

TOTAL (8) SHEETS WITH A COVER

CAUTION

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DESIGNED BY



MARINE ENGINEERING CO., LTD.
BUSAN, KOREA
(TEL:+82-51-710-7735 FAX:+82-51-710-7745)

SHIP NO.

H0001~0008

SHIP NAME

OWNER

MPC GROUP

SHIP TYPE

34,000 DWT BULK CARRIER

APPROVED BY S. S. KWON

CHECKED BY _____

DRAWN BY _____

TITLE

**ARR'T OF ECHO SOUNDER
& SPEED LOG TRANSDUCER**

EXT. NO.

DEP'T

ELECTRIC DESIGN TEAM

DATE

2008. 10. 23.

SCALE

NONE

CLASS

GL

DWG. NO.


EB-025

REV. NO.

ORG.



T.K Shipbuilding Co., Ltd

			PLAN HISTORY		SHIP NO. H0001~0008	A / -
					DWG. NO. EB-025	
DATE	REV.	MARK	DESCRIPTION	DWN BY	CHK BY	APP BY
08.10.23.	ORI.		DESIGNED BY ELECTRIC OUTFITTING DESIGN TEAM			

INDEX

SHIP NO.

H0001~0008

B

DWG. NO.

EB-025

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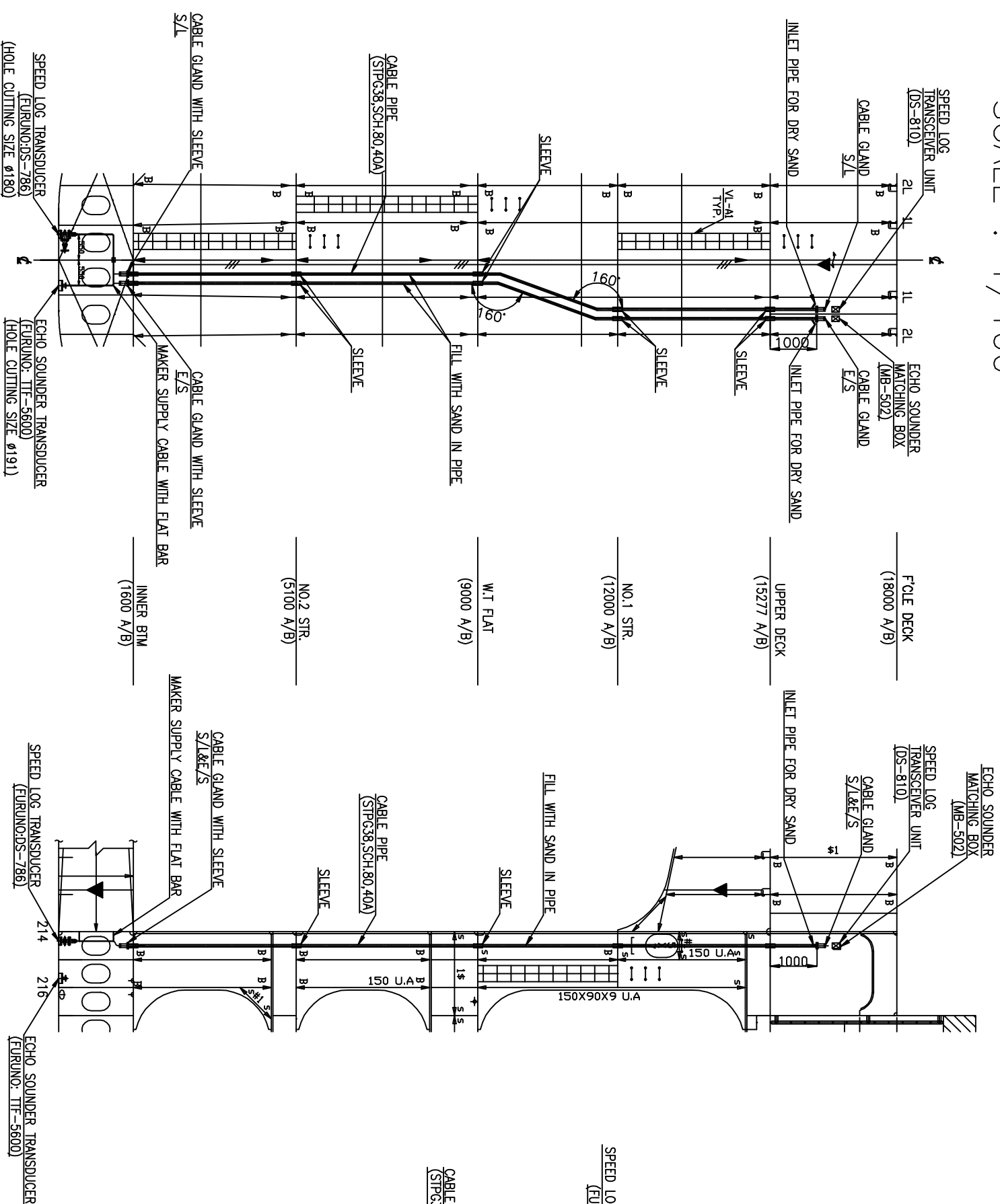
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CENTER LINE ELEVATION (LOOKING PORT)

SCALE : 1/100

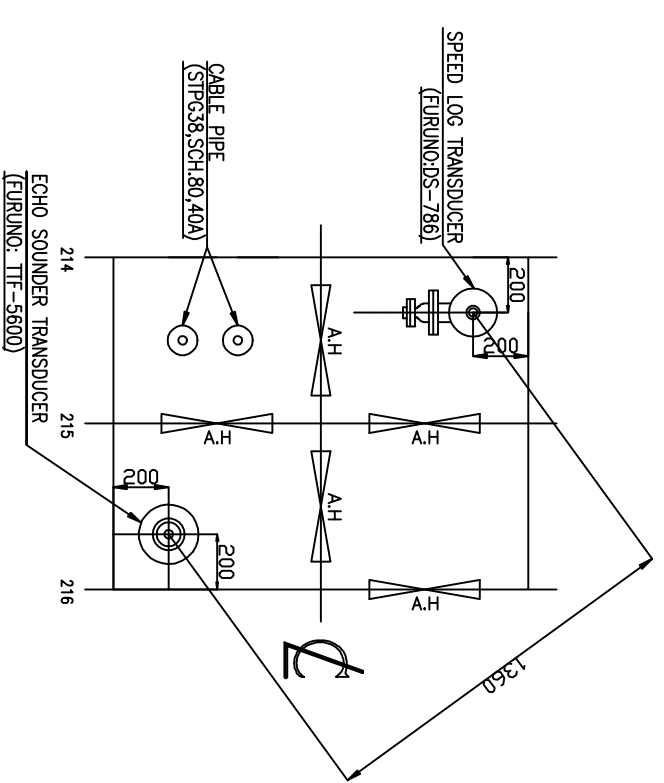
ECHO SOUNDER




TANK TOP PLAN

$$\overline{(1600 \text{ A/B})}$$

SCALE : 1/25



AFT PART

	ARR'T OF ECHO SOUNDER		SHIP NO.	H0001~0008	<div>2</div> <div>5</div>
			DWG. NO.	EB-025	

SECTION (LOOKING FWD)

CENTER LINE ELEVATION (LOOKING PORT)

$$\overline{(\text{FR.35} \rightarrow \text{FR.36})}$$

SCALE : 1/100

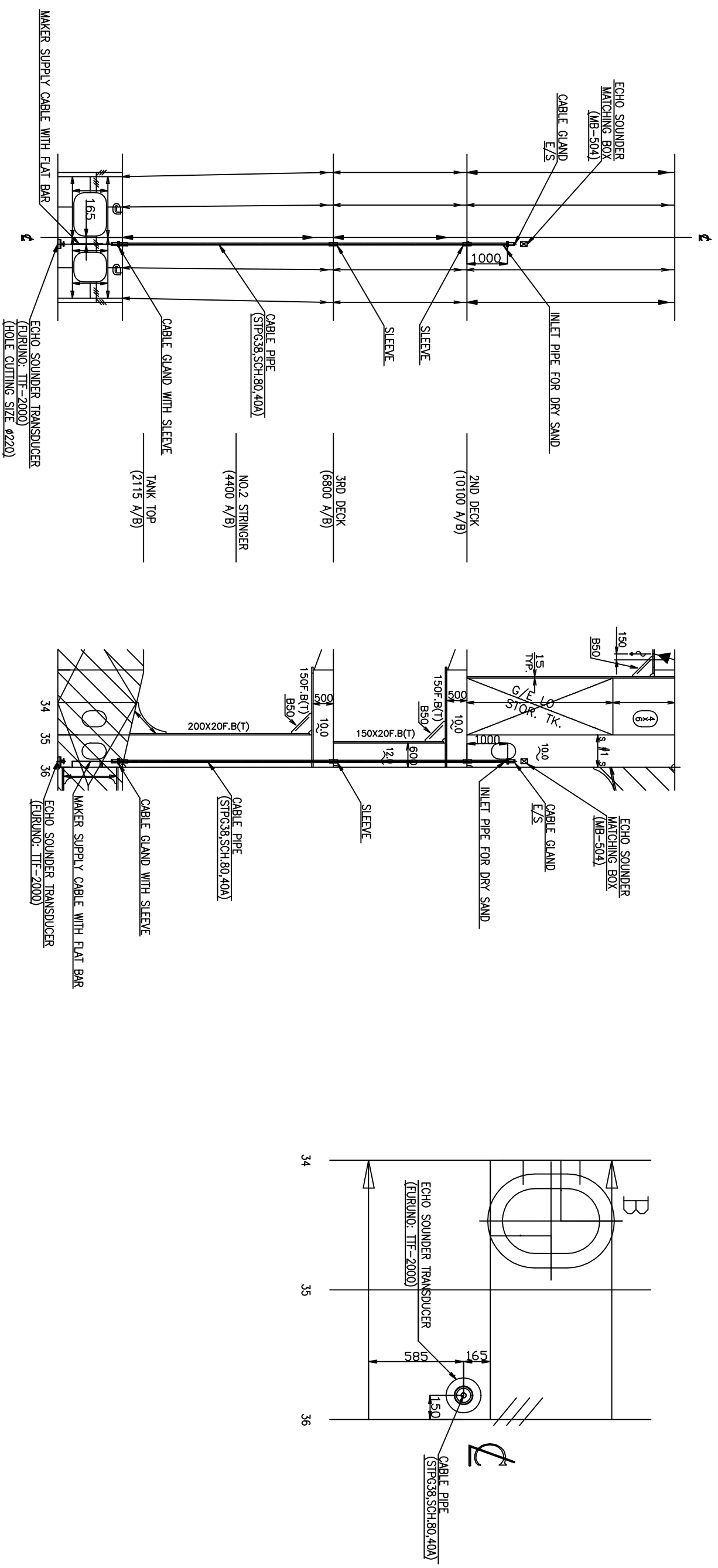
(Fr. 35) 2 (Fr. 36)

SCALE : 1/100

TANK TOP PLAN

SCALE : 1/100

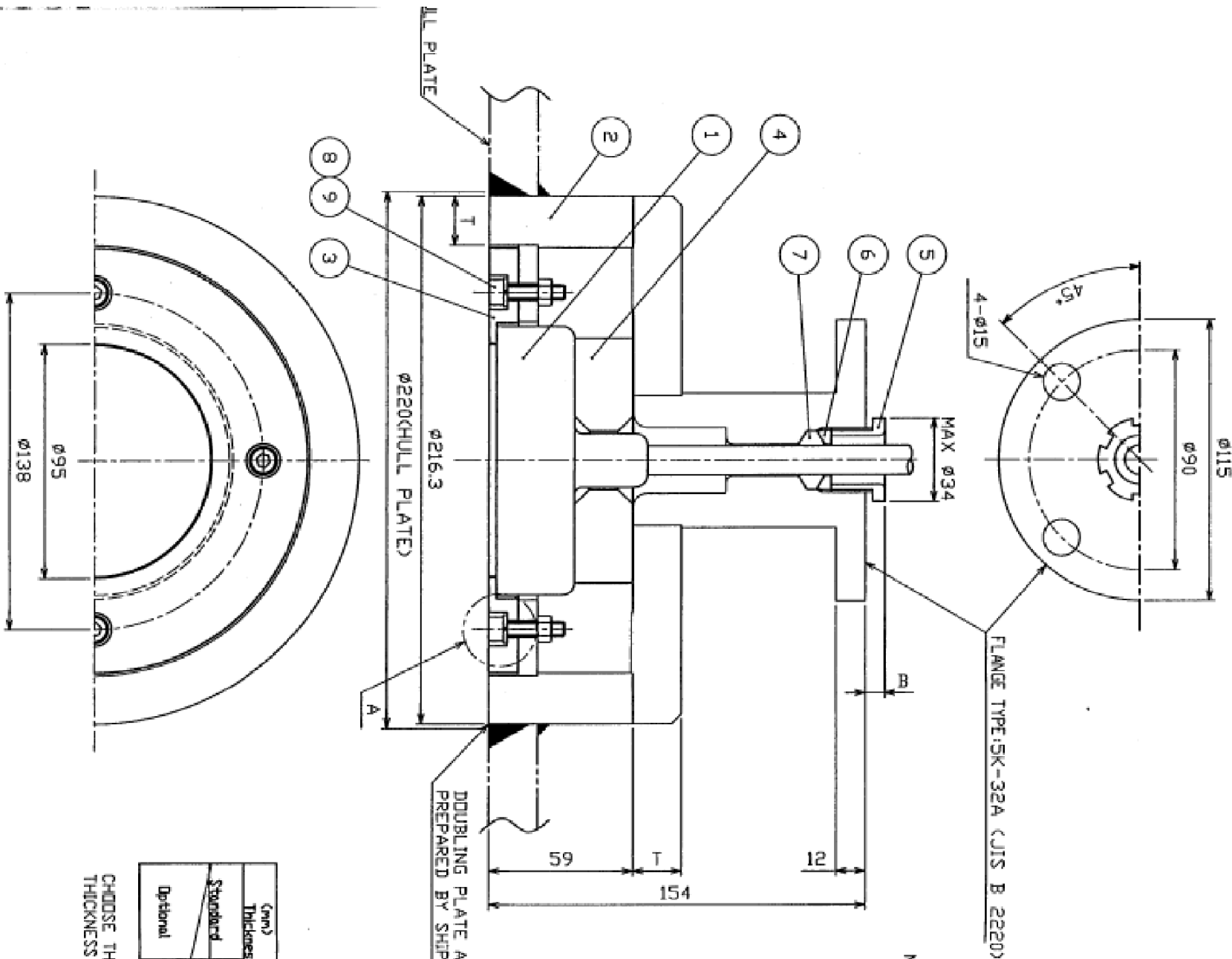
SCALE : 1/25



FREQUENCY 200 KHZ

TABLE 2

DIMENSIONS	TOLERANCE
L ≤ 50	±1.5
50 < L ≤ 100	±2.5
100 < L ≤ 500	±3



NOTE: 1.THE TRANSDUCER TANK SHOULD BE WELDED FLUSH WITH SHIP'S HULL PLATE, AND SHOULD NOT REcede FROM THE HULL PLATE.
2.SCRAPe OFF SURFACE PLATING OF WELDING PART OF CASING ② BEFORE WELDING, TO AVOID DISTORTION BY HEAT, PUT FIXING FLANGE ③ WITHOUT TRANSDUCER ①, DAMPER ④ AND GASKET ⑦ ONTO CASING ② WHILE WELDING.
3.MATERIAL OF CASING ② MEETS NK (NIPPON KAIJI KYOKUKAI) STANDARD KSTPG370.
4.THE TRANSDUCER TANK IS FINISHED BY EPICON ZINC RICH PRIMER B-2 (CHUGOKU MARINE PAINTS,LTD.).
5.DO NOT PAINT TRANSDUCER FACE.
6.FILL THE SPACE OF POSITION 'A' AND THE GAP BETWEEN CASING ② AND FIXING FLANGE ③ WITH SILICONE SEALANT AFTER MOUNTING THE TRANSDUCER ①.
7.TIGHTEN GLAND NUT ⑤ SO THAT DIMENSION 'B' IS BETWEEN 7.0 mm AND 7.5 mm.
8.TABLE 2 INDICATES TOLERANCE OF DIMENSIONS.
9.MASS DOES NOT INCLUDE TRANSDUCER ①.

TABLE 1

Dental Direction	C	SI	Mn	P	S	Cr	Mo
Contented	0.25 or less	0.35 or less	0.30-0.90	0.040 or less	0.040 or less	NI	NI

TABLE 3

(mm) Thickness	(kg) MASS OF TANK
Standard T=20	20 ± 10%
Optional T=12	16 ± 10%
Optional T=25	22 ± 10%

CHOOSE THICKNESS 'T' ACCORDING TO THICKNESS OF HULL PLATE.

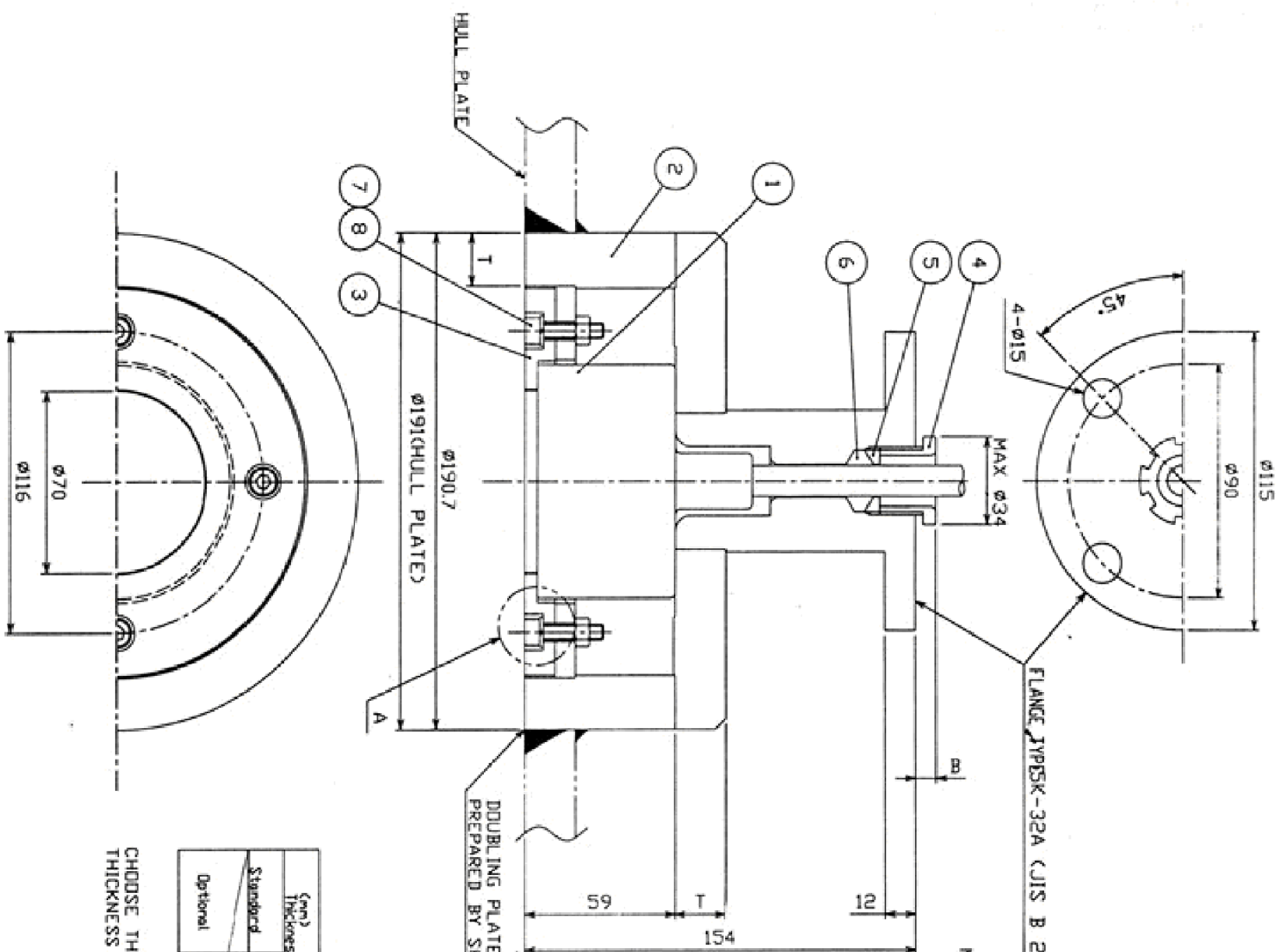
ITEM	NAME	MATERIAL	Q'TY	DWG.NO.	REMARKS
9	SPRING WASHER	SUS316L	4	M6	
8	HEX.S.H.C.SCREW	SUS316L	4	M6X25	
7	GASKET	CR	1	TPB-11-08	
6	WASHER	C3604B	1	TPB-11-07	
5	GLAND NUT	C3604B	1	JIS F8801 20 1b	
4	DAMPER	CR	1	TTF-2000-03	
3	FIXING FLANGE	SUS316L	1	TTF-2000-02	
2	CASING EPOXY ZINC RICH PRIMER	KSTPG370	1	TTF-2000-05	CLASSIFICATION SOCIETY APPROVED MATERIAL
1	TRANSDUCER		1	200B-8B	NOT INCLUDED IN MASS

DRAWN	Mr. H. E. KINOSHITA	TITLE	TTF-2000 (SK-32A)
CHECKED	TAKAHASHI T		
APPROVED			
SCALE	1/2	MASS TABLE 3	
DWG No.	C2001-332-X	02-TTF-205G-0	NAME TRANSDUCER (200 KHZ) TANK TRANSDUCER INSTALLATION

FREQUENCY 50 KHZ

TABLE 2

DIMENSIONS	TOLERANCE
L ≤ 50	±1.5
50 < L ≤ 100	±2.5
100 < L ≤ 500	±3



NOTE: 1.THE TRANSDUCER TANK SHOULD BE WELDED FLUSH WITH SHIP'S HULL PLATE, AND SHOULD NOT RECEDE FROM THE HULL PLATE.
2.SCRAP OFF SURFACE PLATING OF WELDING PART OF CASING ② BEFORE WELDING, TO AVOID DISTORTION BY HEAT, PUT FIXING FLANGE ③ WITHOUT TRANSDUCER ① AND GASKET ⑥ ONTO CASING ② WHILE WELDING.
3.MATERIAL OF CASING ② MEETS NK (NIPPON KAIJI KYOKAI) STANDARD KSTPG370.
TABLE 1 INDICATES CHEMICAL COMPOSITION OF KSTPG370.
4.THE TRANSDUCER TANK IS FINISHED BY EPICON ZINC RICH PRIMER B-2 (CHUGOKU MARINE PAINTS,LTD).
5.DO NOT PAINT TRANSDUCER FACE.
6.FILL THE SPACE OF POSITION 'A' AND THE GAP BETWEEN CASING ② AND FIXING FLANGE ③ WITH SILICONE SEALANT AFTER MOUNTING THE TRANSDUCER ①.
7.TIGHTEN GLAND NUT ④ SO THAT DIMENSION 'B' IS BETWEEN 7.0 mm AND 7.5 mm.
8.TABLE 2 INDICATES TOLERANCE OF DIMENSIONS.
9.MASS DOES NOT INCLUDE TRANSDUCER ①.

TABLE 1

Chemical Composition	C	Si	Mn	P	S	Cr	Mo
Content(%)	0.25 or less	0.35 or less	0.30-0.90	0.040 or less	0.040 or less	NI	NI

TABLE 3

(mm) Thickness	MASS OF TANK
Standard T=20	18 ± 10%
T=12	15 ± 10%
Optional T=25	20 ± 10%

CHOOSE THICKNESS 'T' ACCORDING TO THICKNESS OF HULL PLATE.

8	SPRING WASHER	SUS316L	4	M6	
7	HEX.S.H.C.SCREW	SUS316L	4	M6X25	
6	GASKET	CR	1	TPB-II-08	
5	WASHER	C3604B	1	TPB-II-07	
4	GLAND NUT	C3604B	1	JIS F8801 20 1a	
3	FIXING FLANGE	SUS316L	1	TTF-5600-02	
2	CASING EPOXY ZINC RICH PRIMER	KSTPG370	1	TTF-5600-01	CLASSIFICATION SOCIETY APPROVED MATERIAL
1	TRANSDUCER		1	SDB-6B	NOT INCLUDED IN MASS.
ITEM	NAME	MATERIAL	Q'TY	DWG.NO.	REMARKS
DRWN	NO. 13, 76 E. MIYOSHI	TITLE TTF-5600 (SK-32A)			
CHECKED	TAKAHASHI, T				
APPROVED					
SCALE	1/2	NO. 1000 3 kg	NAME TRANSDUCER (50 KHZ) TANK		
DWG No.	C2001-362-X	02-TTF-565G-0	TRANSDUCER INSTALLATION		

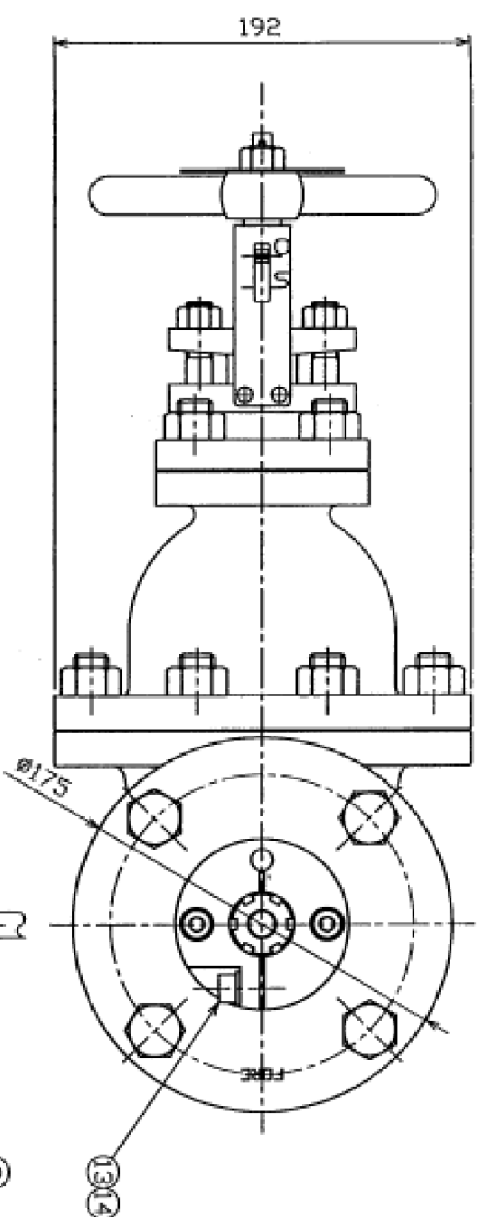
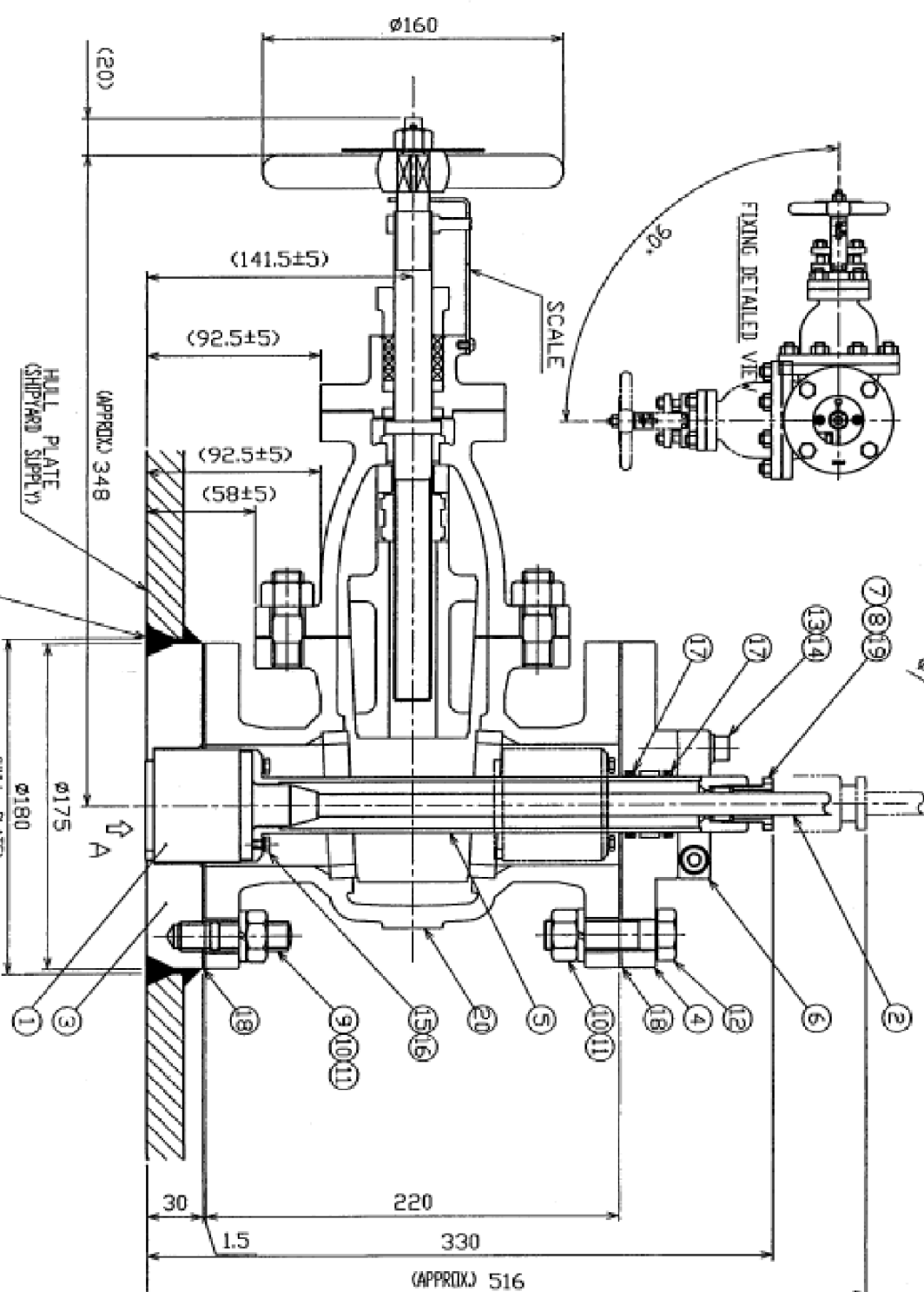


TABLE 1

DIMENSIONS	TOL. FLANGE
L ≤ 50	±1.5
50 < L ≤ 100	±2.5
100 < L ≤ 500	±3

- NOTE1. WHEN WELDING HULL FLANGE (3), FIXING ERROR IN FORE-AFT AND HORIZONTAL DIRECTIONS SHALL BE LESS THAN 4 DEGREE.
- APPLY ANTI-CREVICE CORROSION SEALANT (KONDUSTER) TO SEAL FACE OF FLANGE (3) (4) AND TO BOTH FACES OF GASKET (18) AND FLANGE OF GATE VALVE (20).
 - BEFORE TIGHTENING NUTS (19), CLEAN BOLTS (9) (12) AND NUTS (10) WITH SOLVENT AND APPLY LOCOTITE 8271 TO THREADS OF THEM.
 - WHEN INSTALLING UPPER FLANGE (4) AND SHAFT (5), ALIGN FORE MARK WITH BOW.
 - PARTS EXCEPT GATE VALVE (20) ARE TESTED UNDER 4500^{PSI} WATER PRESSURE.
 - GATE VALVE (20) CAN BE ATTACHED IN ANY DIRECTION IN 90° PITCH.
 - TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.



20	GATE VALVE	SC480	1	65-003-9311 (JIS F 7366-6SS)	CLASSIFICATION SOCIETY APPROVED
19	FIXING GLAND	BRASS	1	JIS F8801#M15	
18	GASKET	JOINT SHEET	2	JIS 10K55A15mm	
17	D-RING	NBR	2	JIS B2401-P30	
16	WASHER	SUS/NBR	4	M4	
15	HEX. SHC. SCREW	SUS316L	4	M4×16	
14	SPRING WASHER	SUS316L	3	M8	
13	HEX. SHC. SCREW	SUS316L	3	M8×30	
12	BOLT	SUS316L	4	M16×60	
11	SPRING WASHER	SUS316L	8	M16	
10	NUT	SUS316L	8	M16	
9	STUD	SUS316L	4	M16×40	
8	WASHER	SPC	2	65-003-9306	
7	GASKET	CR	1	65-003-9305	
6	LOCK RING	SS400	1	65-003-9304	
5	SHAFT	SUS316L	1	65-003-9303	
4	UPPER FLANGE	SUS316L	1	65-003-9302	
3	HULL FLANGE RUST PREVENTIVE OIL	KA	1	65-003-9301	CLASSIFICATION SOCIETY APPROVED MATERIAL
2	TRANSDUCER CABLE				Ø11.8
1	TRANSDUCER		1		DS-785/820

ITEM	NAME	MATERIAL	Q'TY	DWG. NO.	REMARKS
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BRN	MAX 18.76 E. MIYOSHI	TITLE	DS-786
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DECIDED	TAKAHASHI, T
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APPROVED	Y. Hatai
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SCALE	1/3	WSS	400	100
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DWG. NO.	C7222-104-F	WMC	SEACHEST TYPE (W/GATE VALVE)
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DOUBLING PLATE AND WELDING
PREPARED BY SHIPYARD

VIEW A

