

WORKING PLAN

工事用図

CUSTOMER

客 先

SAM JIN SHIPBUILDING INDUSTRIES CO., LTD.

HULL No.

船 番

H1009/10/11/12/31/32

STERN TUBE BEARING

STERN TUBE SEAL

船尾管軸受

船尾管シール

Wärtsilä Japan, Ltd.



Japan Marine Technologies

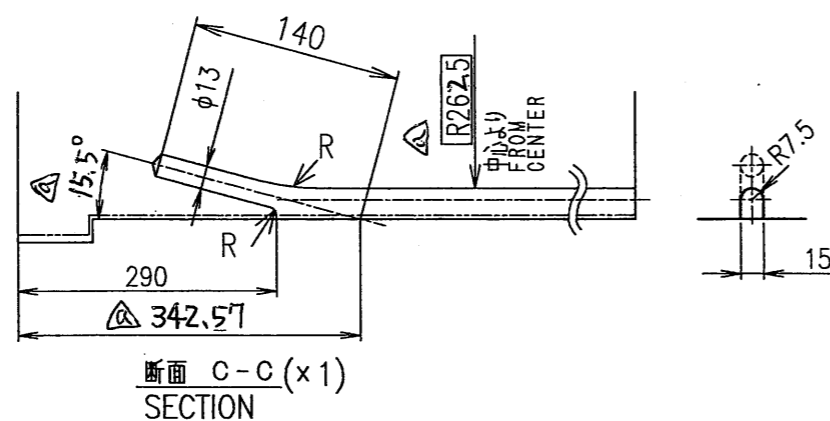
TOYAMA FACTORY

14-37, 7-Chome, Mukaishinjo-Machi,




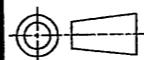

Toyama, Japan 930-0916



TEL : (076) 451-3150

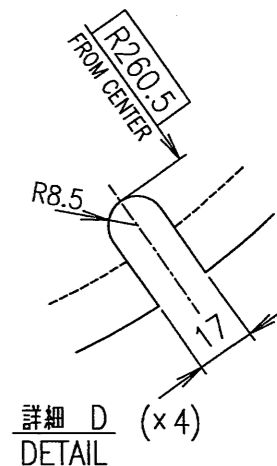
FAX : (076) 451-3161



ELEMENT
ONLY

面の肌表示 SURFACE TEXTURE	普通公差（機械加工） MACHINING TOLERANCE UNLESS OTHERWISE SPECIFIED		CUSTOMER		NO.	
			SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.			
JIS B 0031 （μmRa）	寸 法 DIMENSION (mm)	公 差 TOLERANCE (mm)	 Wärtsilä Japan Ltd.  Japan Marine Technologies			
	0.5 以上 6 以下	±0.1				
 三角法 THIRD ANGLE 	6 をこえ 30 "	±0.2	SIZE 船尾管軸受 （船尾側） #500 STERN TUBE BEARING (AFT)			
	30 " 120 "	±0.3				
	120 " 400 "	±0.5				
	400 " 1000 "	±0.8				
	1000 " 2000 "	±1.2				
2000 " 4000 "	±2.0	MAT'L DRAWN A.MAEYAMA DATE MAY 30'08 REFERENCE MASS CHECKED  SCALE NONE APPROVED DWG. NO. B01-A050-13556				
ドリル径には適用しない NOT APPLICABLE TO DRILL HOLES						
JIS B 0405-m						

1st REV	DEC. 5 '08	
C		A



注)





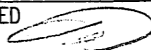

△) 1) 軸受外径には直径で5~10mmの仕上げ代を含んでおり、その状態で納入する。

2) $\frac{25}{\sqrt{ }}$ 印はホワイトメタル铸造後、機械加工しないことを示す。面粗さは $\frac{25}{\sqrt{ }}$ と同一である。

3) 口印す法は、軸受内径に対してBOTTOM方向に偏心加工のこと。

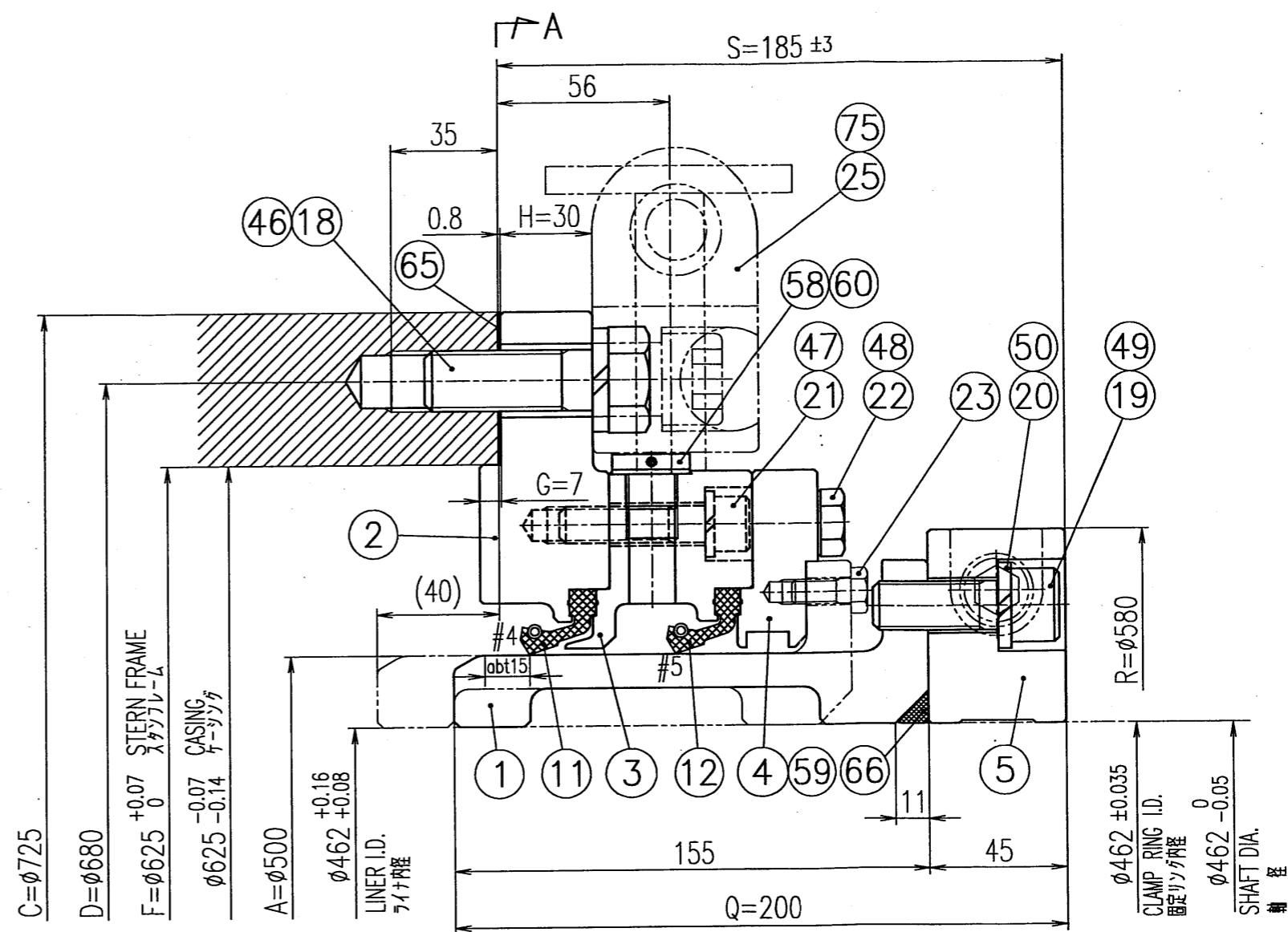
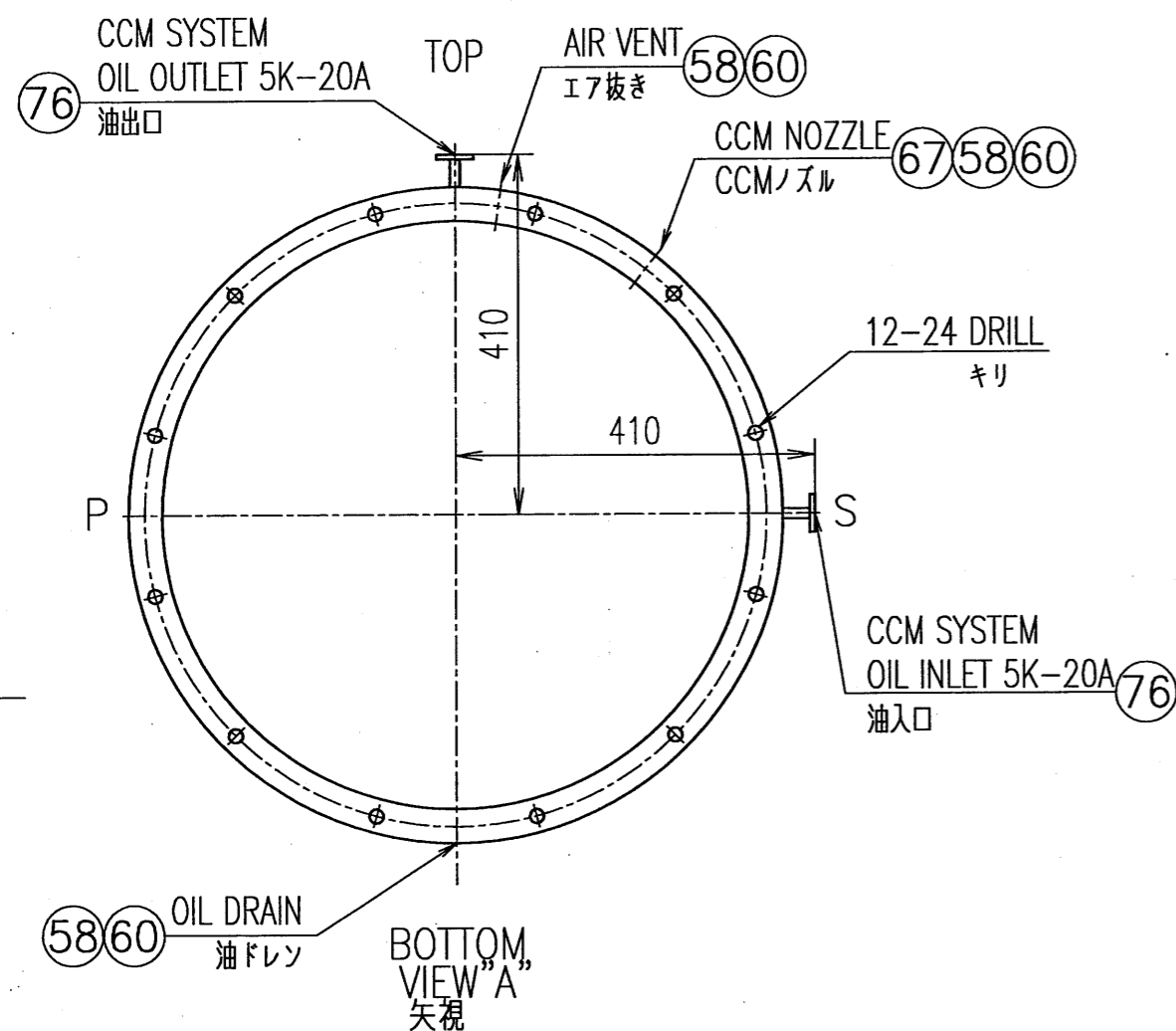
NOTED

- ② 1) OUTSIDE DIA. OF BUSH INVOLVES $5 \sim 10 \text{ mm}$ MARGIN IN DIA. FOR FINAL MACHINING.
- 2) $\nabla 5$ MARK MEANS THE SURFACE OF NO-MACHINING AFTER BABBITTING OF WHITE METAL AND ROUGHNESS TO BE THE SAME AS THOSE OF $\nabla 5$ MARK.
- 3) THE CENTER OF \square MARKED DIA. SHOULD BE ECCENTRICALLY MACHINED TOWARD BOTTOM.
- 4) PERMISSIBLE MEAN PRESSURE: 1.2 MPa

CLASS		KR	H1009/10/11/12/31/32	
面の肌表示 SURFACE TEXTURE	普通公差（機械加工） MACHINING TOLERANCE UNLESS OTHERWISE SPECIFIED		CUSTOMER	
	NO.		SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.	
JIS B 0031 （ μ mRa）	寸法 DIMENSION (mm)	公差 TOLERANCE (mm)	 Wärtsilä Japan Ltd.  Japan Marine Technologies	
	0.5 以上 6 以下 6 をこえ 30 "	± 0.1 ± 0.2		
 三角法 THIRD ANGLE 	30 " 120 "	± 0.3	SIZE 船尾管軸受（船首側） #500 STERN TUBE BEARING (FWD)	
	120 " 400 "	± 0.5		
	400 " 1000 "	± 0.8		
	1000 " 2000 "	± 1.2		
	2000 " 4000 "	± 2.0		
ドリル径には適用しない NOT APPLICABLE TO DRILL HOLES		MAT'L _____ DRAWN A.MAEYAMA DATE MAY 30'08 REFERENCE _____ MASS _____ CHECKED  SCALE NONE APPROVED _____ DWG. NO. B01-F050-13557 		
JIS B 0405-m				

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.				DWG.NO. 4BLR-A500-R0076a		
PARTS LIST FOR STERN TUBE SEAL STAND-BY SEAL 4BL				SHIP NO.	H1009/10/11 H1012/31/32	
部品表 船尾管シール スタンバイシール4BL				SIZE	#500	
ITEM	DESCRIPTION	MAT'L	SIZE	REQ.		REMARKS
				WORK	SPARE	
1	AFT LINER 後部ライナー	HIGH Ni-Cr STEEL 高 Ni-Cr 鋼		1		
2	AFT CASING FLANGE 後部フランジケーシング	MANGANESE BRONZE CAC301		1		
3	AFT INTERMEDIATE RING A 後部中間リング A	MANGANESE BRONZE CAC301		1		
4	AFT INTERMEDIATE RING B 後部中間リング B	MANGANESE BRONZE CAC301		1		
5	AFT INTERMEDIATE RING C 後部中間リング C	MANGANESE BRONZE CAC301		1		
6	AFT SEAL COVER 後部シールカバー	MANGANESE BRONZE CAC301		1		
7	P-RING COVER P-リングカバー	MANGANESE BRONZE CAC301		1		
10	SPACER (SPLIT TYPE) スペーサー(二分割型)	MILD STEEL SS400		1		
11	SEAL RING (WITH SPRING) シールリング(スプリング付)	VITON FR	#500	1		
12	SEAL RING (WITH SPRING) シールリング(スプリング付)	VITON FR	#500	1		
13	SEAL RING (WITH SPRING) シールリング(スプリング付)	VITON FR	#500	1		
14	SEAL RING (WITH SPRING) シールリング(スプリング付)	VITON FR	#500	1		
15	P-RING (WITH SPRING) P-リング(スプリング付)	NBR ニトリルゴム	#500	1		
18	HEX.HEAD BOLT (WITH WIRE HOLE) 六角ボルト(ワイヤー穴付)	STAINLESS STEEL SUS304	M20-75L	12		P = 2.5
20	HEX.HEAD BOLT (WITH WIRE HOLE) 六角ボルト(ワイヤー穴付)	STAINLESS STEEL SUS304	M20-45L	12		P = 2.5
21	HEX.SOCKET HEAD BOLT 六角穴付ボルト	STAINLESS STEEL SUS304	M12-45L	10		
22	HEX.SOCKET HEAD BOLT 六角穴付ボルト	STAINLESS STEEL SUS304	M12-45L	10		
23	HEX.SOCKET HEAD BOLT 六角穴付ボルト	STAINLESS STEEL SUS304	M12-45L	10		
24	HEX.HEAD BOLT 六角ボルト	STAINLESS STEEL SUS304	M12-25L	10		
25	HEX.HEAD BOLT 六角ボルト	STAINLESS STEEL SUS304	M12-25L	10		
29	HEX.HEAD BOLT 六角ボルト	MILD STEEL SS400	M12-20L	8		
30	HEX.HEAD BOLT (WITH WIRE HOLE) 六角ボルト(ワイヤー穴付)	STAINLESS STEEL SUS304	M10-45L	4		
31	HEX.SOCKET HEAD BOLT 六角穴付ボルト	Cr-Mo STEEL SCM435	M20-50L	2		
32	HEX.HEAD BOLT (WITH WIRE HOLE) 六角ボルト(ワイヤー穴付)	STAINLESS STEEL SUS316	M20-25L	2		
40	HEX.SOCKET HEAD BOLT 六角穴付ボルト	STAINLESS STEEL SUS304	M10-35L	2		
41	PARALLEL PIN 平行ピン	STAINLESS STEEL SUS304	φ 8-20L	2		
43	HEX. NUT 六角ナット	MILD STEEL SS400	M20	12		FOR ITEM 20
46	SHEET PACKING シートパッキン	NON ASBESTOS ノンアスベスト		1	1	

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.				DWG.NO. 4BLR-A500-R0076		
PARTS LIST FOR STERN TUBE SEAL STAND-BY SEAL 4BL				SHIP NO.	H1009/10/11 H1012/31/32	
部品表 船尾管シール スタンバイシール4BL				SIZE	#500	
ITEM	DESCRIPTION	MAT'L	SIZE	REQ.		REMARKS
				WORK	SPARE	
47	SHEET PACKING シートパッキン	NON ASBESTOS ノンアスベスト		1		
48	SHEET PACKING シートパッキン	NON ASBESTOS ノンアスベスト		1		
49	"O"-RING "O"-リング	NBR ニトリルゴム	φ 25-450(I.D.)	1	1	
50	"O"-RING "O"-リング	NBR ニトリルゴム	φ 2.4-14.8(I.D.)	6	6	
51	"O"-RING "O"-リング	NBR ニトリルゴム	φ 8.4-100L	2		
53	GAUGE STOPPER ゲージ用ストッパー	NBR ニトリルゴム		2		
56	LOCKING WIRE 回り止めワイヤー	STAINLESS STEEL SUS304	φ 1.5-8m	1		
57	LOCKING WIRE 回り止めワイヤー	STAINLESS STEEL SUS304	φ 1.5-1m	USE ITEM56	1	
58	SPRING WASHER ばね座金	STAINLESS STEEL SUS304	M12	30		
59	TOOTHED WASHER 歯付座金	STAINLESS STEEL SUS304	M12	20	20	
70	PLUG プラグ	STAINLESS STEEL SUS304	R1/4	4		
71	PLUG(WITH WIRE HOLE) 六角穴付プラグ(ワイヤー穴付)	STAINLESS STEEL SUS316	G1/4	9		
72	PLUG(WITH WIRE HOLE) 六角穴付プラグ(ワイヤー穴付)	STAINLESS STEEL SUS316	G3/8	2	2	
73	Cu PACKING 銅パッキン	COPPER 銅	G1/4	9		
74	Cu PACKING 銅パッキン	COPPER 銅	G3/8	2	2	
75	STRAP FASTENER ライナー固定片	MILD STEEL SS400		4		
76	LIFTING PLATE 吊り金具	FORGED STEEL SF390		1		
77	WEAR DOWN GAUGE 摩耗測定ゲージ	STAINLESS STEEL SUS304		1		WITH WOODEN BOX
85	ZINC ANODE 防食亜鉛	ZINC Zn		4		
86	HEX.SOCKET HEAD BOLT 六角穴付ボルト	STAINLESS STEEL SUS304	M12-25L	8		
87	SPRING WASHER ばね座金	STAINLESS STEEL SUS304	M12	8		
88	RUBBER SHEET ゴムシート	NBR ニトリルゴム		4		
90	SPANNER FOR W.D.G. W.D.G.用スパナ	MILD STEEL SS400		1		
91	T-TYPE WRENCH T型レンチ	MILD STEEL SS400		1		
92	STEEL BOX 格納箱	STEEL 鋼		1		



NOTE) 1.THE CENTER OF CASING AND SEAL RING IS CONCENTRIC.
2.AFTER INSTALLATION,ITEM 25/75 AND 23 SHOULD BE TAKEN OFF AND KEEP IN THE SPARE PARTS & TOOL BOX.
3.CONFIRM THE INSTALLATION CONDITION WITH IN ALLOWANCE, ACCORDING TO THE MANUAL.

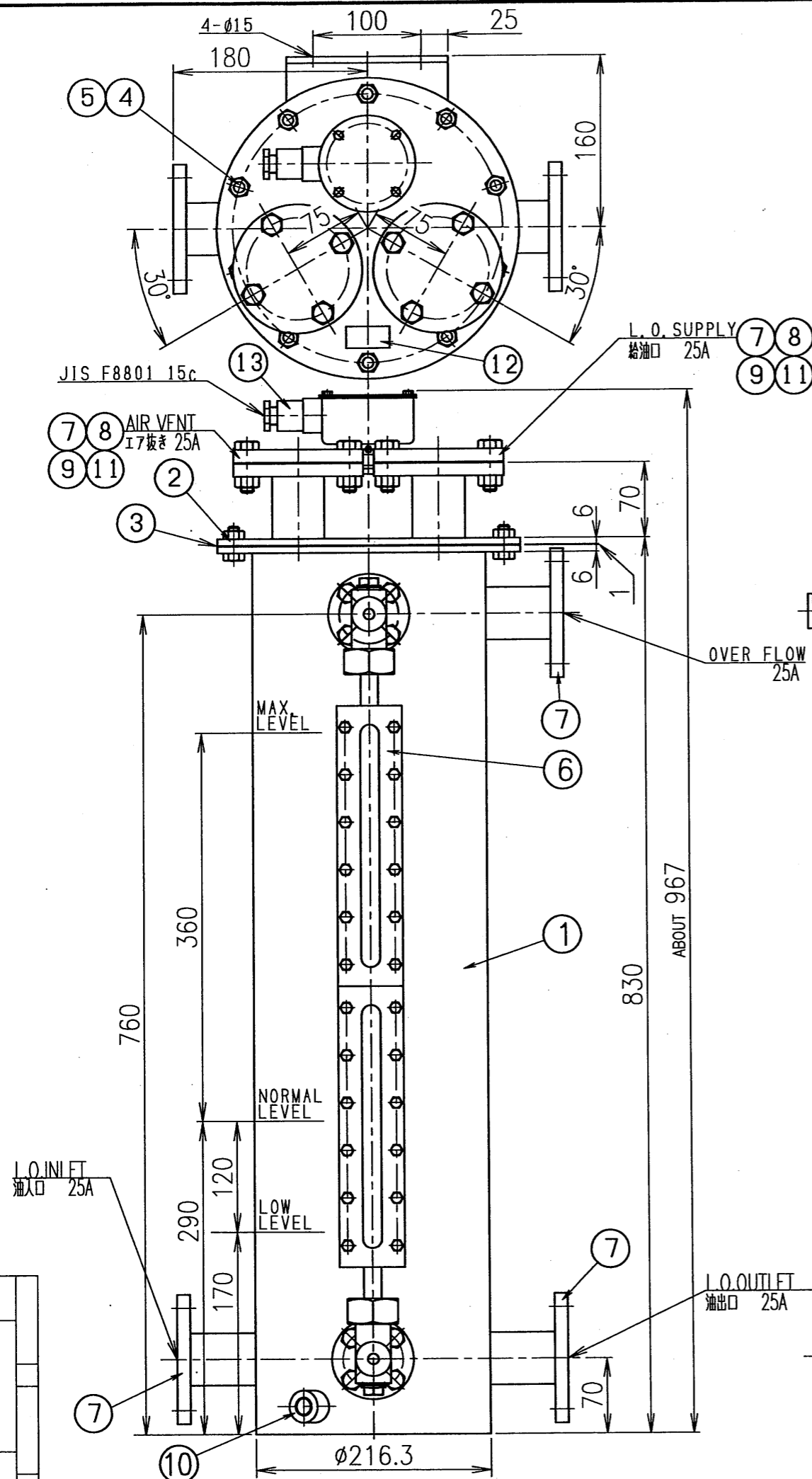
注) 1.ケーシング中心とシールリング中心とは同心である。
2.シール装置取付後、部番25/75及び23は、取外して予備品要具箱に保管のこと。
3.取付時、取扱説明書に従い取付精度を確認のこと。

H1009/10/11/12/31/32

CLASS: KR
REQ: 1 SET/ 1 SHIP

CUSTOMER		NO.	
SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.			
 WÄRTSILÄ		Wärtsilä Japan Ltd.  Japan Marine Technologies	
TITLE STERN TUBE SEAL STERNGUARD MARKII			
SIZE 500 船尾管シール装置 スタンガードMKII(FWD)			
MAT'L		DRAWN A.MAEYAMA	DATE MAY 30'08
MASS 157kg		CHECKED 	REFERENCE 0458-0476
SCALE 1/2		APPROVED	DWG. NO. MKIIR-F500-R0121
			

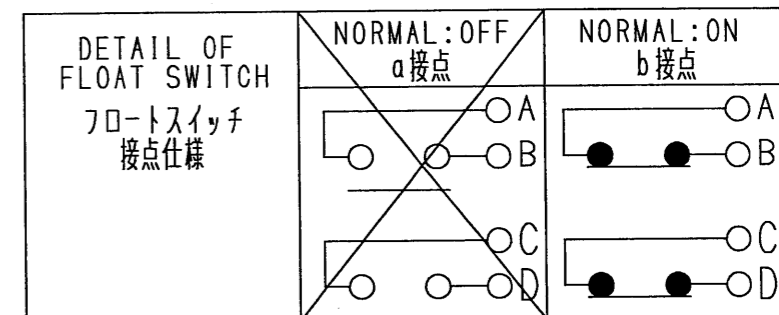
SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.				DWG NO. MKIIR-F500-R0121 _{0A}		
PARTS LIST FOR STERN TUBE SEAL STERNGUARD MKII (FWD) 部品表 船尾管シール スタンガード MK II (FWD)				SHIP NO.	H1009/10/11 H1012/31/32	
				SIZE	#500	
ITEM	DESCRIPTION	MAT'L	SIZE	REQ.		REMARKS
				WORK	SPARE	
1	FWD LINER 前部ライナー	HIGH Ni-Cr STEEL 高 Ni-Cr 鋼		1		
2	FWD CASING FLANGE 前部フランジケーシング	CAST IRON FC300		1		
3	FWD INTERMEDIATE RING 前部中間リング	CAST IRON FC300		1		
4	FWD SEAL COVER 前部シールカバー	CAST IRON FC300		1		
5	CLAMP RING 固定リング	CAST IRON FC300		1		
11	SEAL RING (WITH SPRING) シールリング(スプリング付)	VITON FR	#500	1		
12	SEAL RING (WITH SPRING) シールリング(スプリング付)	VITON FR	#500	1		
18	HEX.HEAD BOLT 六角ボルト	MILD STEEL SS400	M20-65L	12		P=2.5
19	HEX.SOCKET HEAD BOLT 六角穴付ボルト	Cr-Mo STEEL SCM435	M16-45L	8		
20	HEX.SOCKET HEAD BOLT 六角穴付ボルト	Cr-Mo STEEL SCM435	M16-55L	2		
21	HEX.SOCKET HEAD BOLT 六角穴付ボルト	Cr-Mo STEEL SCM435	M12-50L	10		
22	HEX.HEAD BOLT 六角ボルト	MILD STEEL SS400	M12-35L	10		
23	HEX.HEAD BOLT 六角ボルト	MILD STEEL SS400	M8-20L	4		
25	HEX.SOCKET HEAD BOLT 六角穴付ボルト	Cr-Mo STEEL SCM435	M20-50L	4		
46	SPRING WASHER ばね座金	HI-CARBON STEEL SWRH	M20	12		
47	SPRING WASHER ばね座金	HI-CARBON STEEL SWRH	M12	10		
48	TOOTHED LOCK WASHER 歯付座金	STAINLESS STEEL SUS304	M12	10	10	
49	SPRING WASHER ばね座金	HI-CARBON STEEL SWRH	M16	8		
50	SPRING WASHER ばね座金	HI-CARBON STEEL SWRH	M16	2		
58	PLUG(WITH WIRE HOLE) 六角穴付プラグ(ワイヤー穴付)	STAINLESS STEEL SUS316	G3/8	3		
59	PLUG プラグ	Cr-Mo STEEL SCM435	R1/4	1		
60	PACKING パッキン	COPPER 銅	G3/8	3		
65	SHEET PACKING シートパッキン	NON ASBESTOS ノンアスベスト		1		
66	"O"-RING "O"-リング	NBR ニトリルゴム	φ 8.4-455(I.D.)	1	1	
67	CCM NOZZLE CCM ノズル	VITON FR		1		
75	LIFTING PLATE 吊り金具	FORGED STEEL SF390		2		
76	FLANGE JOINT フランジ継手	MILD STEEL SS400	5K-20A	2		



AFT S/T SEAL TK
25L
HIGH & LOW LEVEL ALARM

注) 銘板は、フロートスイッチに取り付けのこと。
NOTE) NAME PLATE TO BE INSTALLED
ON FLOAT SWITCH.

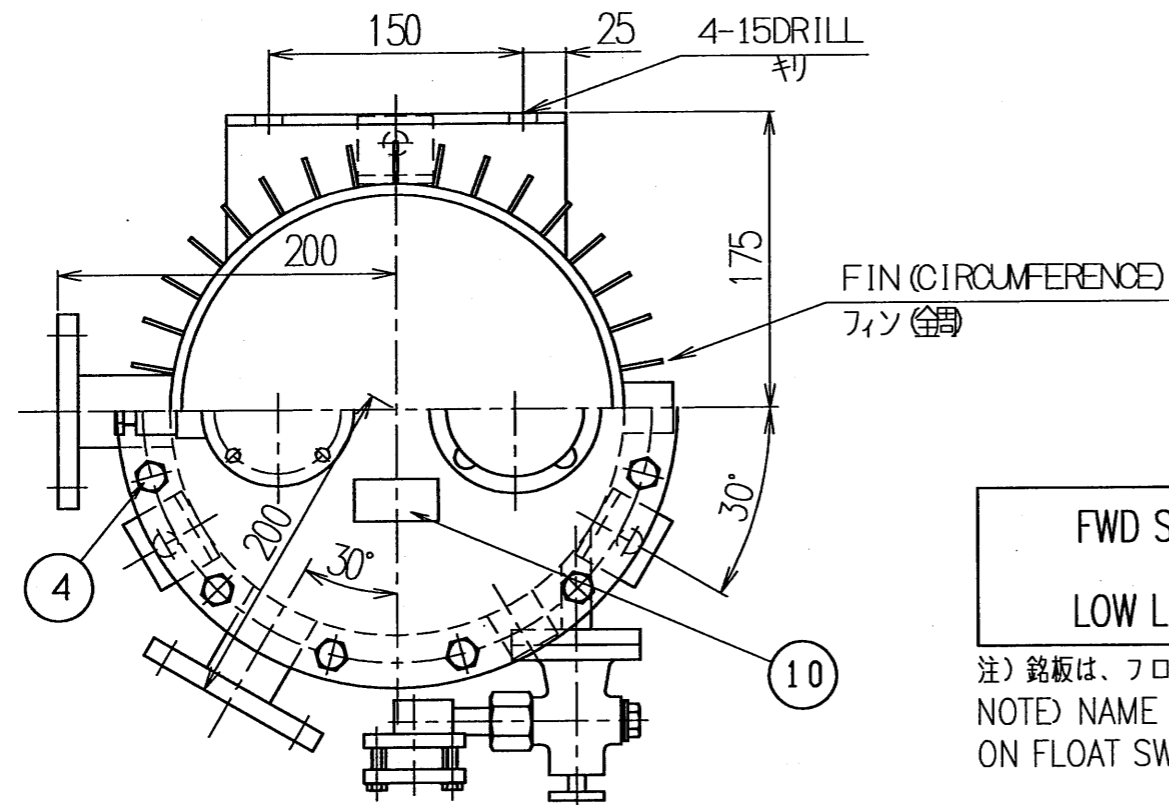
BILL OF MAT'L				
ITEM	REQ.	WORKING SPARE	SIZE	MAT'L DESCRIPTION
1	1			STEEL TANK BODY
				SGP タンク本体
2	1			MILD STEEL TANK COVER
				SS400 タンクカバー
3	1			NON-ASBESTOS SHEET PACKING
				ノンアスベスト シートパッキン
4	10	sets		MILD STEEL HEX. HEAD BOLT & NUT
				SS400 六角ボルト・ナット
5	10			MILD STEEL SPRING WASHER
				SS400 バネ座金
6	1		SELF CLOSED SOLAS TYPE	MILD STEEL/GLASS OIL LEVEL GAUGE
				FLAT TYPE 油面計
7	5			MILD STEEL FLANGE
				SS400 フランジ
8	2			NON-ASBESTOS SHEET PACKING
				ノンアスベスト シートパッキン
9	2			MILD STEEL BLIND FLANGE
				SS400 盲フランジ
10	1			MILD STEEL DRAIN PLUG
				SS400 ドレプラグ
11	8	sets		MILD STEEL HEX. HEAD BOLT & NUT
				SS400 六角ボルト・ナット
12	1			ALUMINIUM NAME PLATE
				AL 銘板
13	1		HIGH & LOW AC15VA, Max. 1A	FLOAT SWITCH
				フロートスイッチ



マンセル
PAINT: MUNSELL N-9.0

CUSTOMER		NO.	
SAM JIN SHIPBUILDING INDUSTRIES CO., LTD.			
WARTSILA		Wärtsilä Japan Ltd.	
		Japan Marine Technologies	
		25L-OIL TANK FOR AFT SEAL	
		後部シール用25L油タンク	
MAT'L	DRAWN	DATE	REFERENCE
MASS	A. MAEYAMA	MAY '30'08	
SCALE	CHECKED		
1:5	APPROVED		
		DWG. NO.	101-C025-3719

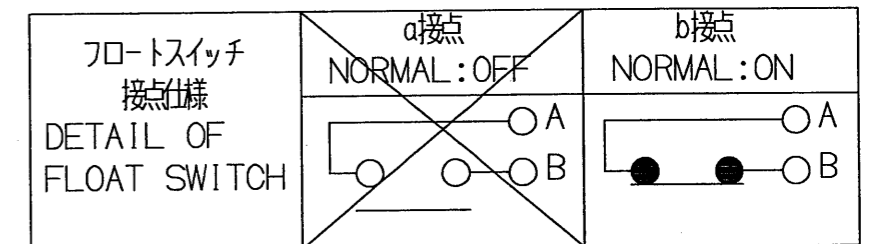
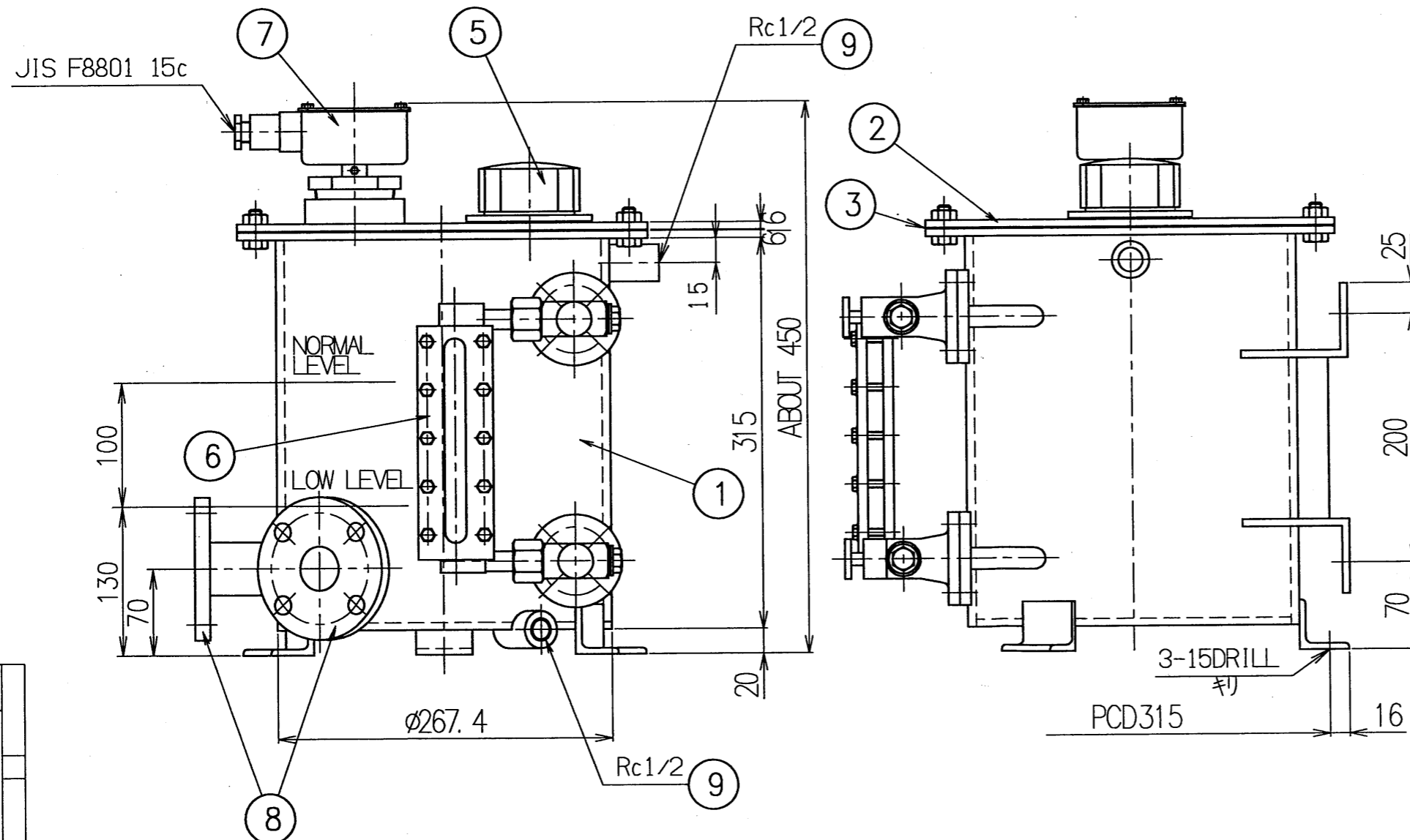
REQ.: 1set/1ship



FWD S/T SEAL TK
15L
LOW LEVEL ALARM

注) 銘板は、フロートスイッチに取り付けのこと。
NOTE) NAME PLATE TO BE INSTALLED
ON FLOAT SWITCH.

ITEM	REQ.		SIZE	MAT'L	DESCRIPTION
	WORKING	SPARE			
1	1			STEEL	TANK BODY
				SGP	タンク本体
2	1			MILD STEEL	TANK COVER
				SS400	タンクカバー
3	1			NON-ASBESTOS	SHEET PACKING
				ナフスベスト	シートパッキン
4	12			MILD STEEL	HEX HEAD BOLT & NUT
				SS400	六角ボルト、ナット
5	1				OIL CAP (WITH FILTER)
					給油口 (油コシ付)
6	1		SOLAS TYPE	MILD STEEL/GLASS	OIL LEVEL GAUGE
				FLAT TYPE	油面計
7	1		LOW LEVEL AC15VA Max1A		FLOAT SWITCH
					フロートスイッチ
8	2		JIS 5K-20A	MILD STEEL	FLANGE
				SS400	フランジ
9	2			MILD STEEL	PLUG
				SS400	プラグ
10	1			ALUMINIUM	NAME PLATE
				AL	銘板

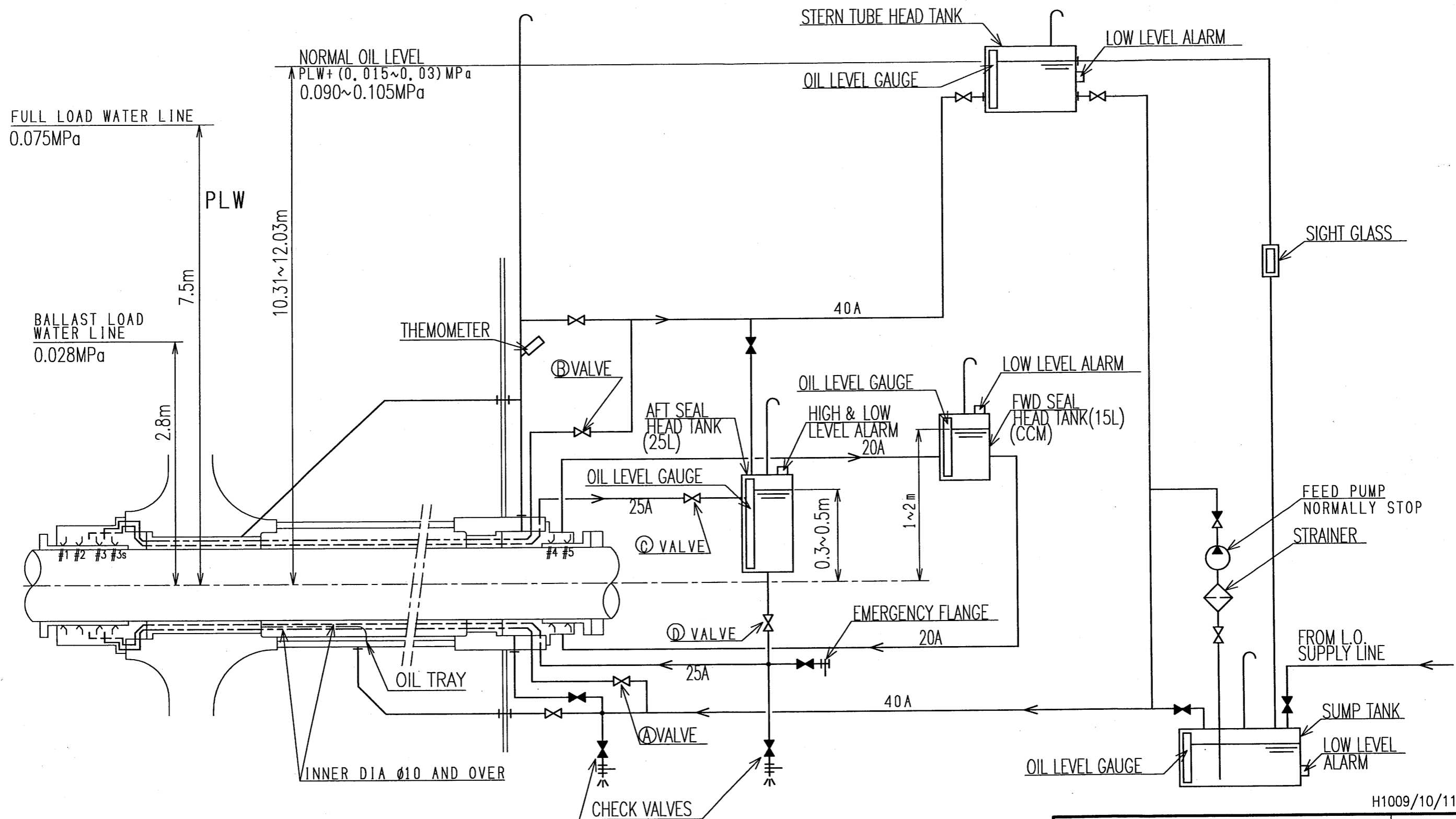


マンセル
PAINT: MUNSELL N-9.0

H1009/10/11/12/31/32

CUSTOMER		NO.	
SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.			
 WÄRTSILÄ		Wärtsilä Japan Ltd.  Japan Marine Technologies	
TITLE		15L TANK FOR FWD SEAL "B" TYPE 前部シール用15Lタンク"B"型	
MAT'L	DRAWN A.MAEYAMA	DATE MAY 30'08	REFERENCE
MASS abt. 35kg	CHECKED 		
SCALE 1 : 4.5	APPROVED	DWG. NO. L01-C015-4730	

REQ.: 1set/1ship







NOTE)

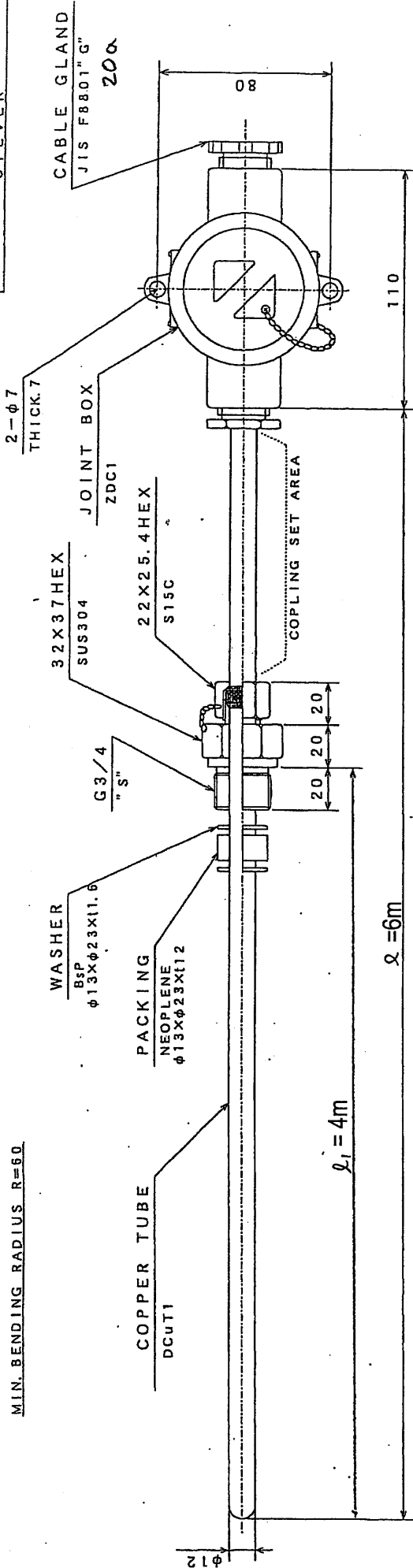
1. THIS DWG IS ONLY FOR REFERENCE.
2. DETAILS SHOULD BE ARRANGED BY SHIPYARD.
3. ALL PARTS (EXCEPT FOR AFT & FWD SEAL HEAD TANK) ON THIS DWG ARE PREPARED BY SHIP YARD.
4. WHEN DRAFT CONDITION IS LESS THAN 3.5m FROM SHAFT CENTER, THE VALVE "C" AND "D" SHOULD BE CLOSED.

✕ NORMAL OPEN
 ✖ NORMAL CLOSE

H1009/10/11/12/31/32

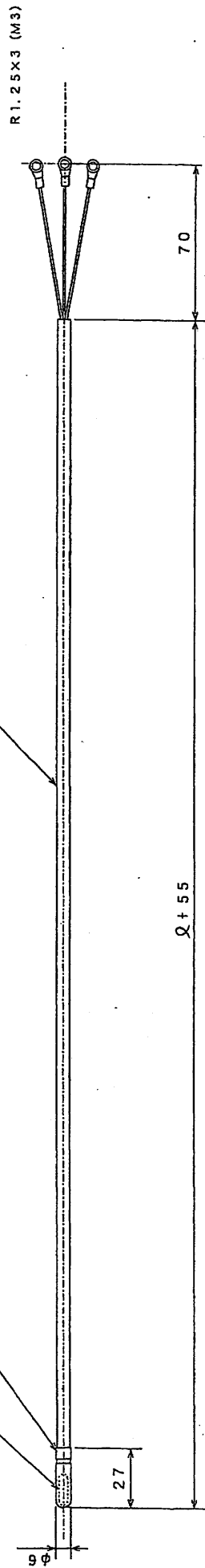
CUSTOMER		NO.	
SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.			
 WÄRTSILÄ		Wärtsilä Japan Ltd.  Japan Marine Technologies	
TITLE PIPING DIAGRAM FOR STERN TUBE AND 4BL TYPE SEAL (NATURAL CIRC. SYSTEM)			
MAT'L	DRAWN A.MAEYAMA	DATE MAY 30'08	REFERENCE
MASS	CHECKED 		
SCALE	APPROVED	DWG. NO. Z-B1-24409	

JOINT BOX
FINISH COLOR (MUNSELL)
EXTERNAL
INTERNAL
SILVER



ELEMENT
PROTECTING TUBE
SUS304

TEFLON CABLE
3FEP-0.75 (φ5)



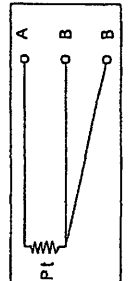
CUSTOMER : SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

S.NO. : H1009/10/11/12/31/32

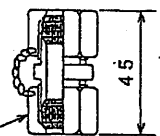
WJPDWG NO. : Z-A1-24399

WORKING : 1set/ship

SPARE : 1set/ship (ELEMENT ONLY)



Rated Value: Pt100Ω
Class : B-JIS' 97
Temp : MAX.100℃



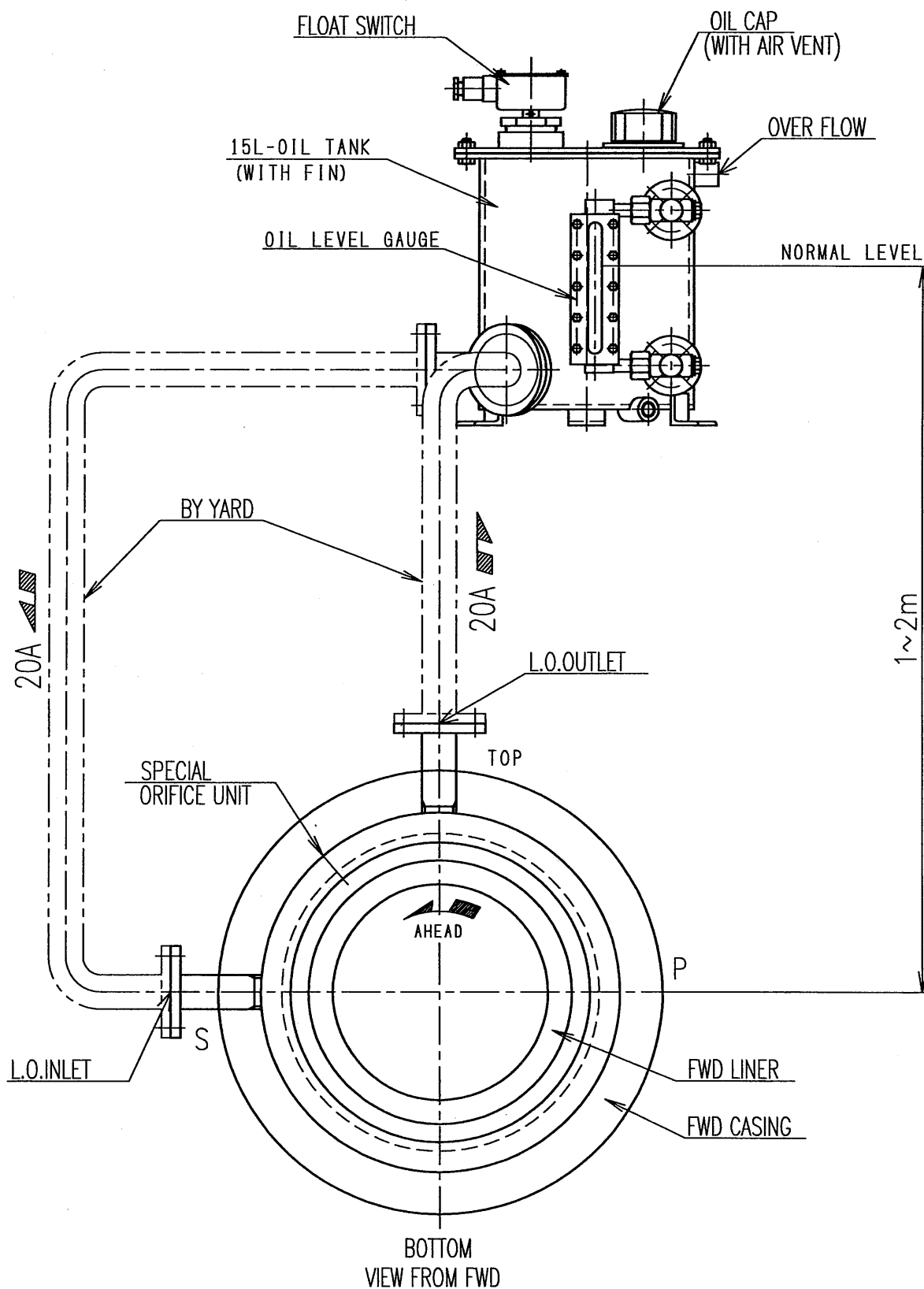
DATE	SCALE	3/4 ANGLE PROJECTION	TITLE TYPE
01. 6. 6	N / S	③-④	PTR-MN
APPROVED	DESIGNED	DRAWN	RESISTANCE BULB
HYUNDAI		P. Maeda	(For STERN TUBE BRG)
DATE	REVISION	BY	DWG. NO.
			P-55110-03A

明陽電機株式会社
MEIYO ELECTRIC CO., LTD

1st REV. NOV. 14 '08

BILL OF MAT'L

ITEM	REQ.		MAT'L	DESCRIPTION
	WORKING	SPARE		



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TITLE		CUSTOMER		S. NO.	
CCM SYSTEM FOR FWD SEAL (MKII)		SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.		H1009/10/11/12/31/32	
MAT'L		DRAWN	A.MAEYAMA	DATE	MAY 30'08
MASS		CHECKED		REFERENCE	
SCALE		APPROVED		DWG. NO.	Z-A1-24400

Wärtsilä Japan Ltd.

WARTSILA

Japan Marine Technologies

DATE MAY 30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR-500L-7390-1/7

TITLE

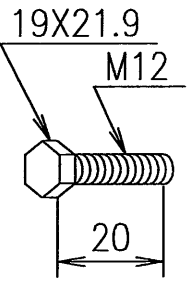
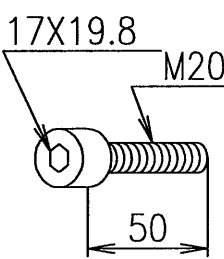
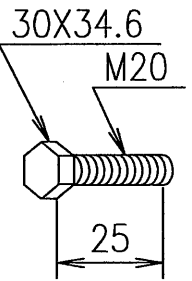
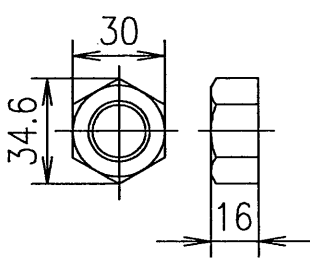
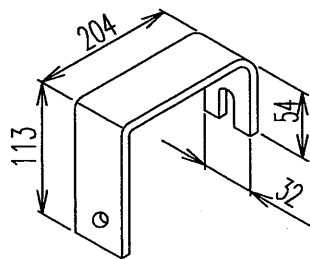
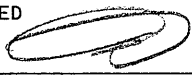
TOOL LIST FOR STERN TUBE SEAL STAND-BY SEAL 4BL

SHIP No.

H1009/10/11
H1012/31/32

要具表 船尾管シール装置 スタンバイシール4BL #500

BOX No.

No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS
				WORKING	SPARE	No.	PART No.	
1	HEX.HEAD BOLT 六角ボルト		MILD STEEL SS400	8		4BLR A500 R0076 a	29	
2	HEX.SOCKET HEAD BOLT 六角穴付きボルト		Cr-Mo STEEL SCM435	2		4BLR A500 R0076 a	31	
3	HEX.HEAD BOLT 六角ボルト		STAINLESS STEEL SUS316	2		4BLR A500 R0076 a	32	THESE BOLTS SHOULD BE INSTALLED ON THE FLANGE CASING, AFTER TAKING ITEM 31/76 OFF. フランジケーシング 部番31/76取付用 クランプ穴 保護ボルト
4	HEX. NUT 六角ナット		MILD STEEL SS400	12		4BLR A500 R0076 a	43	M20
5	STRAP FASTENER ライナー固定片		MILD STEEL SS400	4		4BLR A500 R0076 a	75	
MFR' S NAME & ADDRESS		DRAWN	CHECKED		APPROVED			
		A.MAEYAMA						



Wärtsilä Japan Ltd.

 1st
REV
Nov. 18'08
REV
24

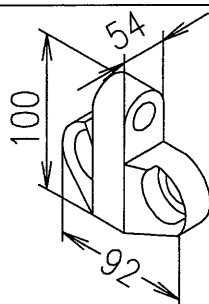

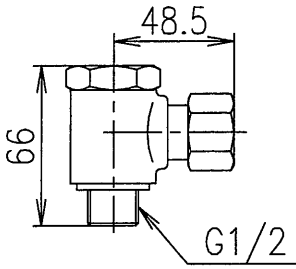

A

C

DATE MAY.30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR- 500L- 7390 -2/7

TITLE TOOL LIST FOR STERN TUBE SEAL STAND-BY SEAL 4BL						SHIP No.		H1009 /10/11 H1012 /31/32	
要具表 船尾管シール装置 スタンバイシール4BL #500						BOX No.			
No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS	
				WORKING	SPARE	No.	PART No.		
1	LIFTING PLATE 吊り金具		FORGED STEEL SF390	1		4BLR A500 R0076 α	76		
2	 STUD ELBOW スタッデルボ		CARBON STEEL S25C	8			—	KMB15-040E	
3									
4									
5									
MFR' S NAME & ADDRESS		DRAWN A.MAEYAMA		CHECKED TSUJIHASHI		APPROVED			
		 Wärtsilä Japan Ltd.							

DATE MAY 30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR- 500L- 7390 -3/7

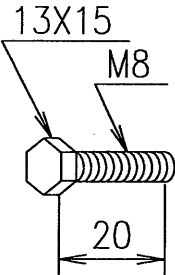
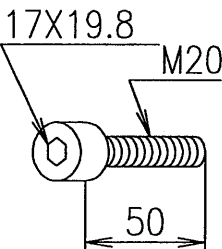
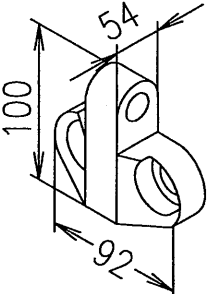
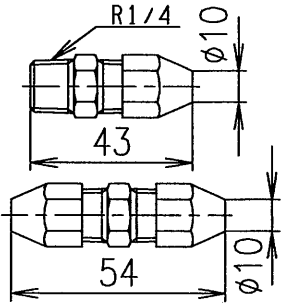
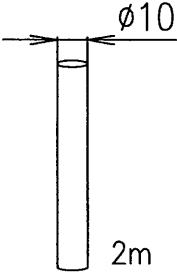
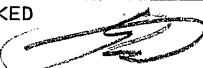

TITLE TOOL LIST FOR STERN TUBE SEAL STERNGUARD MKII

SHIP No.

H1009/10/11
H1012/31/32

要具表 船尾管シール装置 スタンガードMKII #500

BOX No.

No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS
				WORKING	SPARE	No.	PART No.	
1	HEX.HEAD BOLT 六角ボルト		MILD STEEL SS400	4		MKIIR F500 R0121 α	23	
2	HEX.SOCKET HEAD BOLT 六角穴付きボルト		Cr-Mo STEEL SCM435	4		MKIIR F500 R0121 α	25	
3	LIFTING PLATE 吊り金具		FORGED STEEL SF390	2		MKIIR F500 R0121 α	75	
4	RING JOINT リングジョイント		BRASS 黄銅	1 +	1	MKIIR F500 R0121 α	—	FOR DRAIN HOLE ON SEAL COVER
5	Cu PIPE 銅パイプ		COPPER 銅	1		MKIIR F500 R0121 α	—	FOR DRAIN HOLE ON SEAL COVER
MFR' S NAME & ADDRESS		DRAWN A.MAEYAMA	CHECKED 	APPROVED				
 Wärtsilä Japan Ltd.								

DATE MAY 30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR-500L-7390-4/7

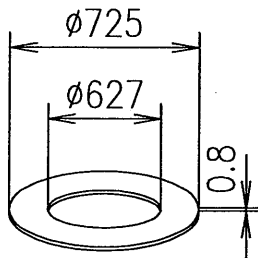
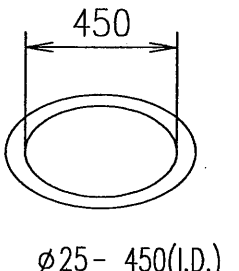
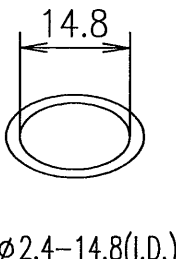
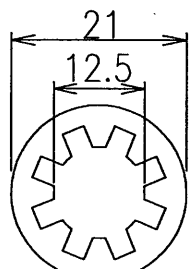
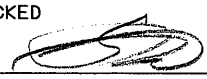

TITLE SPARE PARTS LIST FOR
STERN TUBE SEAL STAND-BY SEAL 4BL

SHIP No.

H1009/10/11
H1012/31/32

予備品表 船尾管シール装置 スタンバイシール4BL #500

BOX No.

No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS
				WORKING	SPARE	No.	PART No.	
1	SHEET PACKING シートパッキン		NON ASBESTOS ノンアスベスト	1	1	4BLR A500 R0076 α	46	
2	"O"-RING "O"-リング		NBR ニトリルゴム	1	1	4BLR A500 R0076 α	49	
3	"O"-RING "O"-リング		NBR ニトリルゴム	6	6	4BLR A500 R0076 α	50	
4	TOOTHED LOCK WASHER 歯付座金		STAINLESS STEEL SUS304	20	20	4BLR A500 R0076 α	59	FOR M12
5								
MFR' S NAME & ADDRESS		DRAWN A.MAEYAMA	CHECKED 			APPROVED		
		 Wärtsilä Japan Ltd.						

DATE MAY 30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR- 500L- 7390 -5/7

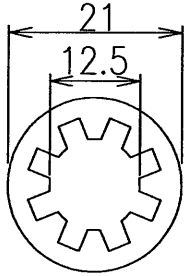
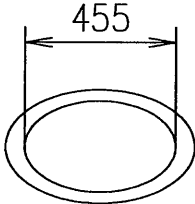
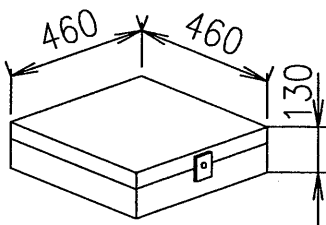


TITLE SPARE PARTS LIST FOR
STERN TUBE SEAL STERNGUARD MKII

SHIP No.

H1009/10/11
H1012/31/32

予備品表 船尾管シール装置 スタンガードMKII #500

BOX No.

No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS
				WORKING	SPARE	No.	PART No.	
1	TOOTHED LOCK WASHER 歯付座金		STAINLESS STEEL SUS304	10	10	MKIIR F500 R0121 α	48	FOR M12
2	"O"-RING "O"-リング	 ø8.4 - 455 ID	NBR ニトリルゴム	1	1	MKIIR F500 R0121 α	66	
3								
4	SPARE PARTS & TOOL BOX 予備品・要具箱		STEEL 鋼	1				WEIGHT 7.1kg
5								
MFR' S NAME & ADDRESS		DRAWN A.MAEYAMA	CHECKED 	APPROVED				
		 Wärtsilä Japan Ltd.						

DATE MAY 30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR-500L-7390-6/7

TITLE SPECIAL TOOLS FOR
IN WATER SURVEY OF STERN TUBE SEAL

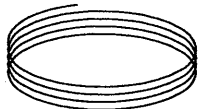
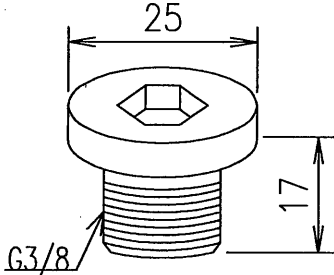
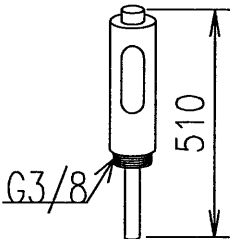
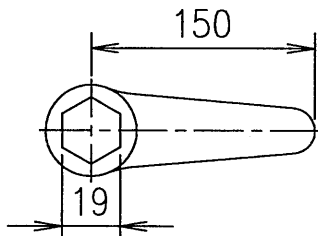
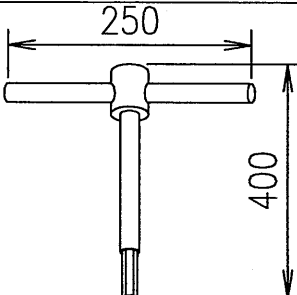
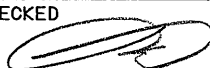

SHIP No.

H1009/10/11
H1012/31/32

水中検査用の特別要具表

船尾管シール

BOX No.

No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS
				WORKING	SPARE	No.	PART No.	
1	LOCKING WIRE 廻り止めワイヤー	 ø1.5-1m	STAINLESS STEEL SUS304	USE ITEM 56	1	4BLR A500 R0076 α	57	
2	PLUG プラグ	 25 17 G3/8	STAINLESS STEEL SUS316	2	2	4BLR A500 R0076 α	72	WITH COPPER PACKING (ITEM NO.74)
3	WEAR DOWN GAUGE 摩耗測定ゲージ	 510 G3/8	STAINLESS STEEL SUS304	1		4BLR A500 R0076 α	77	
4	SPANNER FOR WEAR DOWN GAUGE 摩耗測定ゲージ用スパナ	 150 19	MILD STEEL SS400	1		4BLR A500 R0076 α	90	
5	T-TYPE WRENCH T型レンチ	 250 400	MILD STEEL SS400	1		4BLR A500 R0076 α	91	
MFR' S NAME & ADDRESS		DRAWN A.MAEYAMA	CHECKED 		APPROVED			
 Wärtsilä Japan Ltd.								

DATE MAY 30'08

SAM JIN SHIPBUILDING INDUSTRIES CO.,LTD.

DWG No.SSTR- 500L- 7390 -7/7

TITLE SPARE LIST FOR
IN WATER SURVEY OF STERN TUBE SEAL

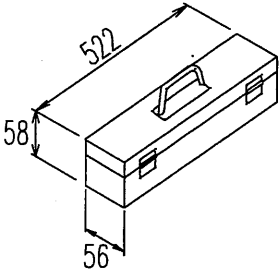
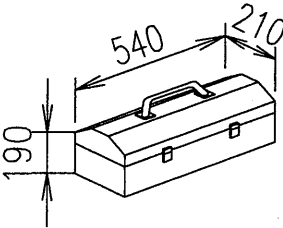


SHIP No.

H1009/10/11
H1012/31/32

水中検査用の特別予備品表

船尾管シール

BOX No.

No.	NAME	SKETCH	MATERIAL	SUPPLY PER 1SET		DRAWING		REMARKS
				WORKING	SPARE	No.	PART No.	
1	WOODEN BOX 格納箱		WOOD 木製	1		4BLR A500 R0076 a	77	
2	STEEL BOX 格納箱		MILD STEEL SS400	1		4BLR A500 R0076 a	92	
3								
4								
5								
MFR' S NAME & ADDRESS			DRAWN A.MAEYAMA	CHECKED 		APPROVED		
 Wärtsilä Japan Ltd.								

Oil piping for collecting the leakage oil from FWD Seal

弊社前部船尾管シール装置に使用しておりますリップシールは、その摺動部において微少油膜を形成しL.O.をシールしております。この油膜状態は、軸の回転速度、差圧、振動、温度等の影響を受けますので、周囲環境により若干の漏れを生じる場合があります。

L.O.の漏れが生じ周囲に飛散する場合は、シール装置下部にある回収穴に付属の銅管と継手を取り付け、適切な場所で回収して下さい。

Lip type seal equipped on our Fwd stern tube seal makes sealing performance by maintaining thinner oil film at its sliding part of lip. Environmental condition, such as shaft revolution, pressure difference on the seal ring, vibration and etc., can make influence on the sealing performance then may cause small amount of L.O. leakage.

In case of L.O. scattering by leakage, collect the leakage L.O. at adequate position by installing copper tube using bite joint on the drain port located at bottom of Fwd seal casing.

