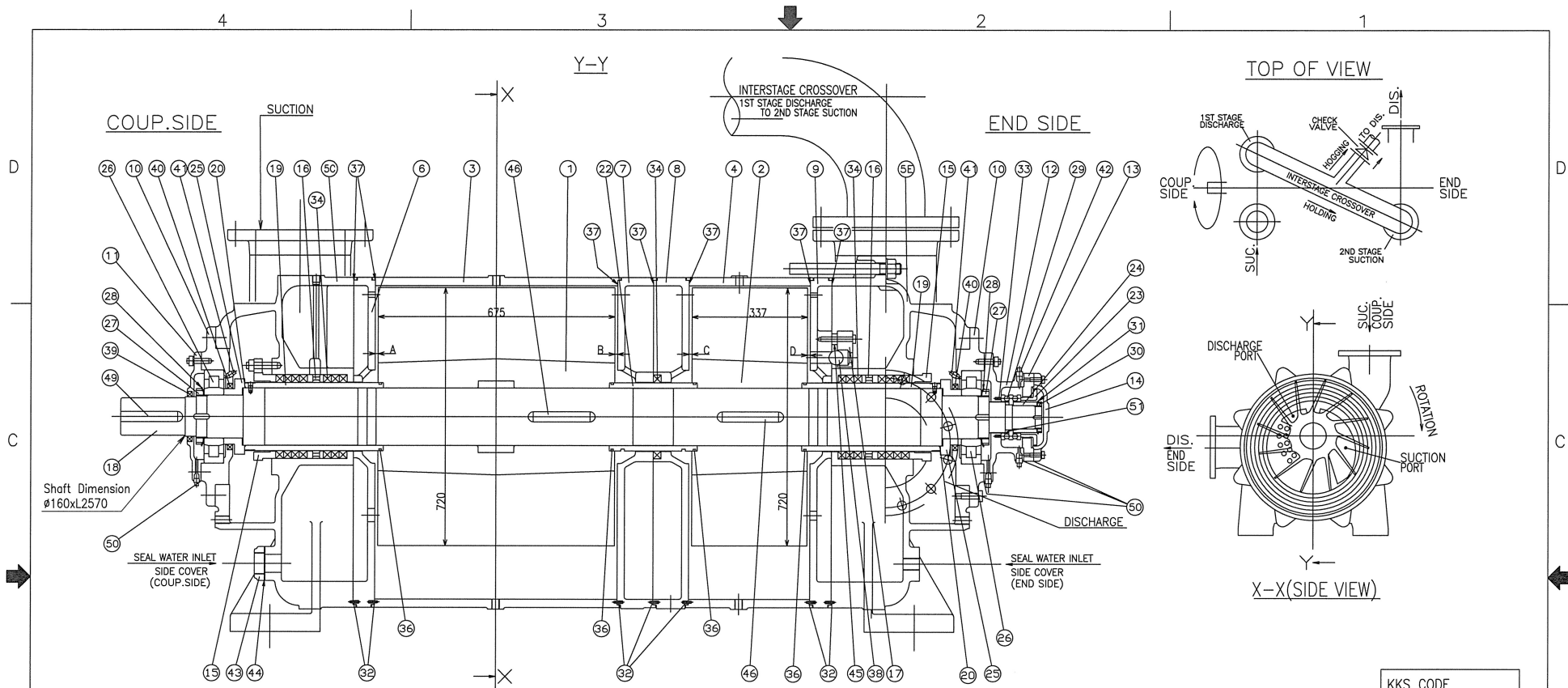
10	BALL BEARING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	No.52217
11	BALL CHECK VALVE		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	φ 40
12	LANTERN RING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	SUS304
13	COUPLING BOLT with BUSH and NUT		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	
14	OIL SEAL		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	NBR

TOSHIBA

15	GLAND PACKING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	$\square 8 \times \phi 35 \times 5$
16	PACKING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	
17	BALL BEARING		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	6306ZZ/L448
18	DEFLECTOR		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	NBR
19	SHAFT SLEEVE		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	SUS304

TOSHIBA

20	COUPLING BOLT with BUSH and NUT		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	
21	PLATE GASKET		Refer to TJB56-L1 -OFF-C -00-G-LST -0021	NBR



KKS CODE
 50MAJ20 AP010
 50MAJ30 AP010
 60MAJ20 AP010
 60MAJ30 AP010

NOTE

1. Clearance List

Part	Design	Limit
A	0.5	0.75
B	0.5	0.75
C	0.5	0.75
D	0.5	0.75

2. Weight of pump heavy parts

No.	Parts	Weight (kg)
5C	SIDE COVER	450
5E	SIDE COVER	450
12,21,18,19,22	(Rotating parts and intermediate part plates.) IMPELLER PORT PLATE, IMPELLER PORT PLATE, SHAFT, SHAFT SLEEVE, IMPELLER LINER	1800

3. Reference Documents

Project Doc. No.	Dwg. No.	Title
TJB56-L1-OFF-C-MAJ-M-DRD-2613	9B00330	OUTLINE DRAWING FOR CONDENSER VACUUM PUMP
TJB56-L1-OFF-C-MAJ-M-PID-2132	9S02952	PIPING AND INSTRUMENTATION DIAGRAM FOR CONDENSER VACUUM PUMP
TJB56-L1-OFF-C-MAJ-M-DAS-3640	9P01167	DATA SHEET FOR CONDENSER VACUUM PUMP

NO.	NAME OF PARTS	JIS MATERIAL	QTY	REMARKS	NO.	NAME OF PARTS	JIS MATERIAL	QTY	REMARKS	NO.	NAME OF PARTS	JIS MATERIAL	QTY	REMARKS		
15	GLAND	FC200 A48 CL30	2		32	CYLINDRICAL PIN	SUS304 S98160	7	M6x20	51	BEARING SPACER	SUS304 S98160	1			
14	END COVER	FC200 A48 CL30	1		31	BEARING WASHER	SS400 A283 D	1	AW13	50	LIQUID GASKET	TB1207B	1SET	THREE BOND		
13	THRUST COVER	FC200 A48 CL30	1		30	BEARING NUT	S30C ANS11030	1	AN13R	49	COUPLING KEY	S45C ANS11045	1			
12	BEARING HOUSING	FC200 A48 CL30	1		29	BALL BEARING	----	1	No. 52217	46	IMPELLER KEY	SUS403 S98160	2			
11	BEARING COVER	FC200 A48 CL30	1		28	BEARING WASHER	SS400 A283 D	2	AW24	45	DISTANCE PIECE	SUS304 S98160	3			
10	BEARING CASE	FC200 A48 CL30	2		27	BEARING NUT	S30C ANS11030	1SET	AN2-L (COUPL. SIDE) R (END SIDE)	44	GASKET	RUBBER	----	1	† 2	
9	PDRT PLATE	FC250 A48 CL35	1	END SIDE	26	ROLLER BEARING	----	2	NU324	43	FLANGE	FC200 A48 CL30	1			
8	PDRT PLATE	FC250 A48 CL35	1	SUCTION SIDE	25	WATER SPLASHER	SUS304 S98160	2		42	GREASE NIPPLE	C2604B-FC2000 FC2000	1	1/4", TYPE-A		
7	PDRT PLATE	FC250 A48 CL35	1	DISCHARGE SIDE	24	BEARING LINER	SUS304 S98160	1		41	GREASE NIPPLE	C2604B-FC2000 FC2000	2	1/4", TYPE-B		
6	PDRT PLATE	FC250 A48 CL35	1	COUPLING SIDE	23	THRUST HOLDER	S45C ANS11045	1		40	OIL SEAL	NBR	----	2	SB15518515	
5E	SIDE COVER	FC200 A48 CL30	1	END SIDE	22	IMPELLER LINER	SUS304 S98160	1		39	OIL SEAL	NBR	----	1	SB11014014	
5C	SIDE COVER	FC200 A48 CL30	1	COUPLING SIDE	20	O RING	NBR	----	2	Gs160	38	BALL CHECK VALVE	PTFE	----	9	φ40
4	CASING	FC200 A48 CL30	1	2ND STAGE	19	SHAFT SLEEVE	SUS304 S98160	2	Hardness: φ200 HB	37	LIQUID GASKET	TB1215	1SET	THREE BOND		
3	CASING	FC200 A48 CL30	1	1ST STAGE	18	SHAFT	SUS420J2 S98160	1		36	O RING	NBR	----	4	G1B0	
2	IMPELLER	SCS13 A351CF-8	1	2ND STAGE	17	BALL HOLDER	FC200 A48 CL30	1		34	GLAND PACKING	Ph650L	1SET	D22xL11000		
1	IMPELLER	SCS13 A351CF-8	1	1ST STAGE	16	LANTERN RING	SUS304 S98160	2		33	COIL SPRING	SUS304 S98160	10	φ5.4xL22		

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
△	2018.10.30	Issued for Use	境田	高力	木下
△	2018.5.16	FOR APPROVAL	境田	高力	木下
△	2018.4.19	FOR APPROVAL	境田	高力	水田
△	2018.3.1	FOR APPROVAL	北村	山口	木下
△	2017.10.24	FOR APPROVAL	木村	高力	水田

TITLE

SECTIONAL DRAWING OF
CONDENSER VACUUM PUMP

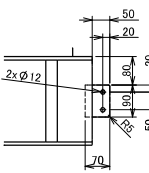
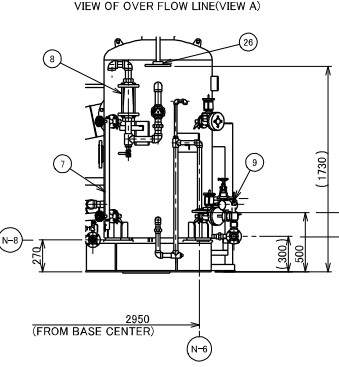
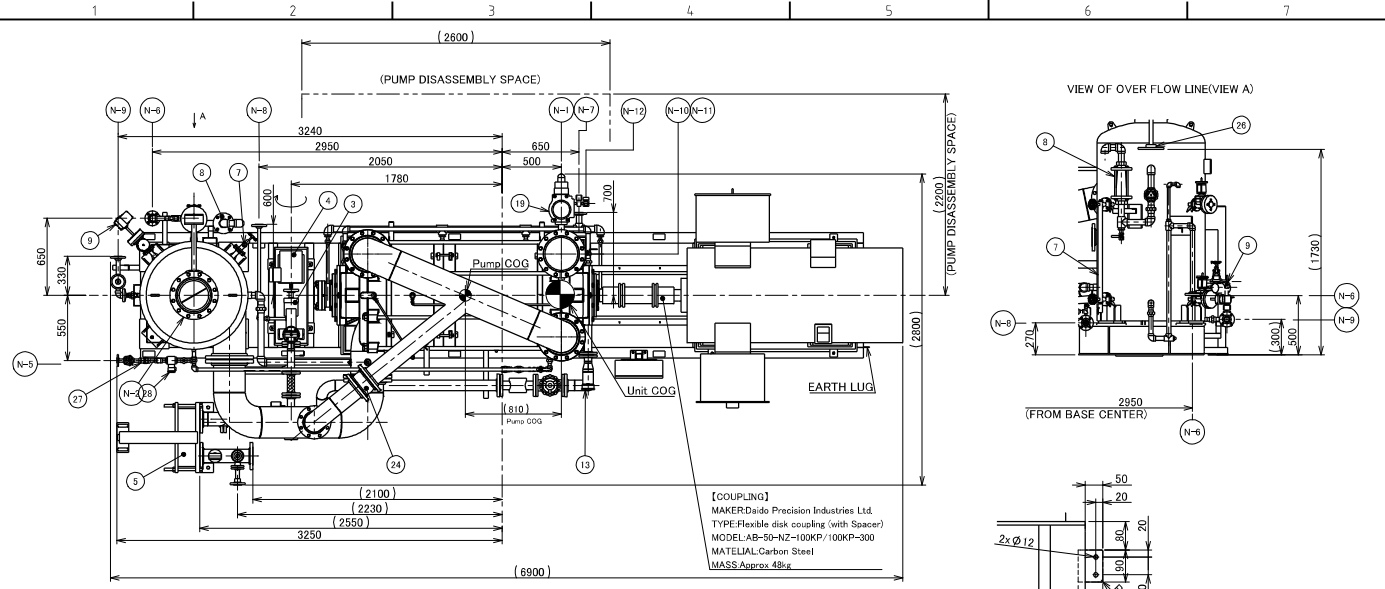
MFG. NO. AY27847, 27849

DWG. NO. 9G00434-5

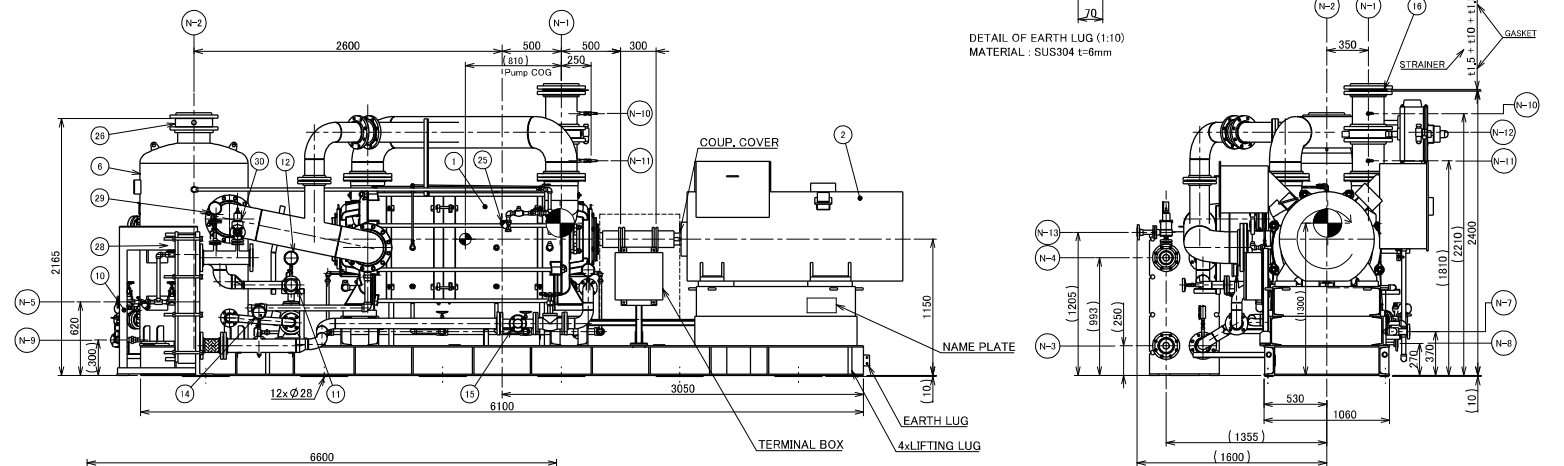
Tsurumi Pump
TSURUMI MANUFACTURING CO., LTD.

UNITS: mm
SCALE: NTS

Rev.No.	DATE	DRAWING No.	REVISION HISTORY	DESIGNED	CHECKED	APPROVED
△	2018/5/17		FOR APPROVAL	尾谷	高力	永田
△	2018/09/03		FOR APPROVAL	境田	高力	木下
△	2018/11/21		Issued for Construction	境田	高力	木下



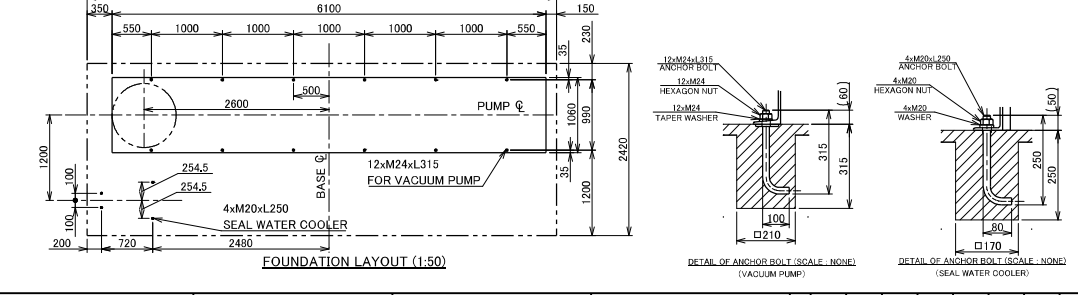
DETAIL OF EARTH LUG (1:10)
MATERIAL : SUS304 L-6mm



NO.	PARTS NAME	REQ. PKG	REMARKS	KKS CODE
1	VACUUM PUMP	1	255VMA695	S0MA20 AP010 S0MA33 AP010
2	INDUCTION MOTOR (FOR VACUUM PUMP)	1	380Vx50Hzx180Wx12P	S0MA21 AP010 S0MA31 AP010
3	SEAL WATER PUMP	1	CENTRIFUGAL	S0MA21 AP010 S0MA31 AP010
4	INDUCTION MOTOR (FOR SEAL WATER PUMP)	1	S80Vx50Hzx3.7kWx2P	---
5	SEAL WATER COOLER	1	PLATE TYPE	S0MA21 AC010 S0MA31 AC010
6	SEPARATOR TANK	1	ID900x16	S0MA20 B8010 S0MA30 B8010
7	LEVEL GAUGE	1	DN20 GLASS TUBULAR	S0MA20 CL501 S0MA30 CL501
8	AIR FLOW METER	1	DN40 GLASS TUBULAR	S0MA20 CF501 S0MA30 CF501
9	LEVEL TRANSMITTER	1	DN25 DEF. PRESS. TRANSMITTER	S0MA20 CL001 S0MA30 CL001
10	THERMOMETER	1	DN15 Ø100 BI METAL, 0~100°C WITH THERMOWELL	S0MA21 CF101 S0MA31 CF101
11	PRESSURE GAUGE	1	DN15 Ø100 0~4bar WITH THERMOWELL	S0MA21 CF101 S0MA31 CF101
12	THERMOMETER	1	DN15 Ø100 BI METAL, 0~100°C WITH THERMOWELL	S0MA21 CF101 S0MA31 CF101
13	THERMOMETER	1	DN15 Ø100 BI METAL, 0~100°C WITH THERMOWELL	S0MA21 CF101 S0MA31 CF101
14	PRESSURE GAUGE	1	DN15 Ø100 0~4bar	S0MA21 CP502 S0MA31 CP502
15	SEAL WATER FLOW GAUGE	1	DN80 SIGHT GLASS WITH SCALE	S0MA21 CF501 S0MA31 CF501
16	TEMPORARY STRAINER	1	DN250FLAT-TYPE 30 MESH	S0MA20 A101 S0MA30 A101
17	INLET VALVE	1	DN250 BUTTERFLY VAL LOCK	S0MA20 A400 S0MA30 A400
18	DISCHARGE VALVE	1	DN150 WATER TYPE	S0MA20 A400 S0MA30 A400
19	TEMPORARY STRAINER	1	DN20 Y-TYPE 20MESH	S0MA20 A100 S0MA30 A100
20	SAFETY VALVE	1	DN20 DN25 CONVENTIONAL WITH SCREW GAP	S0PC015 CP501 S0PC015 AA111

NO.	SERVICE	NO.	SIZE	FLANGE RATING	REMARKS
N-1	SYSTEM SUCTION	1	DN250	ASME 150Lb SO RF	(SA105)
N-2	SYSTEM DISCHARGE	1	DN250	ASME 150Lb SO RF	(SA105)
N-3	AUXILIARY COOLING WATER INLET	1	DN100	ASME 150Lb RF	AS16
N-4	AUXILIARY COOLING WATER OUTLET	1	DN100	ASME 150Lb RF	(SA105)
N-5	MAKE-UP WATER INLET	1	DN20	ASME 150Lb SO RF	(SA105)
N-6	OVER FLOW	1	DN40	ASME 150Lb SO RF	(SA105)
N-7	VACUUM PUMP DRAIN	1	DN40	ASME 150Lb SO RF	(SA105)
N-8	SEAL WATER PUMP GLAND DRAIN	1	DN40	ASME 150Lb SO RF	(SA105)
N-9	SEPARATOR TANK DRAIN	1	DN40	ASME 150Lb SO RF	(SA105)
N-10	PRESS. INSTRUMENT CONNECTION(LWG)	1	DN15	NPT1/2	---
N-11	PRESS. INSTRUMENT CONNECTION(HIGH)	1	DN15	NPT1/2	---
N-12	INSTRUMENT AIR INLET	1	DN8	NPT1/4	---
N-13	PROM SAFETY VALVE	1	DN40	ASME 150Lb RF	(SA105)

- NOTES
- APPROX MASS / DRY : (11000) kg
OPERATION : (12000) kg
 - PARTS / VACUUM PUMP : 5500 kg
MOTOR : 3500 kg
COMMON BASE : 1800 kg
SEAL WATER COOLER : 543 kg
SEAL WATER TANK : 400 kg
SEAL WATER PUMP : 112 kg
- Phase fill the inside of a base with grav. (Non-Shrink Grouting mortar)
(Please fill up to the top of channel)
 - The Temporary Strainer and Coupler Flange for system suction line supplied by TSURUMI for protection from foreign material during start up.
 - This drawing shows the system for unit 5 only.
 - For unit 6 KKS codes shall be changed from "50" to "60".
 - The top KKS codes refer to equipment A, and the bottom KKS codes refer to equipment B.



Reference Documents

Project Doc. No.	TRM Doc. No.	Title
TURSH-L-OFF-CHA-JAW-09-0132	890982	PIPING AND INSTRUMENTATION DIAGRAM FOR CONDENSER VACUUM PUMP
TURSH-L-OFF-CHA-JAW-DAS-0840	940167	DATA SHEET FOR CONDENSER VACUUM PUMP
TURSH-L-OFF-CHA-JAW-DRD-0722	9260434	SECTION DRAWING FOR CONDENSER VACUUM PUMP
TURSH-L-OFF-CHA-JAW-DAS-0377	9593121	MOTOR DATA SHEET WITH DRAWING FOR CONDENSER VACUUM PUMP
TURSH-L-OFF-CHA-JAW-DRD-0541	8903192	OUTLINE DRAWING FOR CONDENSER VACUUM PUMP SEAL WATER COOLER

PROJECT		MODEL	
TANJUNG JATI B EXPANSION(JAWA-4) COAL FIRED STEAM POWER PLANT 2x1000MW		250VMAF12160	
DATE		ORIGINAL SCALE	
2017/10/24		1:30	
DRAWING NAME		HFG NO.	
OUTLINE DRAWING for Condenser Vacuum Pump		AY27847, AY27849	
APPROVED		DRAWING NO.	
永田	高力	9B00330-6	
DESIGNED	木村		
PROJECTION METHOD		DRAWING NO.	
第一角法		9B00330-6	
株式会社 鶴見製作所 TSURUMI MFG. CO., LTD.			