


SURFACE ROUGHNESS ISO 1302 (Rd)		
MICRON	OLD	NEW
50	▽	N12/
25		N11/
12.5		N10/
6.3	▽▽	N9/
3.2		N8/
1.6		N7/
0.8	▽▽▽	N6/
0.4		N5/
0.2		N4/
0.1	▽▽▽▽	N3/
0.05		N2/
0.025		N1/



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INDUSTRIES CO., LTD

图纸 分发			
分发处		分发数	
汉 字	ENGLISH	FW	FC
基本设计	Basic Design Team		
构造设计	Hull Structure Design Team	1	1
船体设计	Hull Design Team		
船装设计	Hull Outfitting Design	1	1
船室设计	Accommodation Design		
机装设计(详细)	Machinery Design(Detail)	1	1
机装设计(生产)	Machinery Design(Production)		
电装设计	Electrical Design		
先行舾装	Preoutfitting Division		2
机械舾装	Machinery Outfitting		2
船室生产	Accommodation Production		
试航部	Trial Cruise Division		
管件资材采购	Pipe M. Procurement Team		
舾装品质管理	Outfitting Quality MGT.Team		2
搭载运营	Erection Operation Team		
电装team	Electrical Outfitting Team		
品质物流(镇海)	Logistics Team (Jinhae)		
机装设计(轴舵)	Machinery Design(S&R)	1	1
合 计 (Total)		4	10
<input type="checkbox"/>	For Working		
<input type="checkbox"/>	For Construction		
<input checked="" type="checkbox"/>	For Revision		

HULL NO. 1009~1012, 1031~1032		PROJECT TPC KOREA 33,5K DWT LOG / BULK CARRIER	
APPD BY M. Y. Park		TITLE RUDDER CARRIER	
CHKD BY J. S. Lee			
DWN BY J. H. Park (Ext. : 0133)		TEL +86) 0631-538-0204	TOTAL 13 SHEET(S) WITH COVER
 Samjin Shipbuilding Industries Co.,Ltd.		DEPT MACHINERY OUTFITTING DESIGN TEAM	DWG NO. DA312D002
			SCALE EACH
		DATE SEPT. 18. 2008	REV. NO. 6

		PLAN HISTORY		HULL NO.	1009~1012 1031~1032	2
				DWG. NO.	DA312D002	13
REV. NO.	DATE	DESCRIPTION	DWG	CHKD	APPD	
A	2008.09.18	SUBMITTED TO OWNER AND CLASS FOR APPROVAL.	J.H PARK			
	2008.10.07	BECAUSE WE DELIVERED THE WRONG DRAWING TO CLASS. SO WE NEED TO DELIVER AGAIN.	J.H PARK			
	2008.10.10.	APPROVED BY OWNER WITHOUT COMMENT.	J.H PARK			
	2008.11.03.	APPROVED BY CLASS WITHOUT COMMENT.	J.H PARK			
0	2008.11.08.	ISSUED FOR CONSTRUCTION.	J.H PARK			
1	2008.12.27.	CHANGED TO LOCATION OF DISK BEARING CUTTING PLANE ON 9/13 PAGE.	J.H PARK			
		ISSUED FOR REVISION.	J.H PARK			
2	2009.01.02.	ACCORDING TO THE O-RING STANDARD SIZE CHANGED TO THE O-RING SIZE Ø5.0 TO Ø8.4 ON 4 & 12 PAGE..	J.H PARK			
		ISSUED FOR REVISION.	J.H PARK			
3	2009.01.08.	a) CHANGED FOR OUT-DIA DIMENSION OF DUST COVER Ø1070 TO Ø1350 ON 13/13 PAGE.	J.H PARK			
		b) CHANGED FOR IN-DIA DIMENSION OF DUST COVER Ø1140 TO Ø870 ON 13/13 PAGE.	J.H PARK			
		ISSUED FOR REVISION.	J.H PARK			
4	2009.01.12.	a) CHANGED FOR DESCRIPTION MARK OF DUST COVER (28), (29) TO (26), (27) ON 13/13 PAGE.	J.H PARK			
		b) CHANGED FOR TAP QUANTITY OF SPLIT BEARING RING 18EA TO 12EA ON 8&13/13 PAGE.	J.H PARK			
		ISSUED FOR REVISION.	J.H PARK			
5	2009.03.17.	a) CHANGED FOR SUPPLIED COMPANY OF (20) ITEM MAKER TO SHIPYARD ON 4/13 PAGE.	J.H PARK			
		b) CHANGED FOR SIZE OF (19) ITEM PT 1/4 TO PT 3/8 AND MATERIAL 'COPPER' TO 'BS' ON 4,7/13 PAGE.	J.H PARK			
		c) CHANGED FOR OUTDIAMETER OF (6) ITEM 660 TO 480 ON 5/13 PAGE.	J.H PARK			
		d) CHANGED FOR ANGLE OF (13) ITEM 60° TO 90° ON 9/13 PAGE.	J.H PARK			
		ISSUED FOR REVISION.	J.H PARK			
6	2009.03.23.	a) CHANGED FOR OUTDIAMETER OF ITEM (5) 720 TO 530 ON 10/13 PAGE.	J.H PARK			
	2009.04.27.	b) CHANGED FOR LEFT/RIGHT TYPE OF ITEM (7) ON 4, 5/13 PAGE.	J.H PARK			
	2009.05.23.	c) CHANGED FOR INDIAMETER OF ITEM (1) 1000 TO 1010 ON 7/13 PAGE.	J.H PARK			
		d) CHANGED FOR ROUND EDGE OF ITEM (1) R10 TO C3 ON 7/13 PAGE.	J.H PARK			
	2009.06.09.	e) CHANGED FOR OUT-DIA DIMENSION OF DUST COVER Ø1350 TO Ø1060 ON 13/13 PAGE.	J.H PARK			
		f) CHANGED FOR SPLIT DIMENSION OF DUST COVER Ø1200 TO Ø935 ON 13/13 PAGE.	J.H PARK			
		g) ACCORDING TO CLASS RULE, MODIFIED MECHANICAL PROPERTIES & CHEMICAL COMPOSITION ON 3/13 PAGE.	J.H PARK			





RUDDER CARRIER

HULL NO. 1009~1012
1031~1032
DWG. NO. DA312D002

3
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GENERAL NOTE

1. CLASSIFICATION (船级社) : KR
2. THE CASTING TO BE SUBJECT TO THE CLASSIFICATION REQUIREMENTS.
(铸件要遵守船级社要求.)
3. REAMER BOLTS ARE TO BE FITTED WITH DRY ICE. (FREEZE-FIT)
(绞刀螺栓用干冰安装. (冷冻安装))
4. ULTRASONIC OR OTHER N.D.T. INSPECTION AS REQUIRED TO BE CARRIED OUT BY MANUFACTURER IN THE PRESENCE OF CLASS AND SHIPOWNER SURVEYOR.
(超声检查和无损探伤测试将由制造商进行并由船级社检验员和船东代表参加.)
5. DIMENSIONS CHECK AND INSPECTION AT THE MANUFACTURER'S SHOP TO BE CARRIED OUT IN THE PRESENCE OF THE SHIPOWNER REPRESENTATIVE TOGETHER WITH THE CLASS SURVEYOR.
(尺寸测试和检查由船级社检验员和船东代表参加在制造商的工作车间进行.)
6. THE FOLLOWING DOCUMENTS TO BE SUBMITTED TO SHIPYARD BY MANUFACTURER.
(以下资料由制造商提供给船厂.)
A) DIMENSION CHECK SHEETS (尺寸核查表.)
B) INSPECTION REPORTS, INCLUDING N. D. T. (检查报告, 包括无损探伤测试.)
C) CERTIFICATES (证书)
7. MANUFACTURING TOLERANCE OF THE CASTING TO BE APPLIED TO DIN 7168, MEDIUM DEGREE. (铸件的制造公差应用7168度, 中度.)
8.  MARKS ARE SHOWN REAMER BOLT. ( 表示绞刀螺栓.)

9. STEEL CASTING (钢铸件)

1) CHEMICAL COMPOSITION (化学成分)

CARBON	SILICON	MANGANESE	SULPHUR	PHOSPHORUS	RESIDUAL ELEMENTS
MAX. 0.23%	MAX. 0.6%	0.5 - 1.6%	MAX. 0.035%	MAX. 0.04%	MAX. 0.80%

2) MECHANICAL PROPERTIES (机械性质)

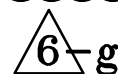
T. S. (N/mm ²)	Y. S. (N/mm ²)	EL. (%)	R. A. (%)	IMPACT (J) (AT ROOM TEMP.)
MIN. 410.0 N/mm ² (41.8 KG/mm ²)	MIN. 235.0 N/mm ² (24.0 KG/mm ²)	MIN. 24	MIN. 40	MIN. 27

* TESTING AT +20°C MAY BE ACCEPTED SUBJECT TO COMPLIANCE WITH A SPECIFIED MINIMUM AVERAGE ENERGY OF 45 J FOR ALL GRADES.

(所有等级遵守规定的最小平均热量45J, 测试温度增加20 可以承受.)

10. REFERENCE DWG. (参考图纸)

- A) RUDDER CONSTRUCTION
- B) RUDDER PINTLE & RUDDER STOCK
- C) STERN FRAME & RUDDER HORN CONSTRUCTION



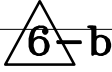

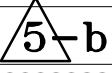
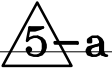
RUDDER CARRIER

HULL NO.	1009~1012 1031~1032
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DWG. NO.	DA312D002
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MARK	DESCRIPTION	MATERIAL	Q'TY	WEIGHT (Kg)	REMARK
* 1	CARRIER HOUSING	CAST STEEL	1ST	1146.1	C max ≤ 0.23%
* 2	SPLIT BEARING RING	CAST STEEL	1ST	410.1	
** 3	DISK BEARING	SYNTHETIC	1ST	18.9	THORDON XL OR EQUIVALENT
** 4	BUSH BEARING	SYNTHETIC	1ST	12.5	THORDON XL OR EQUIVALENT
5	PACKING GLAND	BRONZE CAST BC3	1ST	20.3	
6	PACKING	GREASED FLAX	1ST	-	
7	SIDE STOPPER	MILD STEEL SS400	6ST	109.3	LEFT/RIGHT TYPE EACH 3 SET
8	REAMER BOLT & DOUBLE NUT	FORGED STEEL SF440	4ST	23.2	ø50/M48*3
9	REAMER BOLT & DOUBLE NUT	FORGED STEEL SF440	4ST	6.6	ø32/M30*3
10	STUD BOLT & DOUBLE NUT	FORGED STEEL SF440	12ST	37.7	M42*3
11	STUD BOLT & DOUBLE NUT	BRASS	8ST	3.5	M20
12	HEX. HD. BOLT & DOUBLE NUT	BRASS	2ST	0.9	M20
13	COUNTER SUNK BOLT	BRASS	26EA	6.5	M20*50L*30S
14	LIFTING EYE	MILD STEEL SS400	4EA	1.4	ø19 R. B.
15	DOUBLE TONGUED WASHER	MILD STEEL SS400	12EA	1.0	M42
16	SEAT FOR RUDDER CARRIER	MILD STEEL SS400	1EA	271.0	
17	□ RING	NEOPRENE	1EA	-	ø1170*ø8.4
18	□ RING 	NEOPRENE	1EA	-	ø871*ø8.4
19	GREASE CONNECTOR (PT 3/8)	BS	10EA	-	
20	COPPER PIPE (ø8)	COPPER	50M	-	YARD SUPPLY
21	WEAR DOWN GUAGE	MILD STEEL SS400	1EA	0.1	
22	RACK FOR WEAR DOWN GUAGE	MILD STEEL SS400	1EA	0.3	
23	DUST COVER	MILD STEEL SS400	1EA	5.5	
24	HEX. HD. BOLT	CARBON STEEL S25C	12ST	-	M6*15L
25	WASHER	MILD STEEL SS400	12EA	-	M6
26	INSPECTION HOLE COVER	MILD STEEL SS400	4EA	-	
27	BOLT & NUT	CARBON STEEL S25C	8ST	-	
28	KEY FOR RUDDER CARRIER	FORGED STEEL	1EA	3.0	
29	AIR PLUG (HEX. BOLT=25L)	SS400	1EA	3.0	M20X2.5P
30	JACK BOLT (HEX. BOLT=125Lx125S)	S45C	6EA	12.0	M24X3P

NECESSARY MATERIAL CERTIFICATIONS

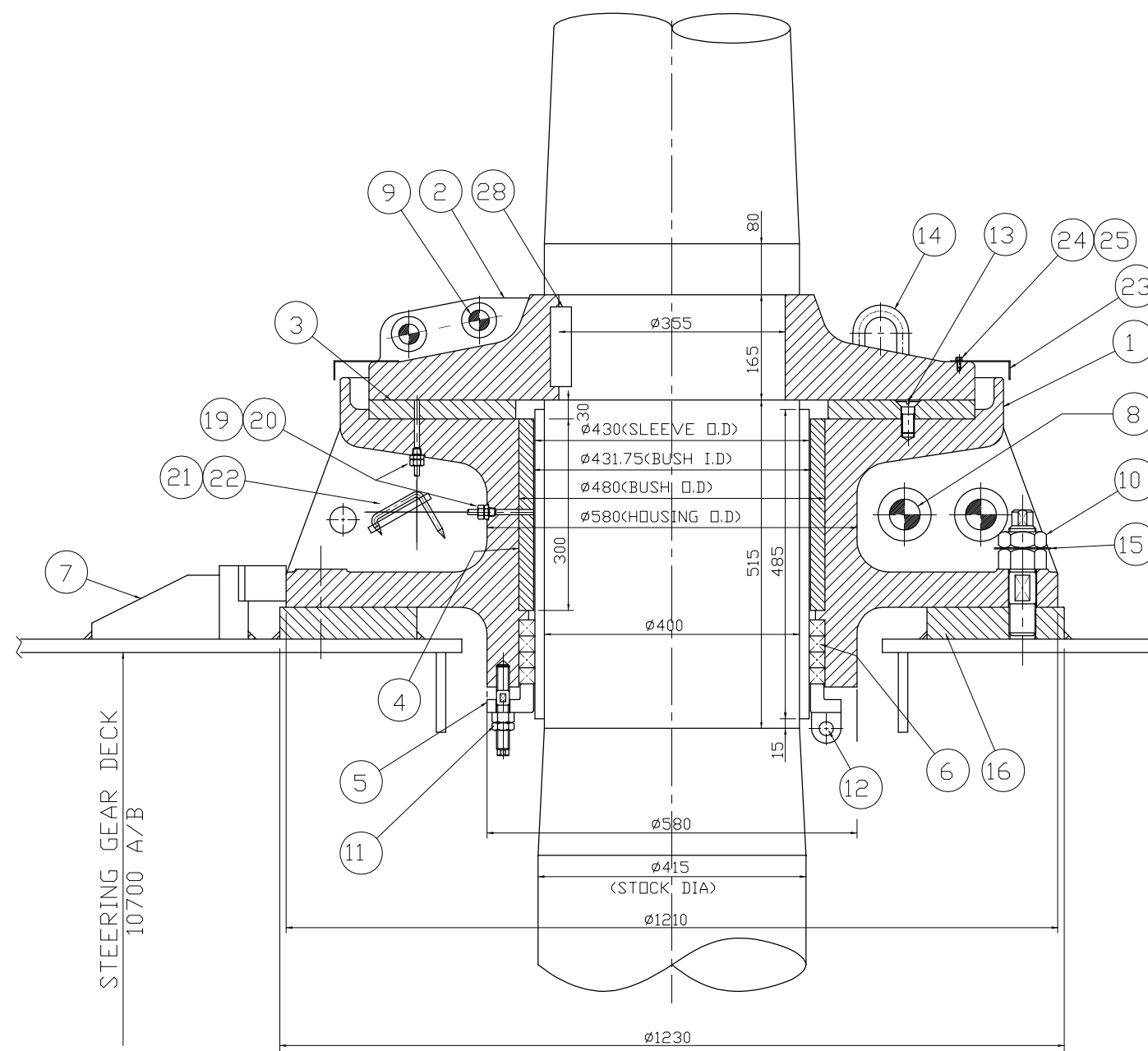
TOTAL WEIGHT	3648.2
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* MARK : CLASS MATERIAL CERTIFICATE SHALL BE SUBMITTED.

** MARK : TYPE APPROVAL CERTIFICATE SHALL BE SUBMITTED.

RUDDER CARRIER ASSEMBLY

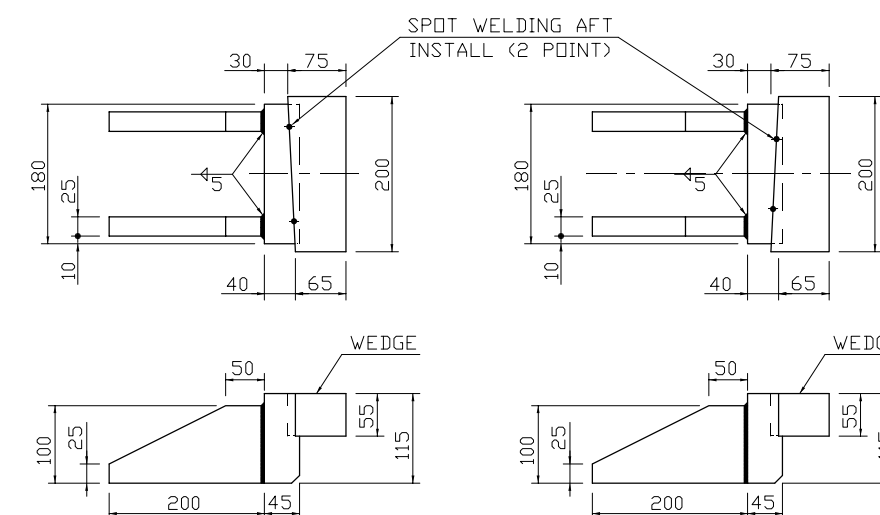
S:1/10


6-b
7 SIDE STOPPER

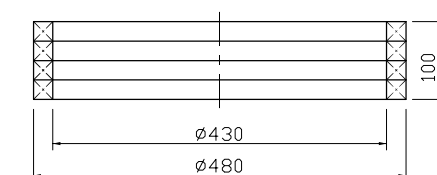
S:1/10

INSERTED TO RIGHT SIDE

INSERTED TO LEFT SIDE


6 PACKING

S:1/10

5-c


NOTES

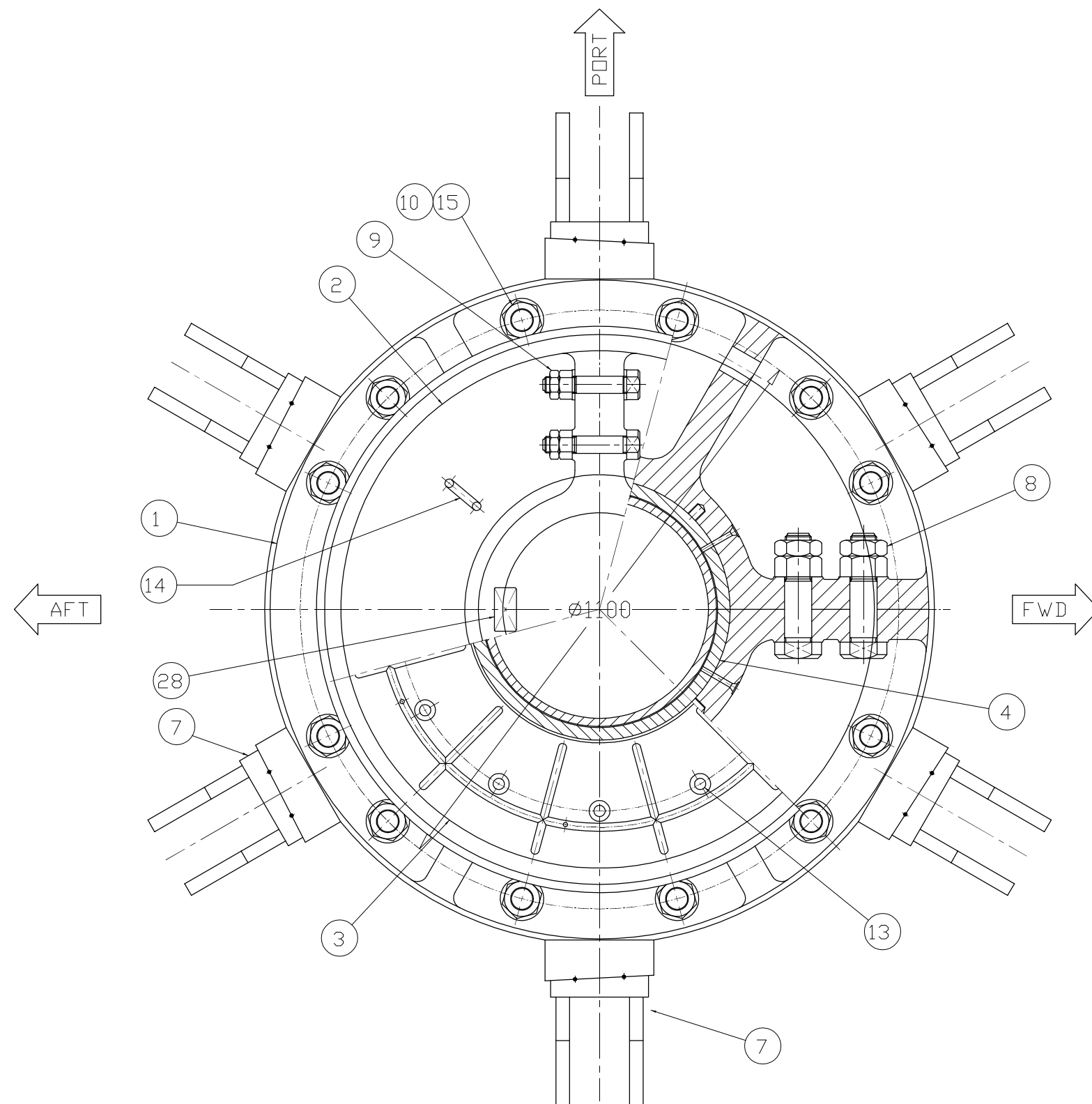
- 1.EACH BONDED JOINT TO BE PLACED AT DIFFERENT POSITION.
(每个粘接结合面要放置在不同的位置.)
- 2.FLAX PACKING TO BE GREASED BEFORE INSTALLATION.
(亚麻填充物在安装前要涂润滑油.)

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SCALE	1/10	



RUDDER CARRIER ASSEMBLY

S:1/10



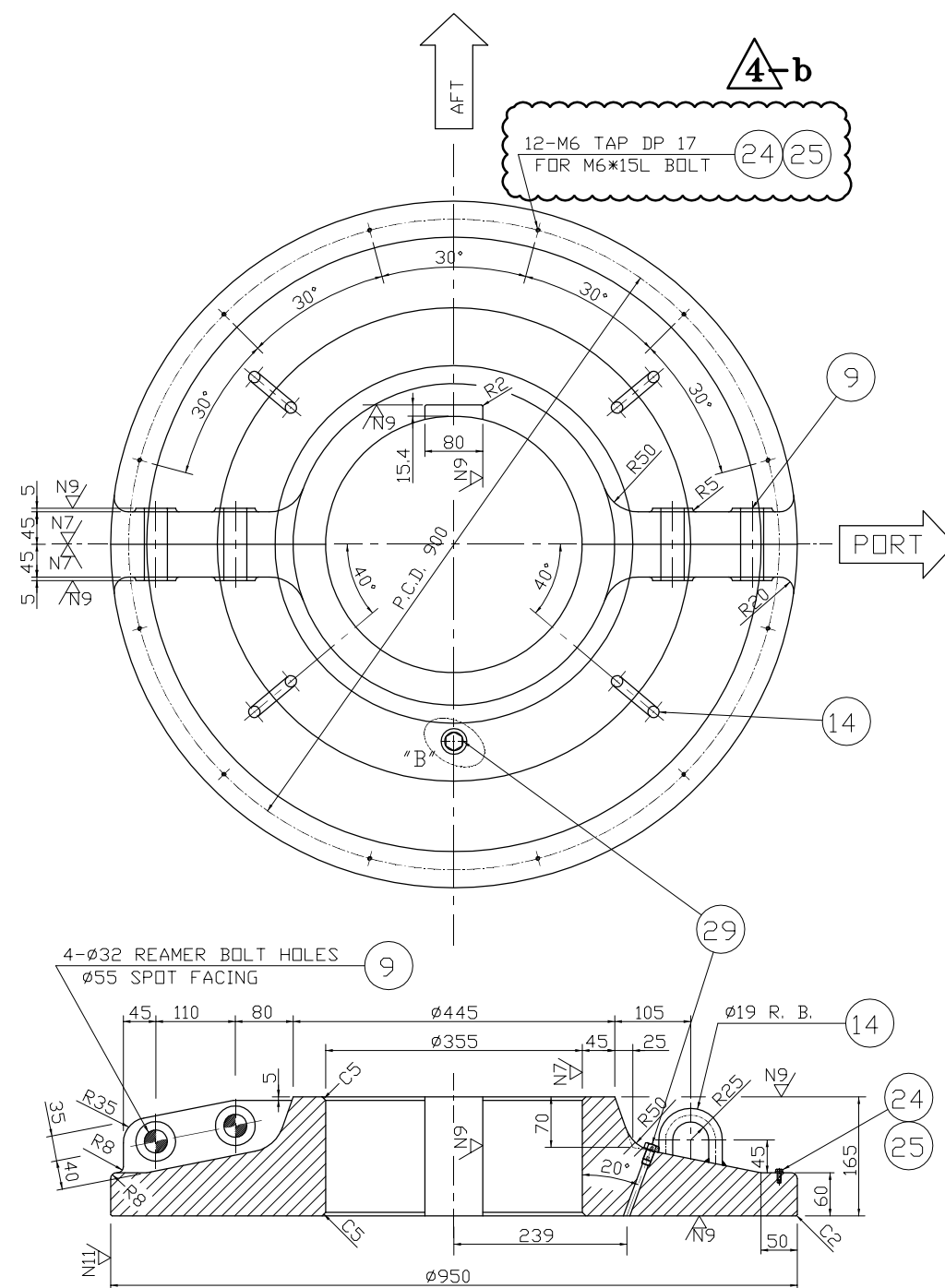
HULL NO.	1009~1012 1031~1032
DWG. NO.	DA312D002
SCALE	1/10

RUDDER CARRIER

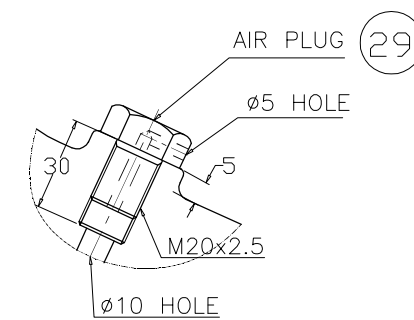
② SPLIT BEARING RING

(∇ , ∇ , ∇ , ∇)

S:1/10



DETAIL-"B"



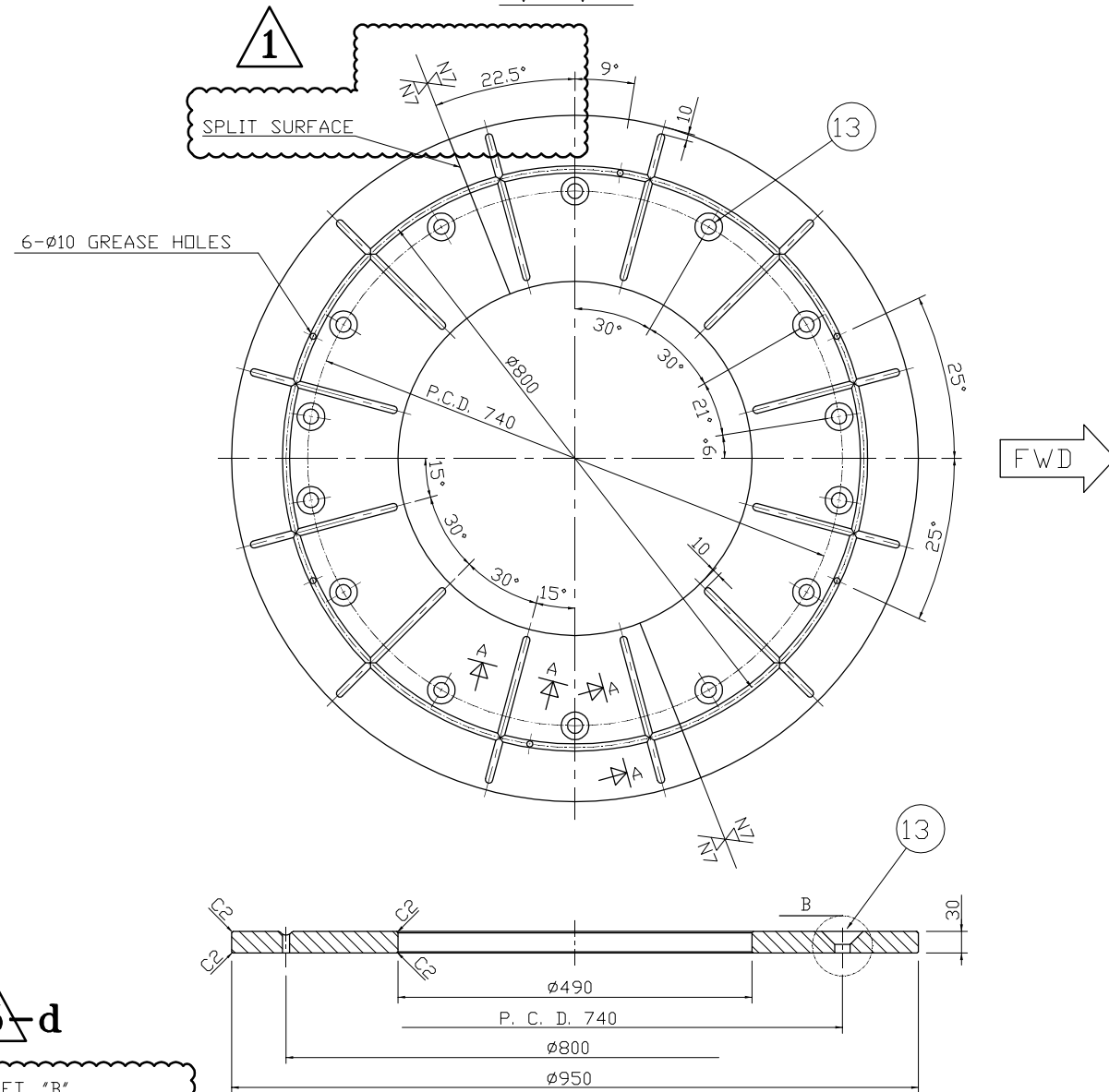
HULL NO.	1009~1012 1031~1032
DWG. NO.	DA312D002
SCALE	1/10

RUDDER CARRIER

3 DISK BEARING

$$\frac{N9}{\nabla} < \frac{N7}{\nabla}$$

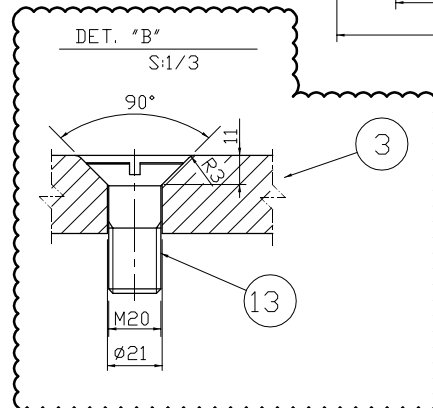
S:1/10



5-d

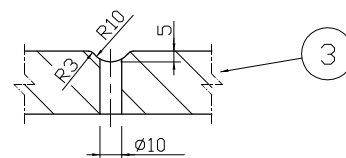
DET. "B"

S:1/3



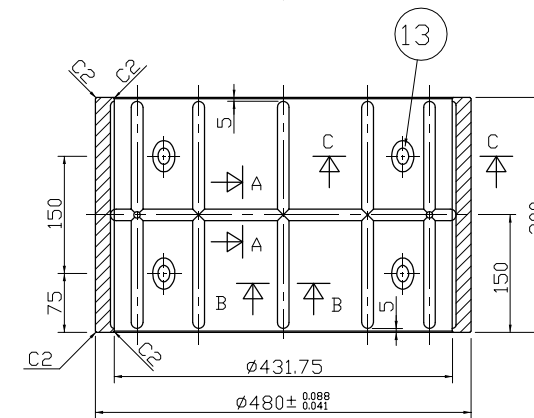
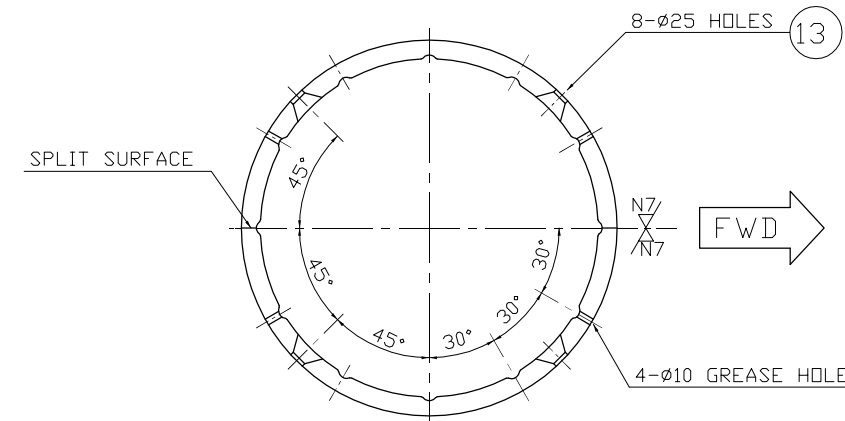
SECTION "A - A"

S:1/3



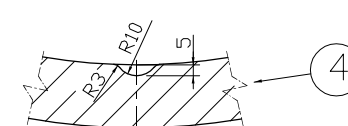
④ BUSH BEARING

S:1/10

$$\frac{N9}{\nabla} \left(\frac{N7}{\nabla} \right)$$


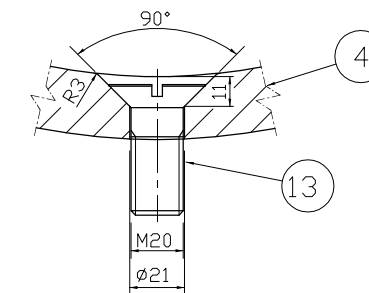
SECTION "B - B"

S:1/3



SECTION "C - C"

S:1/3

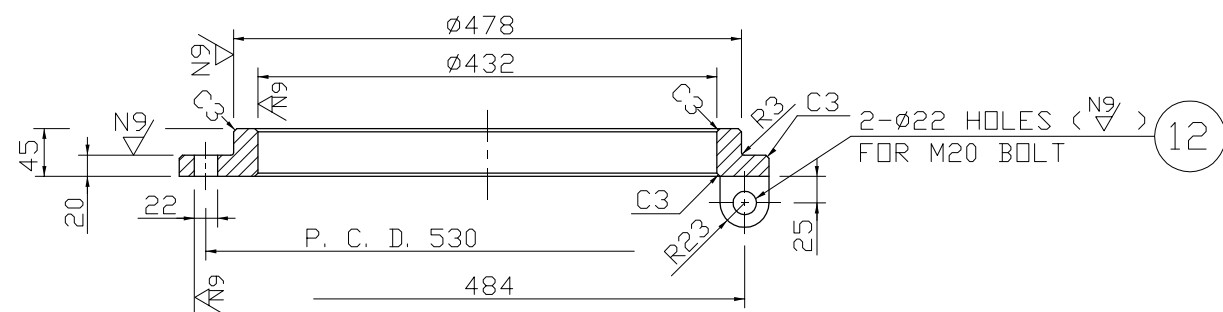
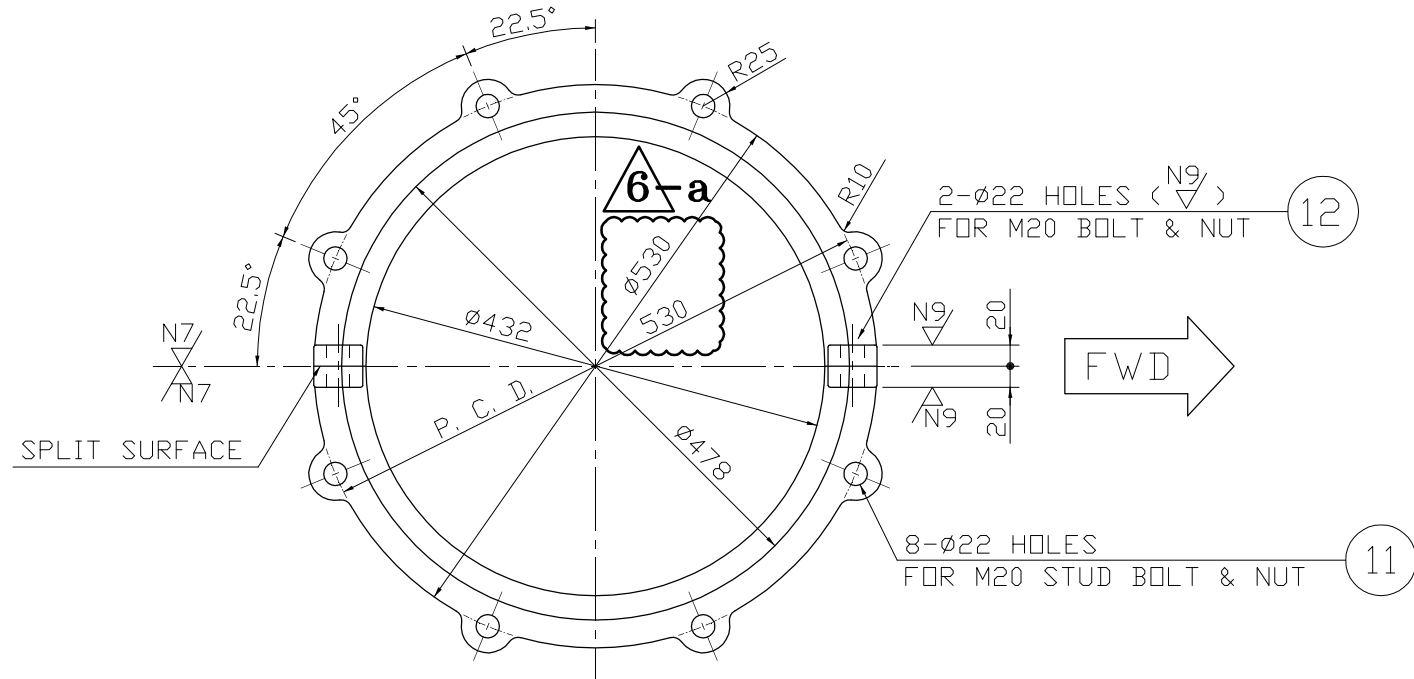


HULL NO.	1009~1012 1031~1032
DWG. NO.	DA312D002
SCALE	1/10

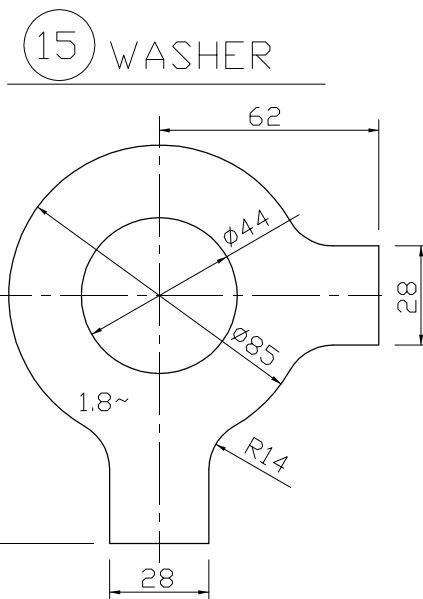
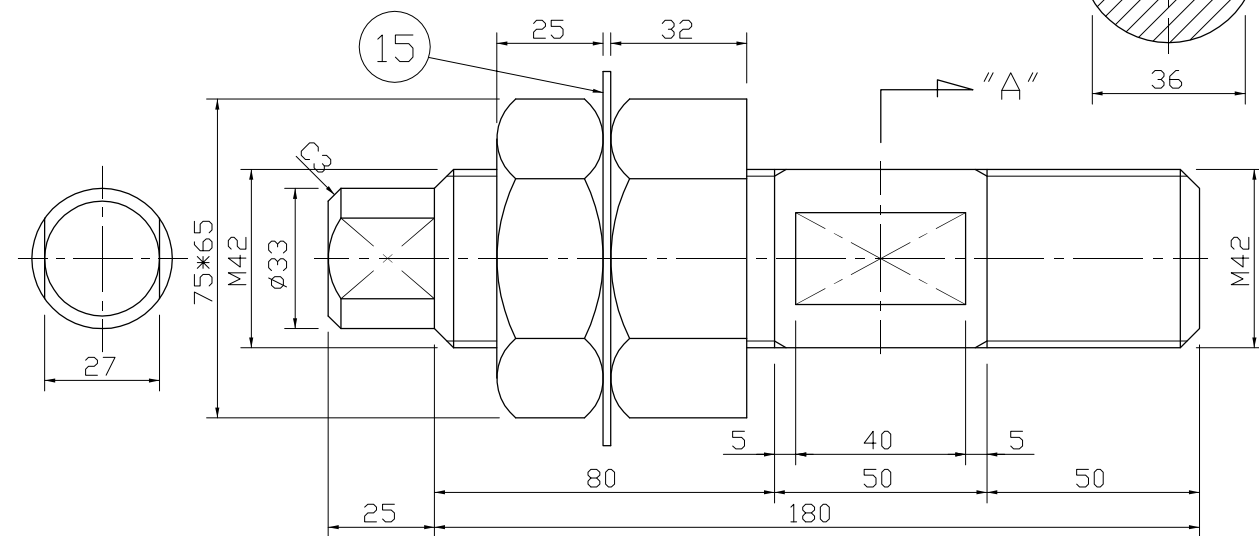
RUDDER CARRIER



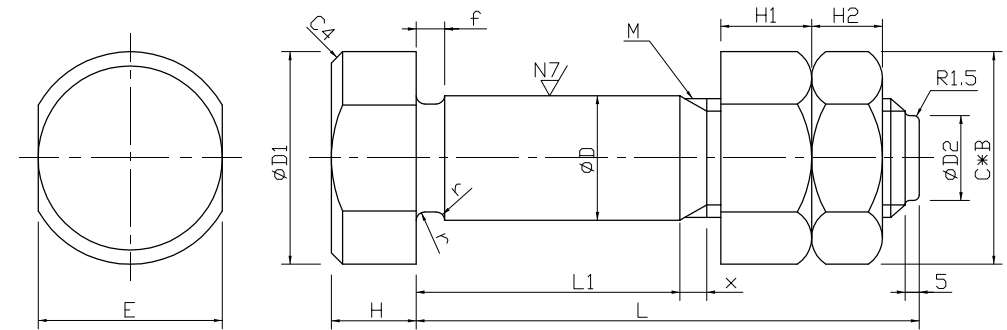
5 PACKING GLAND
N8/N9 S:1/10



10 STUD BOLT & NUT
N9



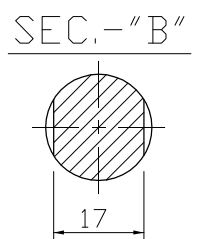
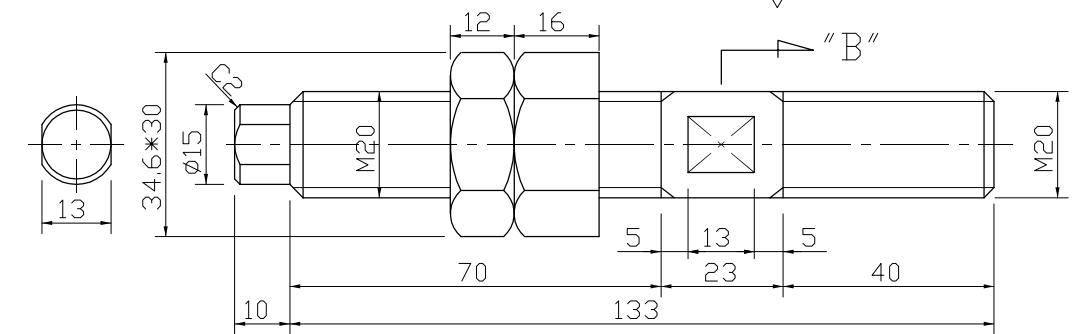
8 9 REAMER BOLT & NUT
N9/N7



* MARKED DIMENSION (D) TO BE FINALLY MACHINED WITH INTERFERENCE 0.00~0.01 AGAINST REAMER HOLE.
(标注的尺寸 (D) 将最后加工并与铰孔有0.00-0.01的干涉.)

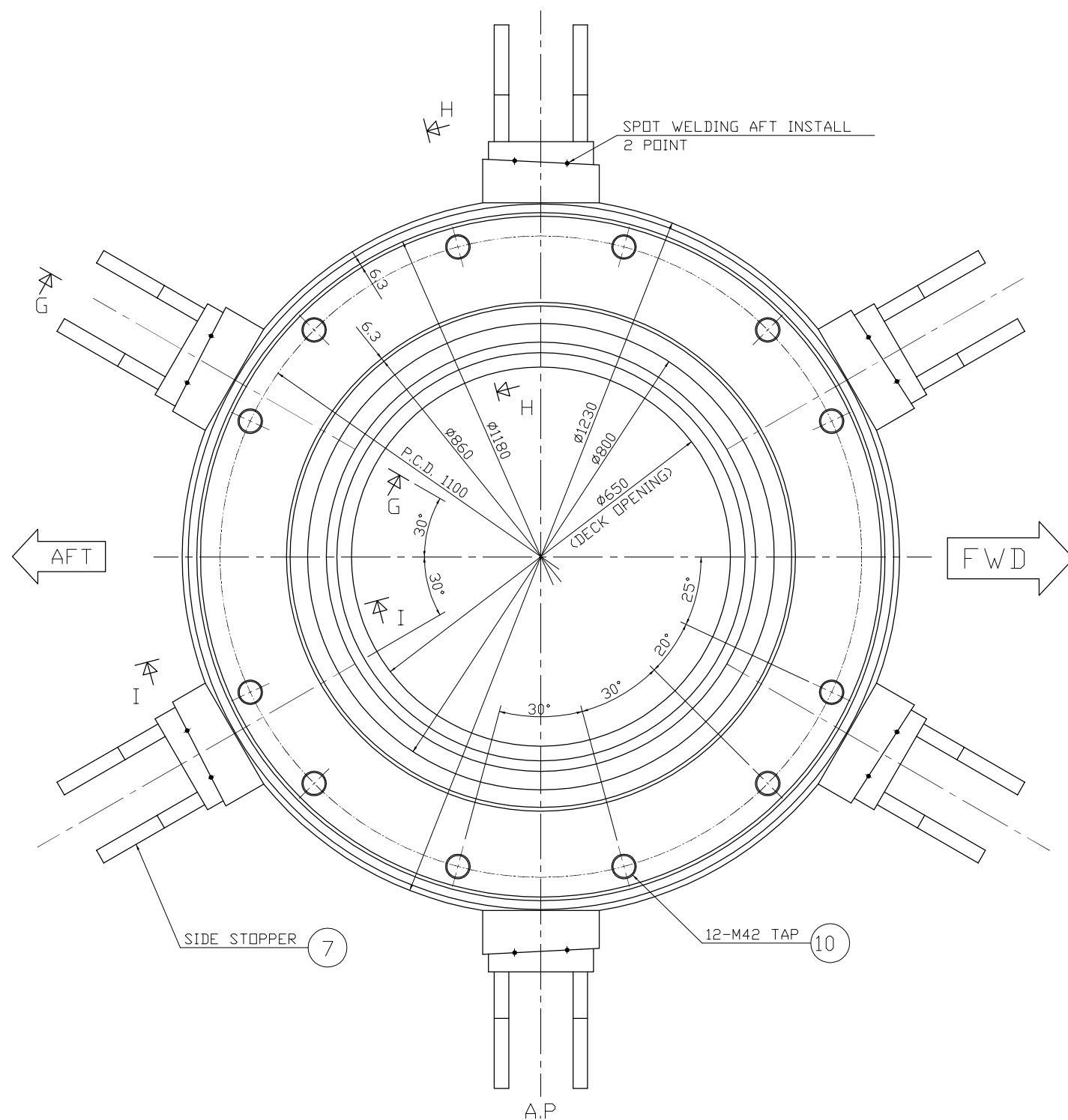
MARK	M	C*B	*D	D1	D2	E	L	L1	H	H1	H2	f	r	x	REMARK
8	M48	86.5*75	50	86	40	75	200	110	30	38	29	8	2.5	5	FOR CARRIER HOUSING
9	M30	53.1*46	32	53	20	46	155	100	19	24	18	6	2	4	FOR SPLIT BEARING RING

11 STUD BOLT & NUT
N9

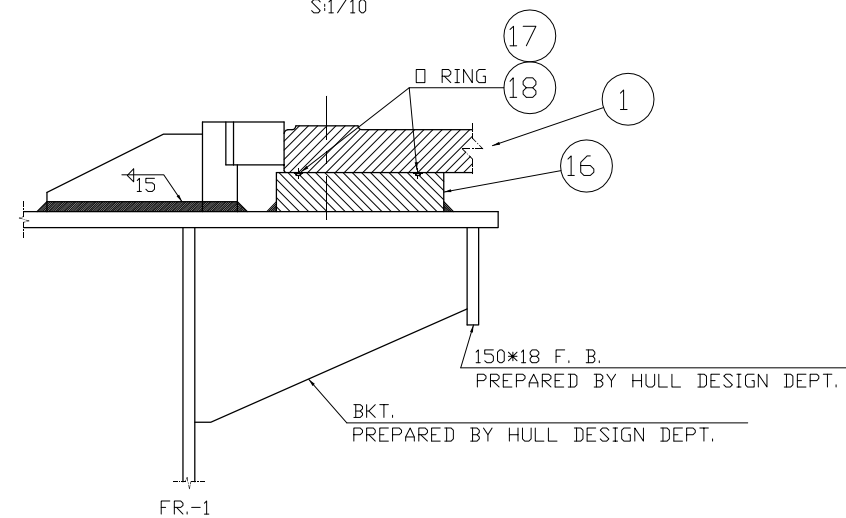


HULL NO.	1009~1012 1031~1032	RUDDER CARRIER
DWG. NO.	DA312D002	
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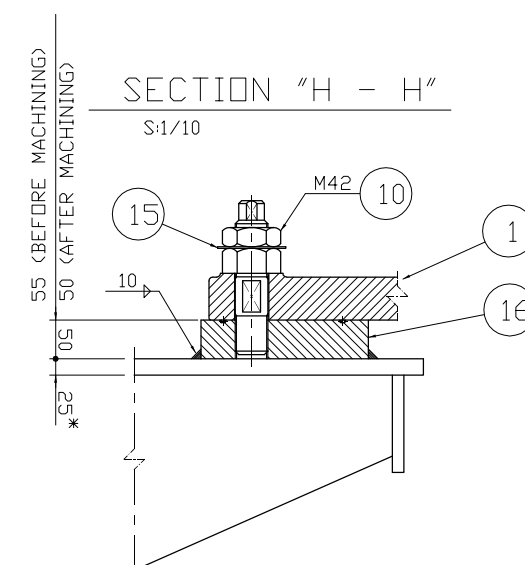
16 SEAT FOR RUDDER CARRIER
S:1/10



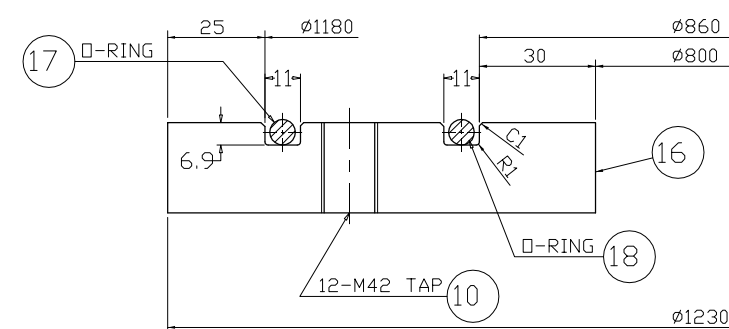
SECTION "G - G"
S:1/10



SECTION "H - H"
S:1/10



SECTION "I - I"
S:1/2

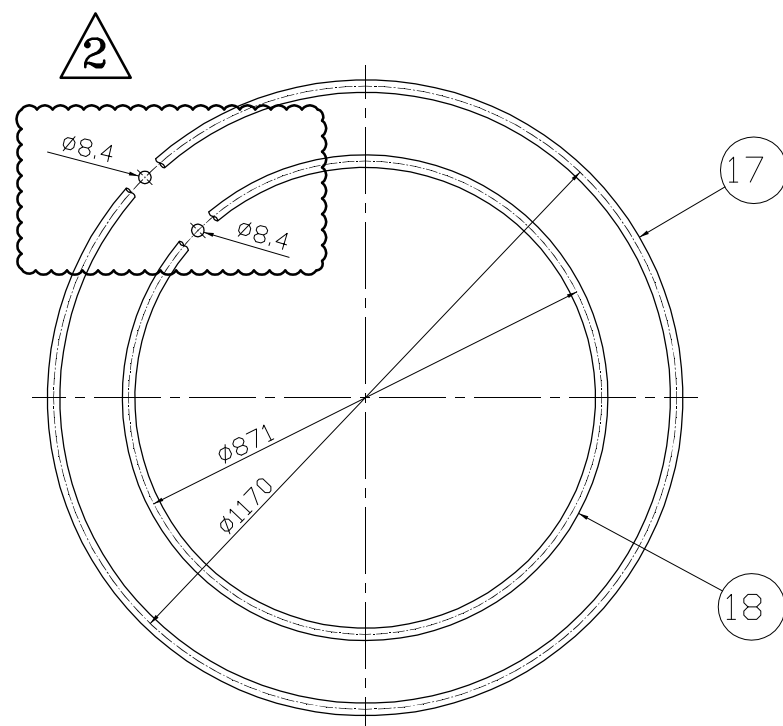


HULL NO.	1009~1012 1031~1032
DWG. NO.	DA312D002
SCALE	1/10

RUDDER CARRIER

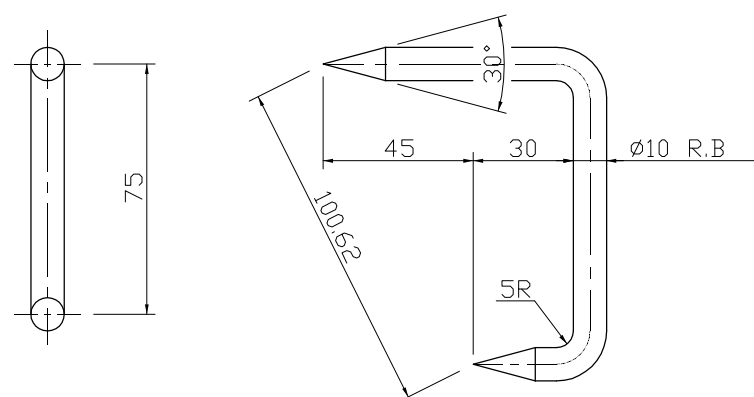
RING

N. T. S.



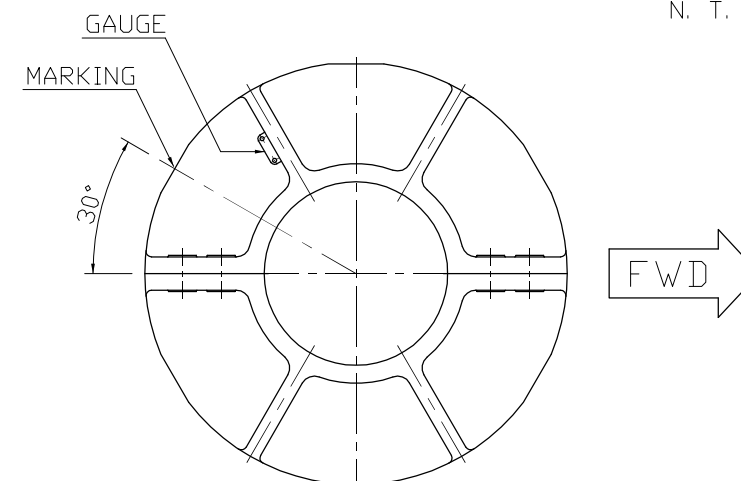
WEAR DOWN GAUGE

S:1/3



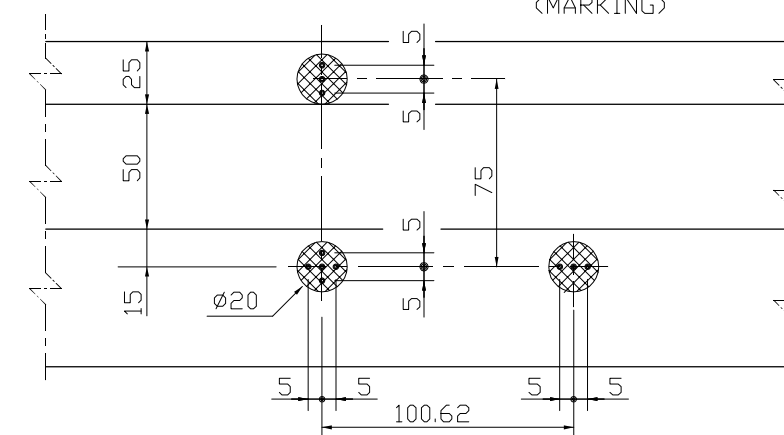
GAUGE AND MARKING POSITION

N. T. S.



K-K VIEW

(MARKING)

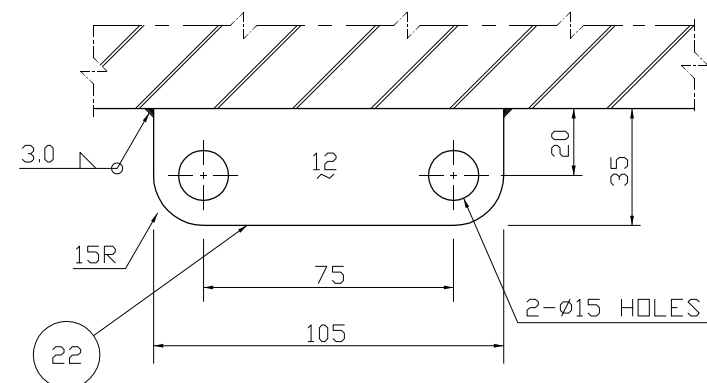


NOTES

- ALL PUNCH MARK TO BE PUNCHED ON THE SPOT.
(所有的打孔标记现场打孔.)
- ORANGE COLOR TO BE APPLIED WITH MARKED PARTS AND GAUGE.
(橙色用于标注零件和线规.)

L-L PLAN

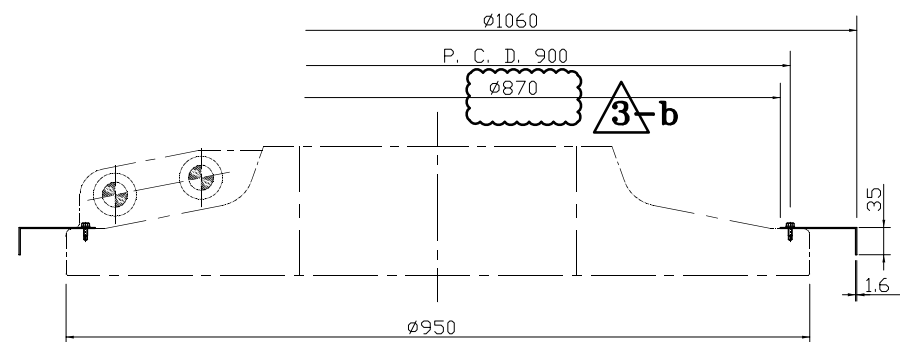
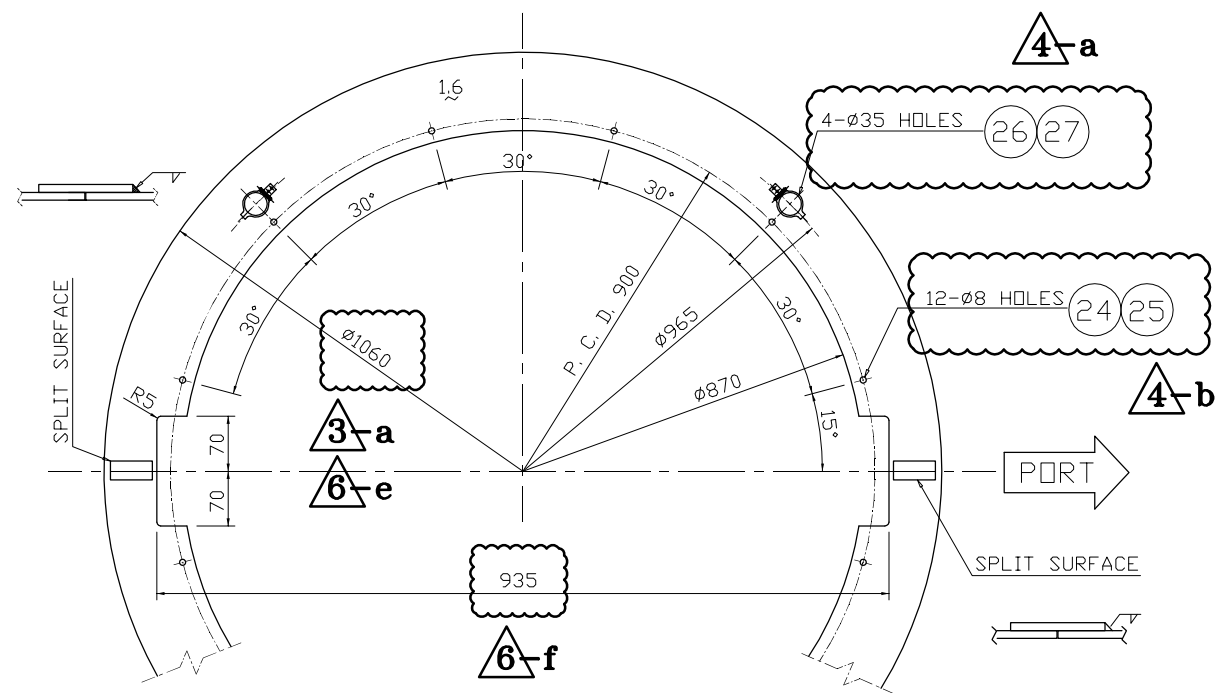
S:1/3



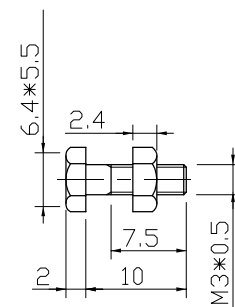
HULL NO.	1009~1012 1031~1032	RUDDER CARRIER
DWG. NO.	DA312D002	
SCALE	1/10	



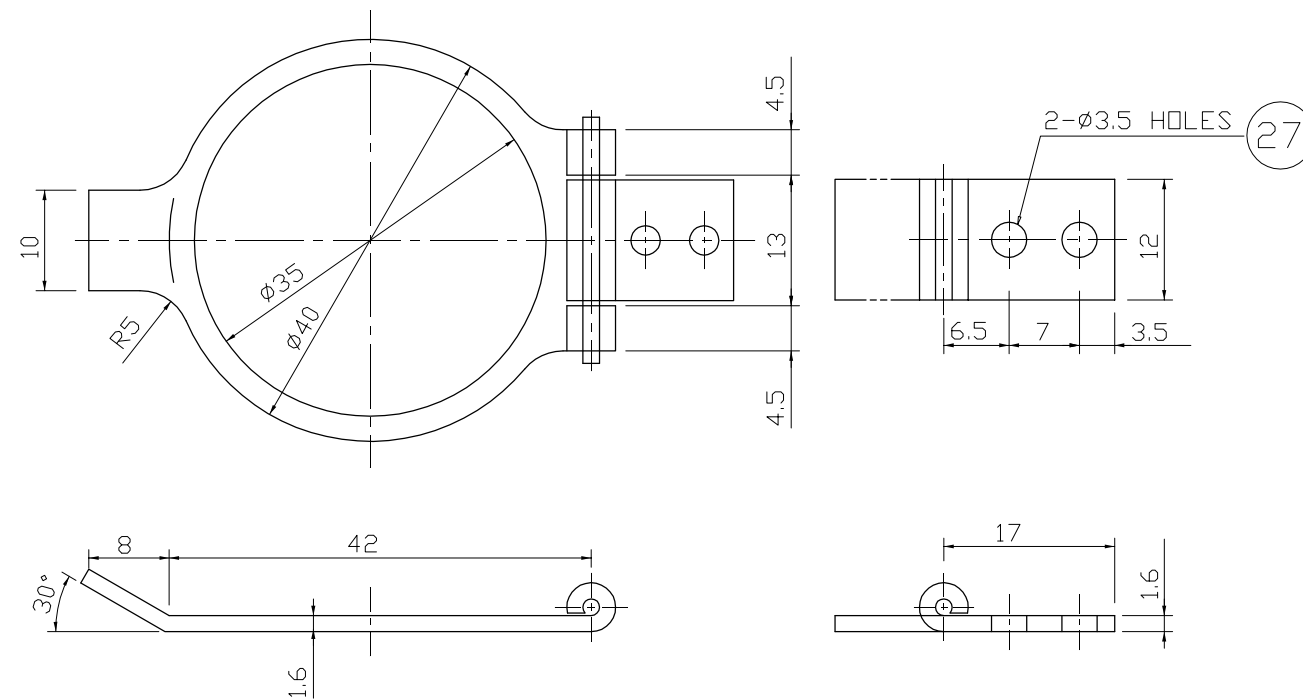
(23) DUST COVER
S:1/10



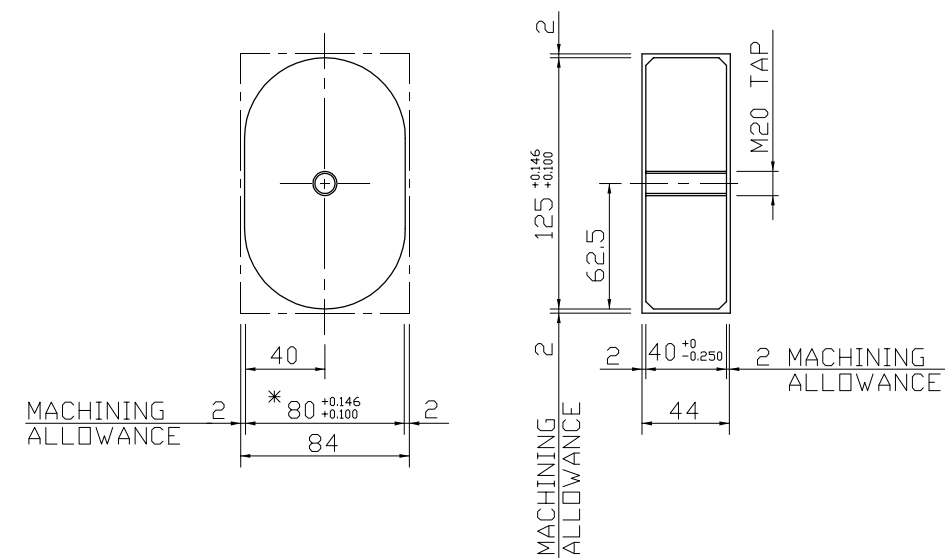
(27) BOLT & NUT
FULL SIZE



(26) INSPECTION COVER
FULL SIZE



(28) KEY FOR RUDDER CARRIER
S : 1/5



HULL NO.	1009~1012 1031~1032	RUDDER CARRIER
DWG. NO.	DA312D002	
SCALE	1/10	