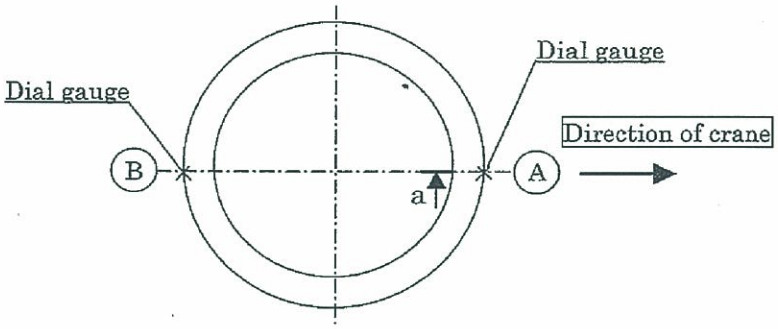
ROCKING TEST METHOD

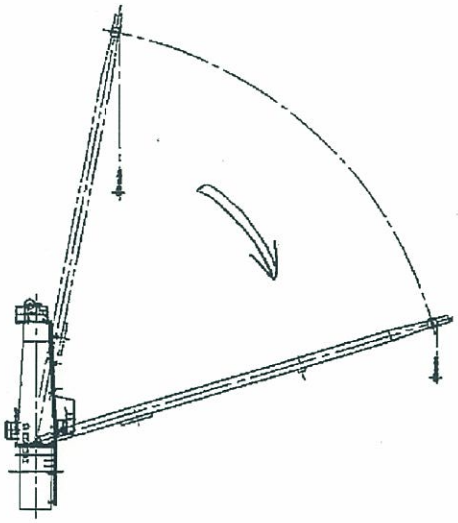
1)Please do rocking test as follows.

2)It is recommendable to carry out the measurement every 6 months.

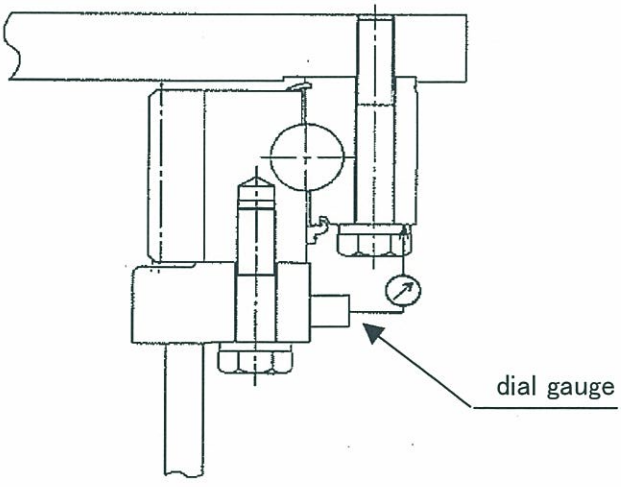
INITIAL CLEARANCE MEASURE METHOD OF SLEWING BEARING

Load	Min. radius (m)	Direction of crane	Max. radius (m)	
0 Ton	"0" standard of the dial gauge. (marked A & B)	at Fore	A	mm
			B	mm
		at Aft.	A	mm
			B	mm
		at Port	A	mm
			B	mm
		at Stbd.	A	mm
			B	mm





SECT. a



In case of heavy wear the time intervals between measurements should be shortened.

If the deviation from the base measurement exceeds the maximum values shown in Tables 11, 12 and 13, please consult Hoesch Rothe Erde.

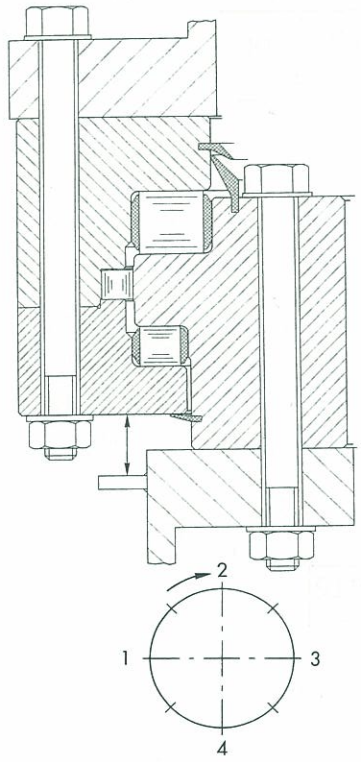


Fig. 41: Three-row roller slewing bearing ring – basic test setup for axial reduction measurement

Measurement	Base measurement	Test measurement
Measuring point 1		
Measuring point 2		
Measuring point 3		
Measuring point 4		
Tester		
Signature		
Date		

Fig. 42: Value recording in axial reduction measurement.

Maximum permissible bearing clearances

Table 11: Double-row ball bearing slewing rings

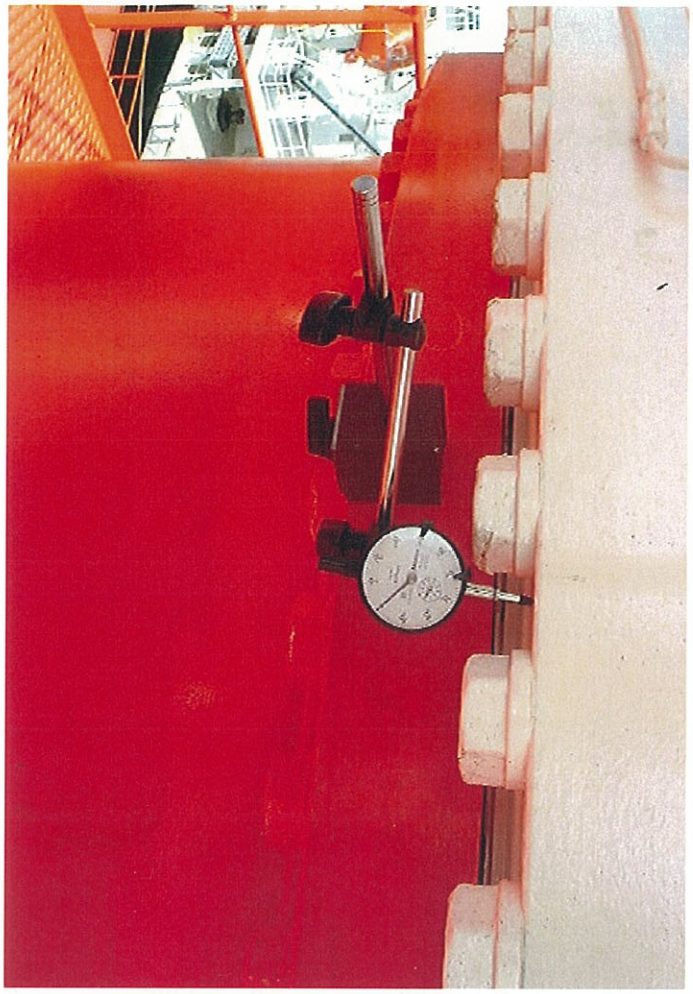
Track diameter up to mm	ball diameter mm 18	20	22	25	30	35	40	45	50	60	70
	permissible increase in bearing clearance mm										
1000	1.8	1.8	1.9	1.9	2.0	2.1	2.5	2.8			
1250	1.9	1.9	2.0	2.0	2.1	2.2	2.6	2.9	3.4	3.6	
1500		2.0	2.1	2.1	2.2	2.3	2.7	3.0	3.5	3.7	
1750			2.2	2.2	2.3	2.4	2.8	3.1	3.6	3.8	4.0
2000				2.3	2.4	2.5	2.9	3.2	3.7	3.9	4.1
2250					2.5	2.6	3.0	3.3	3.8	4.0	4.2
2500						2.7	3.1	3.4	3.9	4.1	4.3
2750						2.8	3.2	3.5	4.0	4.2	4.4
3000							3.3	3.6	4.1	4.3	4.5
3250							3.4	3.7	4.2	4.4	4.6
3500							3.5	3.8	4.3	4.5	4.7
3750							3.6	3.9	4.4	4.6	4.8
4000								4.0	4.5	4.7	5.0
4500								4.2	4.7	4.9	5.2
5000									4.9	5.1	5.4
5500									5.1	5.3	5.5
6000									5.3	5.5	5.7
6500										5.7	5.9
7000										5.9	6.1
7500											6.3
8000											6.5

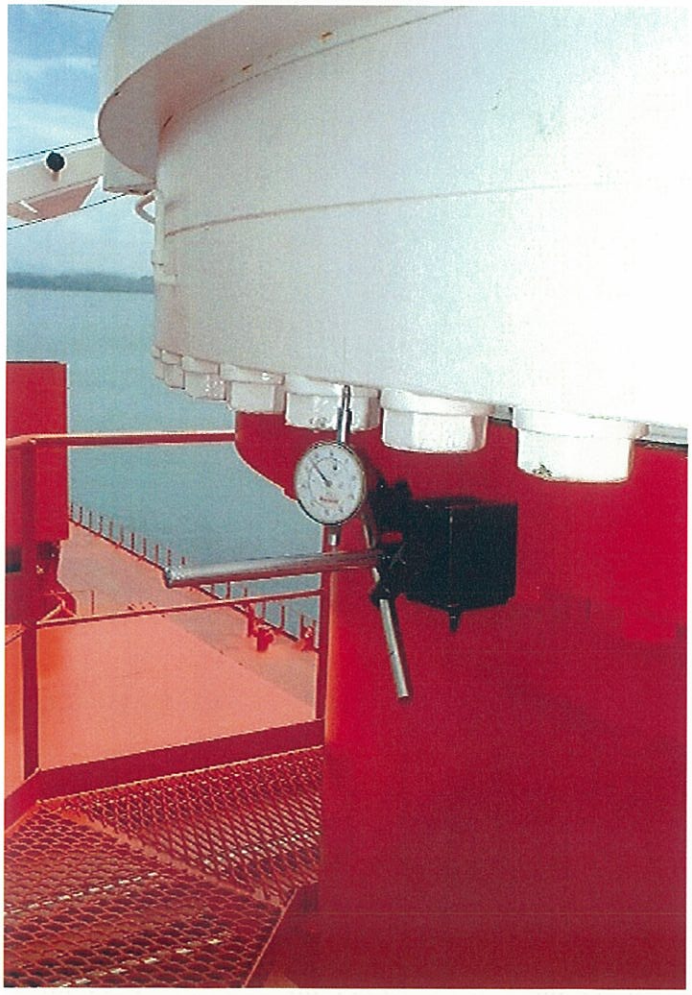
Table 12: Single-row ball bearing slewing rings (4-point bearings) including standard series KD 210

Track diameter up to mm	ball diameter mm 20	22	25	30	35	40	45	50	60	70
	permissible increase in bearing clearance mm									
1000	1.4	1.4	1.4	1.5	1.7	1.9	2.1	2.5		
1250		1.5	1.5	1.6	1.7	2.0	2.2	2.6	2.7	
1500			1.6	1.7	1.7	2.0	2.3	2.6	2.8	
1750				1.7	1.8	2.1	2.3	2.7	2.9	3.0
2000				1.8	1.9	2.2	2.4	2.8	2.9	3.1
2250					2.0	2.3	2.5	2.9	3.0	3.2
2500					2.0	2.3	2.6	2.9	3.1	3.2
2750						2.4	2.6	3.0	3.2	3.3
3000						2.5	2.7	3.1	3.2	3.4
3250						2.6	2.8	3.2	3.3	3.5
3500							2.9	3.2	3.4	3.5
3750							3.0	3.3	3.5	3.6
4000								3.3	3.6	3.7
4500								3.5	3.8	3.9
5000								3.7	4.0	4.1
5500								3.9	4.2	4.3
6000								4.1	4.5	4.6
6500									4.6	4.7
7000									4.8	4.9
7500										5.1
8000										5.3

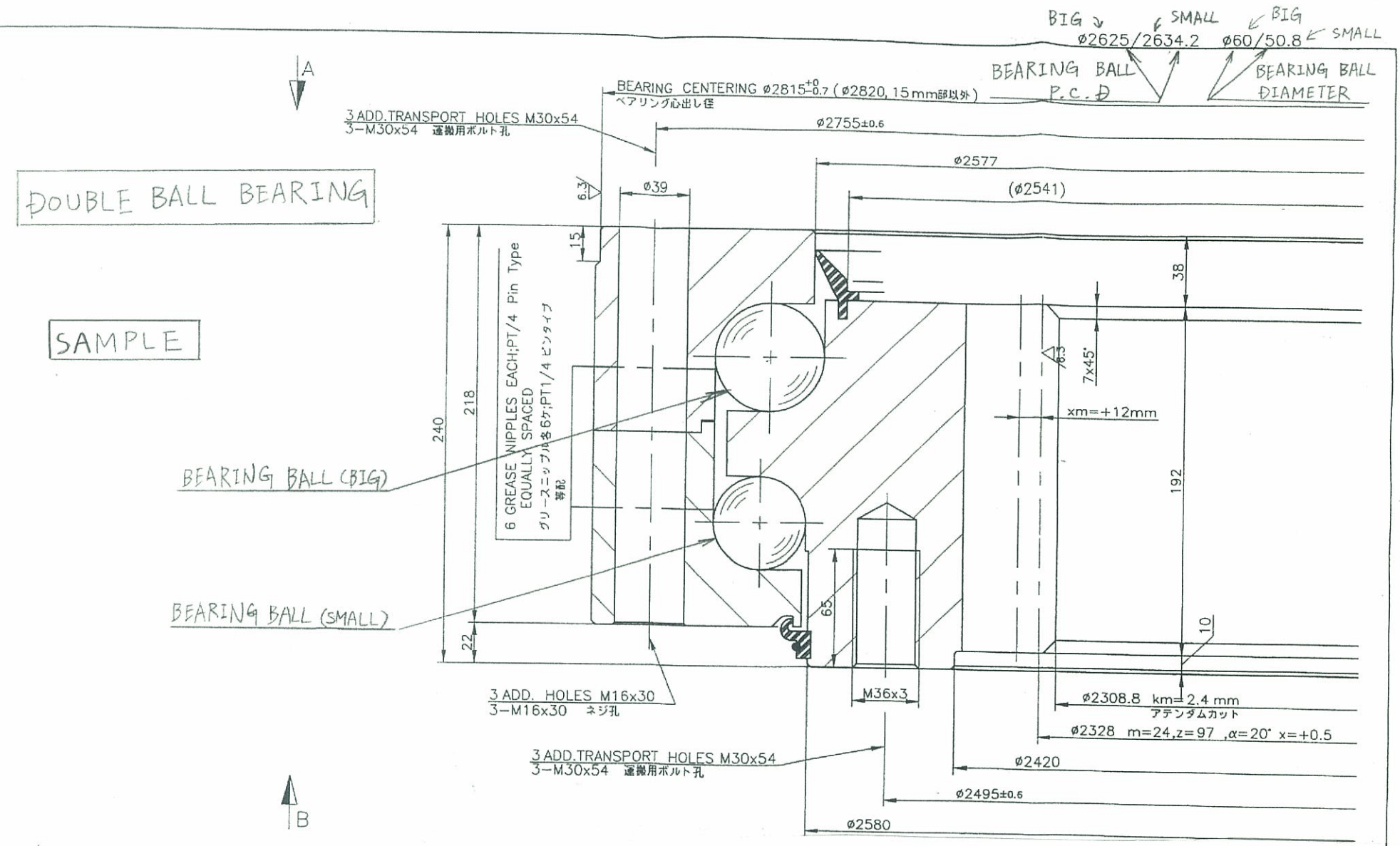
Table 13: Roller bearing slewing rings

Track diameter up to mm	roller diameter mm 16	20	25	28	32	36	40	50	60
	permissible increase in bearing clearance mm								
400	0.20	0.22	0.24						
500	0.20	0.22	0.24	0.26	0.28	0.31			
630	0.25	0.27	0.29	0.31	0.33	0.36	0.38		
800	0.25	0.27	0.29	0.31	0.33	0.36	0.38		
1000	0.30	0.32	0.34	0.36	0.38	0.41	0.43		
1250	0.40	0.42	0.44	0.46	0.48	0.51	0.53	0.60	
1500	0.50	0.52	0.54	0.56	0.58	0.61	0.63	0.70	
2000		0.62	0.64	0.66	0.68	0.71	0.73	0.80	0.90
2500			0.74	0.76	0.78	0.81	0.83	0.90	1.00
3150				0.86	0.88	0.91	0.93	1.00	1.10
4000				0.96	0.98	1.01	1.03	1.10	1.20
5000				1.06		1.11	1.13	1.20	1.30
6000						1.21	1.23	1.30	1.40
7000								1.40	1.50
8000									1.60





FOR REFERENCE



13 (6.3)

76 OUTER HOLES (78)EQUALLY SPACED FOR M36 BOLTS
外輪 76 孔 (78)等配

78 INNER HOLES EQUALLY SPACED
内輪 78 孔 等配

ALL UNDIMENSIONED CHAMFERS 2 MM
特記無キ面取リ 2 MM

UNGIVEN TOLERANCES ON DIA.TO BE REFERED TO THE TABLE
表記無キ直径公差ハ右表ニ依ル

MANAGER		MESSRS	S.NO.
CHIEF		PROJECT NAME	ORDER NO.
SUB CHIEF			SCALE / PROJECTION THIRD ANGLE
IN CHARGE		SLEWING BEARING OUTLINE VIEW	DATE
DRAWN			
図面コード			D.NO. △

TSUJI HEAVY INDUSTRIES CO.,LTD.

CAD:ROCKINGTEST

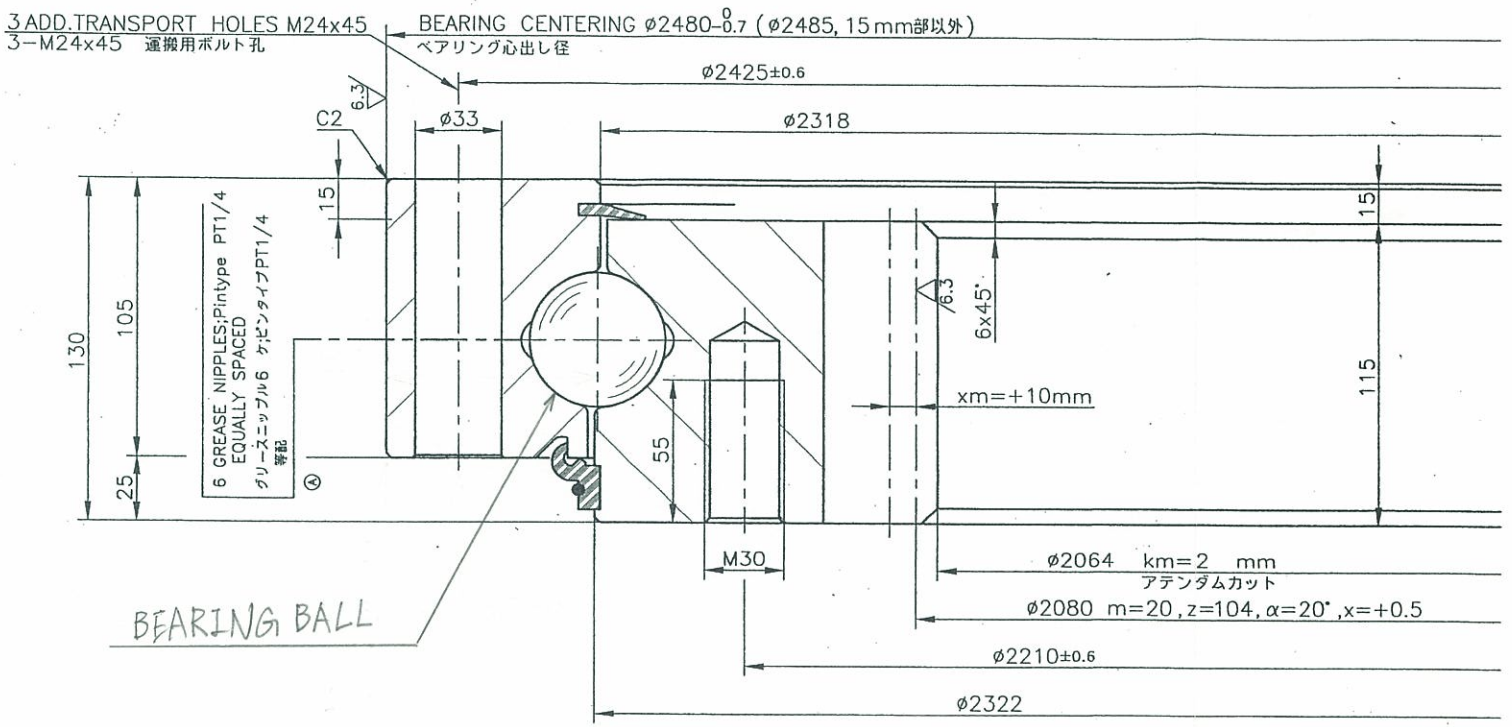
A3

SINGLE BALL BEARING

DATE	HISTORY OF D.	R.V.	DATE	REMARKS	ITEM	DR	D	C	K	B

BEARING BALL PCD ø2320 / 50.8 BEARING BALL DIAMETER

SAMPLE



潤滑はグリースを使用し軸受旋回稼動約50時間毎に約1kg補給して下さい
TO BE RELUBRICATED WITH 1kg GREASE EVERY 50 OPERATING HOURS

グリース ...アルバニア EP2
GREASE...ALVANIA EP2

○	1	BEARING	62M2043. 086. 525	−	1		1096	1				
手配	PIECE NO.	PARTICULARS	MEMBER	MATE-RIAL	基本数	PER ONE	TO-TAL	チャルン	REMARKS	単価	金額	副材料
						WEIGHT				一台分材料費		
オルミグ			SET		REMARKS							

MANAGER		MESSRS	S.NO.
CHIEF	K. Murata		
SUB CHIEF	K. Tsuji	PROJECT NAME	ORDER NO.
IN CHARGE		SLEWING BEARING OUTLINE VIEW	SCALE − PROJECTION THIRD ANGLE
DRAWN			DATE 2003. FEB. 3
図面コード	9991		D.NO. 223238 △

TSUJI HEAVY INDUSTRIES CO.,LTD.

元図221319 A3 1/1

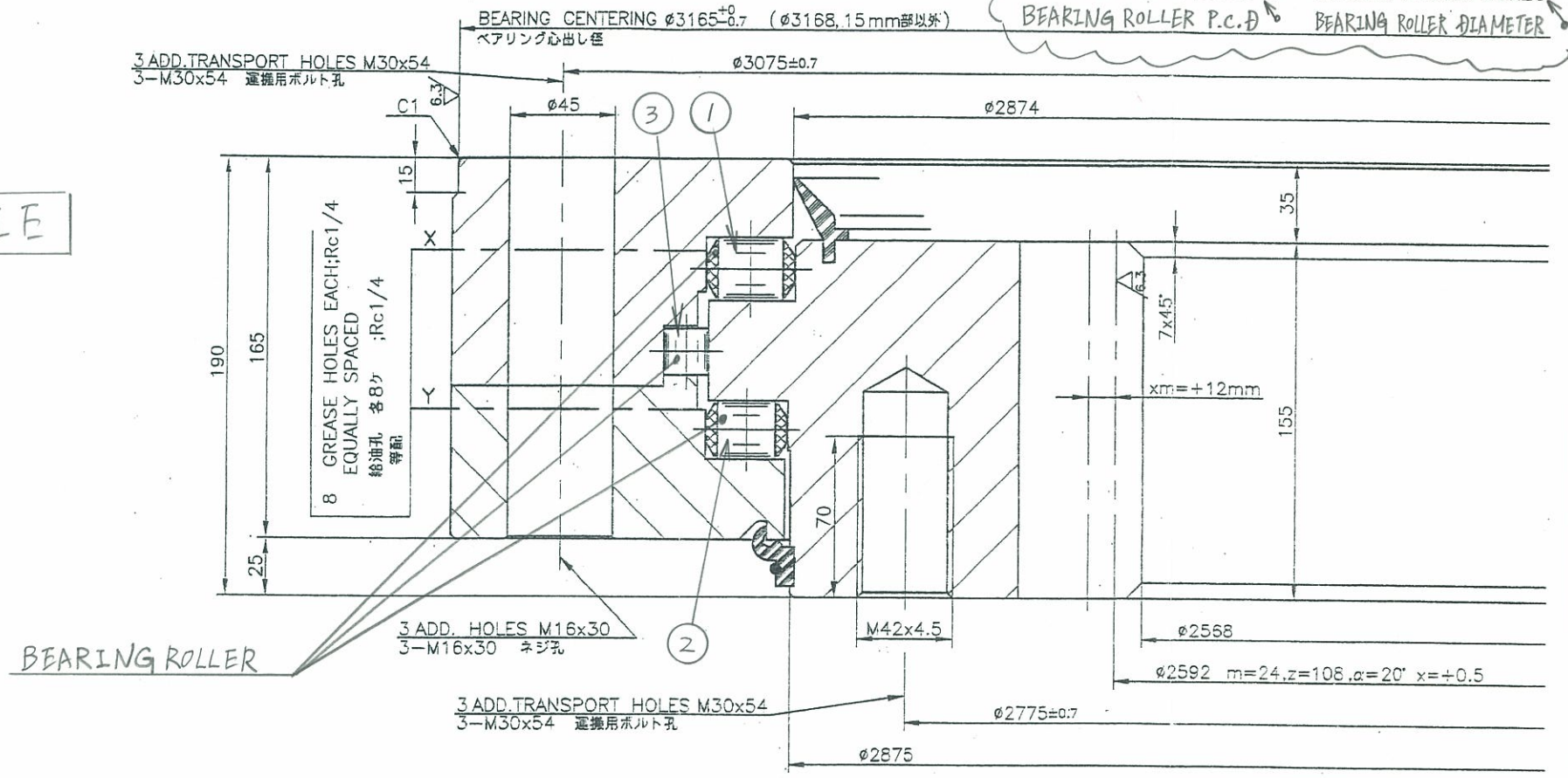
DATE	HISTORY OF D.	R.I.V.	DATE	REMARKS	ITEM	DR	D	C	F	B

ROLLER BEARING

SAMPLE

① ② ③ ø2910/2913/2966 BEARING ROLLER P.C.D

① ② ③ ø28x28/25x25/20x20 BEARING ROLLER DIAMETER



13 (6.3)

68 OUTER HOLES (72) EQUALLY SPACED FOR M42 BOLTS
外輪 68 孔 (72)等配

72 INNER HOLES EQUALLY SPACED
内輪 72 孔 等配

ALL UNDIMENSIONED CHAMFERS 2 MM
特記無キ面取リ 2 MM

UNGIVEN TOLERANCES ON DIA.TO BE REFERED TO THE TABLE
表記無キ直径公差ハ右表ニ依ル

O	1	SLEWING RING	95M5275. 002. 232	SCM 440V	1		2842	1				
手配	PIECE NO.	PARTICULARS	MEMBER	MATE-RIAL	素材	PER ONE	TOT	材料	REMARKS	単価	金額	摘要
						WEIGHT						
オルタ			SET		REMARKS							

MANAGER		MESSRS	S.NO.
CHIEF	T. Nishi	PROJECT NAME	ORDER NO.
SUB CHIEF	M. Ooshi		
IN CHARGE	T. Kobayashi	SLEWING RING OUTLINE VIEW	SCALE 1/2 PROJECTION THIRD ANGLE
DRAWN	T. K		DATE Jan. 20, 2004
図面コード	9970		

TSUJI HEAVY INDUSTRIES CO.,LTD.

D.NO. 228153 △

A3 (1/1)