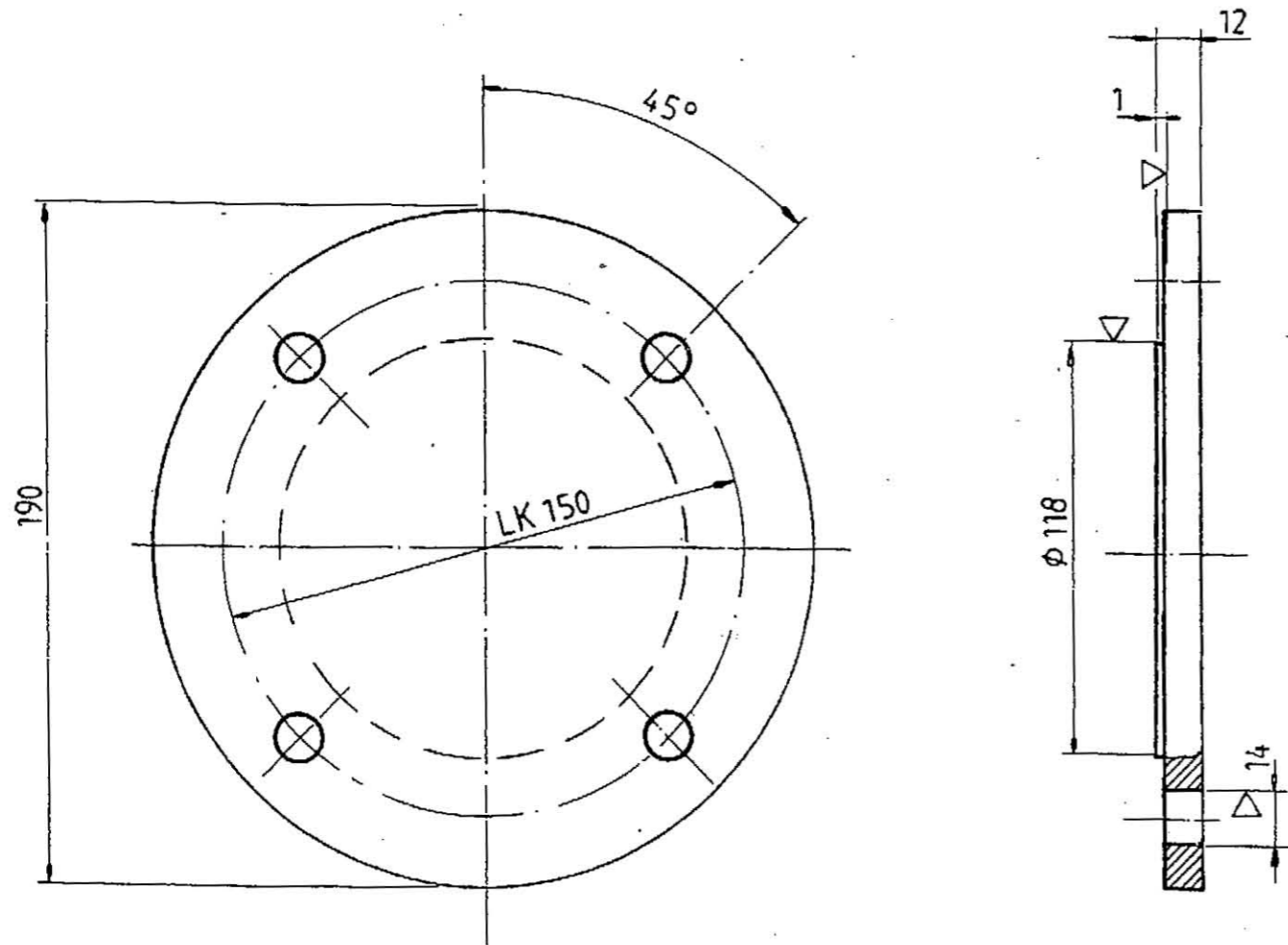


Item Number	Material	Item Title	Item Description	Item Quantity	Unit of Measure	Delivery Period (In number of days)
10	20419001000023	COUPLING,60.3X2.9MM,DWN:PD/R-218314 R3	COUPLING,60.3X2.9MM,DWN:PD/R-218314 R3 DRAWING NO : PD/R-218314 R3 POSITION NO : 13	16	EA	90
20	20419001000035	ELBOW F/MOULD COOLING ASSY,PD/R-16925	ELBOW FOR MOULD COOLING ASSY,PD/R-16925 DRAWING NO : PD/R-169254	4	EA	90
30	20419001000045	THREADED PIN ASSLY,M24X250,PD/R-169218	THREADED PIN ASSLY,M24X250,PD/R-169218 FOR MOULD NARROW FACE ADJUSTING FOR CASTER 1 & 2 AS PER DRAWING NO PD/R-169218, CONSISTING WITH:- 1) WASHER, 26X40/3MM THICK (QTY-2 NOS), MATL: SS 310 2) STANDARD NUT (QTY-3 NOS), MATL: SS 316L 3) CAP NUT (QTY 1 NO), MATL: SS 310 AS PER PD/R-169217 4) STUD MATL: AISI 430F NOTE: TO BE SUPPLIED IN ASSEMBLED CONDITION. DRAWING NO : PD/R-169218&PD/R-169217	12	EA	90
40	20419001000067	NUT,TRAPEZOIDAL,DWN:PD/R-169316	NUT,TRAPEZOIDAL,DWN:PD/R-169316 MATERIAL:GZ-CUSN12NI FOR MOULD DRAWING NO : PD/R-169316	8	EA	90
50	20419001000068	FLANGE,F/CPLG,60.3X2.9MM	FLANGE,F/CPLG,60.3X2.9MM MATERIAL:SS-304 PART NO : 8 DRAWING NO : PD/R-218314 R3	12	EA	90
60	20419001000070	FIX PIN,F/MOULD,CASTER-1&2,PD/R-169123	FIX PIN,F/MOULD,CASTER-1&2,PD/R-169123 ACROSS FLAT 70F8 MUST BE 70MM (-0.036 TO -0.076) WITH WASHER DIA 43 X 78 X 7MM THICK AS PER IS 6649 (QTY-01 NO) WITH MATCHING DOME SHAPED CAP NUT AS PER IS 7790(QTY-01 NO). MATERIAL: 42 CR MO V4. DRAWING NO : PD/R-169123	16	EA	90
70	20419001000088	CLAMP,48.3X2.6MM,DWN:PD/R-218314 R3	CLAMP,48.3X2.6MM,DWN:PD/R-218314 R3 FOR COUPLING AS PER PART NOS:21,23 AND 24-1NO,CLAMP MEANS 2PIECES OF CLAMP,PT NO:21 WITH 2NOS,HEX BOLT WITH NUT,PT NO:23-2NOS,BOLT RETAINER RING,PT NO:24 DRAWING NO : PD/R-218314 R3	16	EA	90
80	20419001000095	COVER,DWN:PD/R-169115 F/MOULD	COVER,DWN:PD/R-169115 FOR MOULD MATERIAL:RST-37.2 DRAWING NO : PD/R-169115	8	EA	90
90	20515101000584	SHAFT WITH KEYS,PD/R-169312,F/MOULD	SHAFT WITH KEYS,PD/R-169312,F/MOULD FOR MOULD NARROW FACE ADJUSTING ASSLY OF CASTER. MATERIAL: 42 CR MO4.AS PER DRAWING DRAWING NO : PD/R-169312	8	EA	90

Item Number	Material	Item Title	Item Description	Item Quantity	Unit of Measure	Delivery Period (In number of days)
100	20515101000585	SHAFT WITH KEYS,PD/R-169311R1,F/MOUL	SHAFT WITH KEYS,PD/R-169311R1,F/MOUL FOR MOULD NARROW FACE ADJUSTING ASSLY OF CASTER. MATERIAL: 42 CR MO4.AS PER DRAWING DRAWING NO : PD/R-169311 R1	8	EA	90
110	20515101000586	COUPLING,F/MOUL,CASTER,DWN:PD/R-169308	COUPLING FOR MOULD NARROW FACE ADJUSTING ASSLY OF CASTER. MATERIAL: AISI 310. AS PER DRAWING DRAWING NO : PD/R-169308	8	EA	90
120	20515101000587	COUPLING,F/MOUL,CASTER,DWN:PD/R-169309	COUPLING FOR MOULD NARROW FACE ADJUSTING ASSLY OF CASTER. MATERIAL: AISI 310. AS PER DRAWING DRAWING NO : PD/R-169309	8	EA	90
130	20515101000588	COUPLING,F/MOUL,CASTER,DWN:PD/R-169219	COUPLING FOR MOULD NARROW FACE ADJUSTING ASSLY OF CASTER AS PER DRAWING. MATERIAL: AISI 310. DRAWING NO: PD/R-169219	8	EA	90
140	20515101000589	WASHER,SIZE:100X50/5MM THK,F/MOUL	WASHER,SIZE:100X50/5MM THK,F/MOUL FOR MOULD NARROW FACE ADJUSTING ASSLY OF CASTER. MATERIAL: AISI 310.	8	EA	90
150	20519001000392	COUPLING,DWN:PD/R-218314 R3,POS:31	COUPLING,DWN:PD/R-218314 R3,POS:31 SIZE:33.7X2.6MM DRAWING NO : PD/R-218314 R3 POSITION NO : 31	20	EA	90
160	20519001000549	COUPLING,DWN:PD/R-218314 R3,POS:25	COUPLING,DWN:PD/R-218314 R3,POS:25 SIZE:33.7X2.6MM DRAWING NO : PD/R-218314 R3 POSITION NO : 25	20	EA	90
170	70501000403865	BOLT,CS,45MM,564MM	BOLT MATERIAL : CARBON STEEL PROPERTY CLASS/GRADE : 8.8 SIZE X PITCH : 45MM LENGTH : 564MM DRAWING NO : PD/R-169117	16	EA	90

CCM-II MOULD SYSTEM.

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SIA-Dat	Sta-tus	Modification	Date	Name	Date of filing

STEEL AUTHORITY OF INDIA LTD.
ROURKELA STEEL PLANT
MODERNISATION PROJECT

Title: SLAB CASTING SHOP IN SMS-2
CASTING MACHINE EQUIPMENT ; MOULD
BASE FRAME ASS'Y ; COVER

PACKAGE No.
104.2

CONSULTING ENGINEERS **M. N. DASTUR & COMPANY LIMITED** CALCUTTA

RSP DRG. No. 104.2-13-01-030100-0113-
SHEET-No. 1 OF 1

MANNESMANN DEMAG Hüttentechnik
SIA-Dat: 07.95
Language: E
Ident-No.: 39602830
Size: 3
Sheet 01
Date of Filing: JUN. 1993
Origin: 39120630
Replaces: Superseded by:

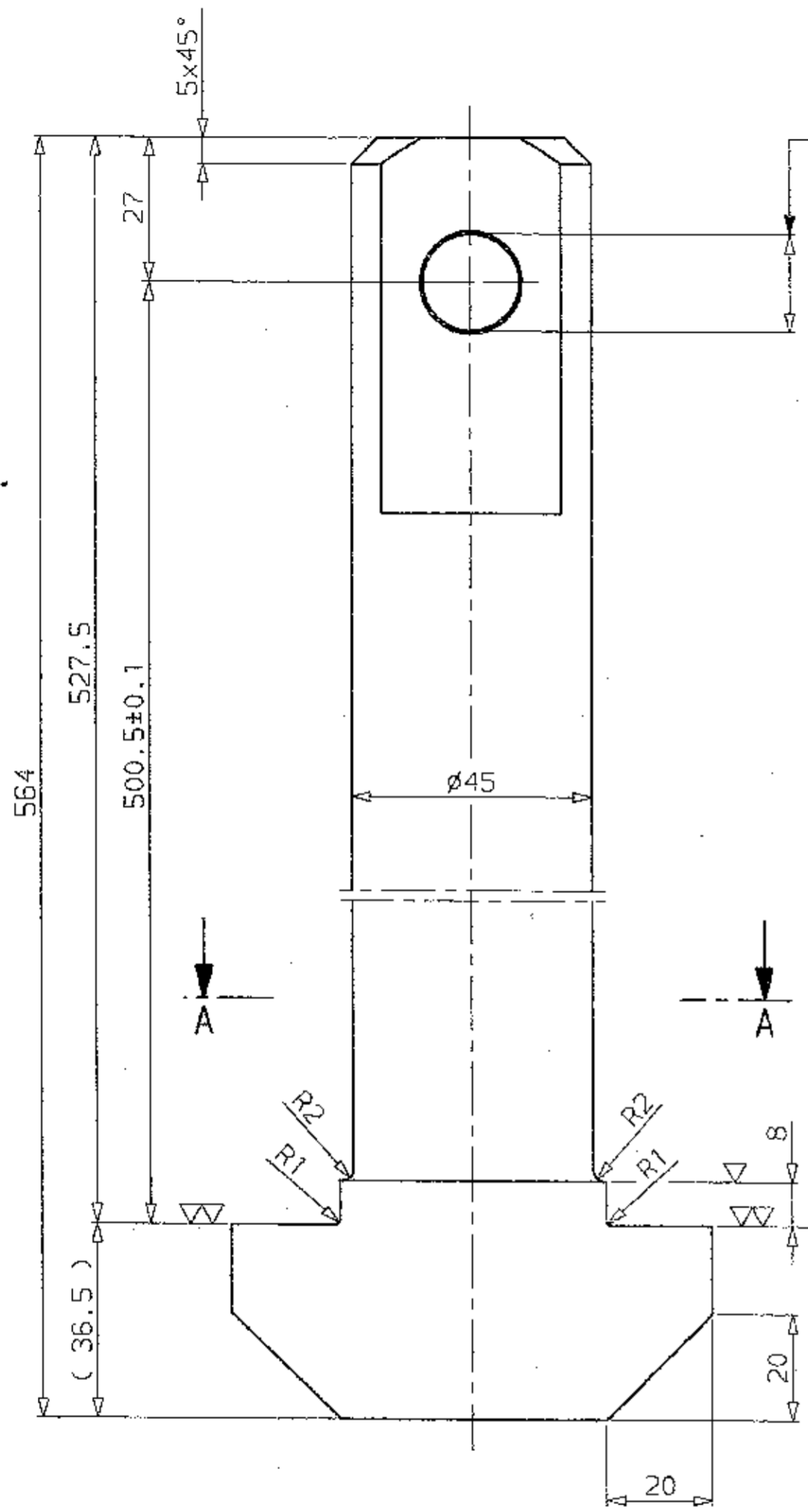
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED
DRG.NO.MEC/ REV

PDIR-169115

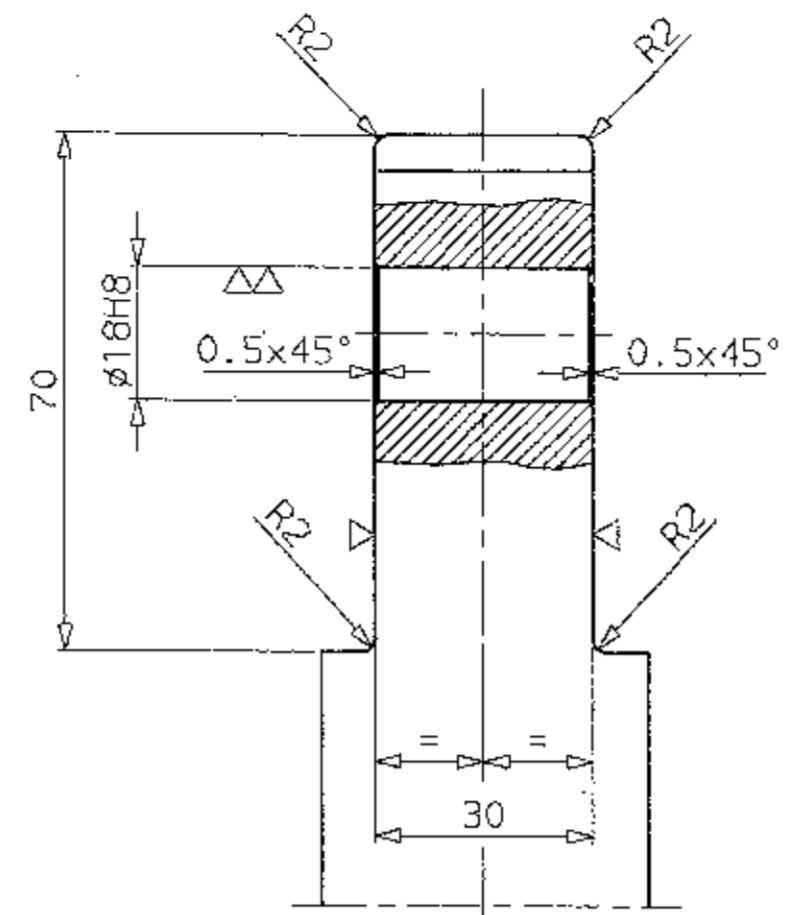
Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-S
Surface peak-to-valley height as per DIN-ISO 1302

DIN 3141		DIN ISO 1302 Reihe 2	
		Rz=µm	Ro=µm
▽	√	√Rz=100	12.5
▽▽	√	√Rz=25	3.2
▽▽▽	√	√Rz=8,3	0,8
▽▽▽▽	√	√Rz=1	0,1

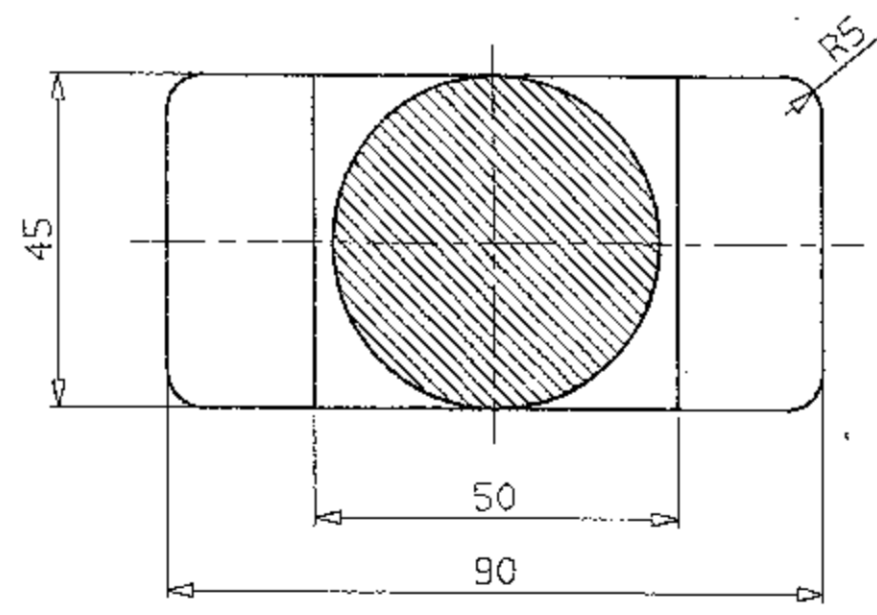
SUBMITTED FOR		APPROVAL		SCALE 1:2	DATE
APPROVAL		BY	DATE	PRPD BY s. kroemer	23.04.93
INFORMATION				CHKD BY Nemeo	07.06.93
CONSTRUCTION				APPVD BY Bartkowlak	
				DEPART-MENT	6414 TEL. 2854



|| 0.05 | A



Schnitt A-A SECTION



~(∇, ∇∇)

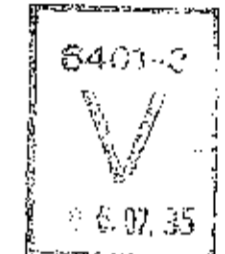
DIN 3141	DIN 150 1302 Reihe 2	Rz=µm	Ra=µm
∇	✓	✓Rz=100	12.5
∇∇	✓	✓Rz=25	3.2
∇∇∇	✓	✓Rz=5.3	0.8
∇∇∇∇	✓	✓Rz=1	0.1

Acceptable deviations of dimensions without tolerances mean, as per DIN 716B -m-5
Surface peak-to-valley height as per DIN-ISO 1302

18 H8	+0.027
Paßmaß	Abmaß
Toleranced Dimension	Allowance
	0

CCM-II
MOULD SYSTEM

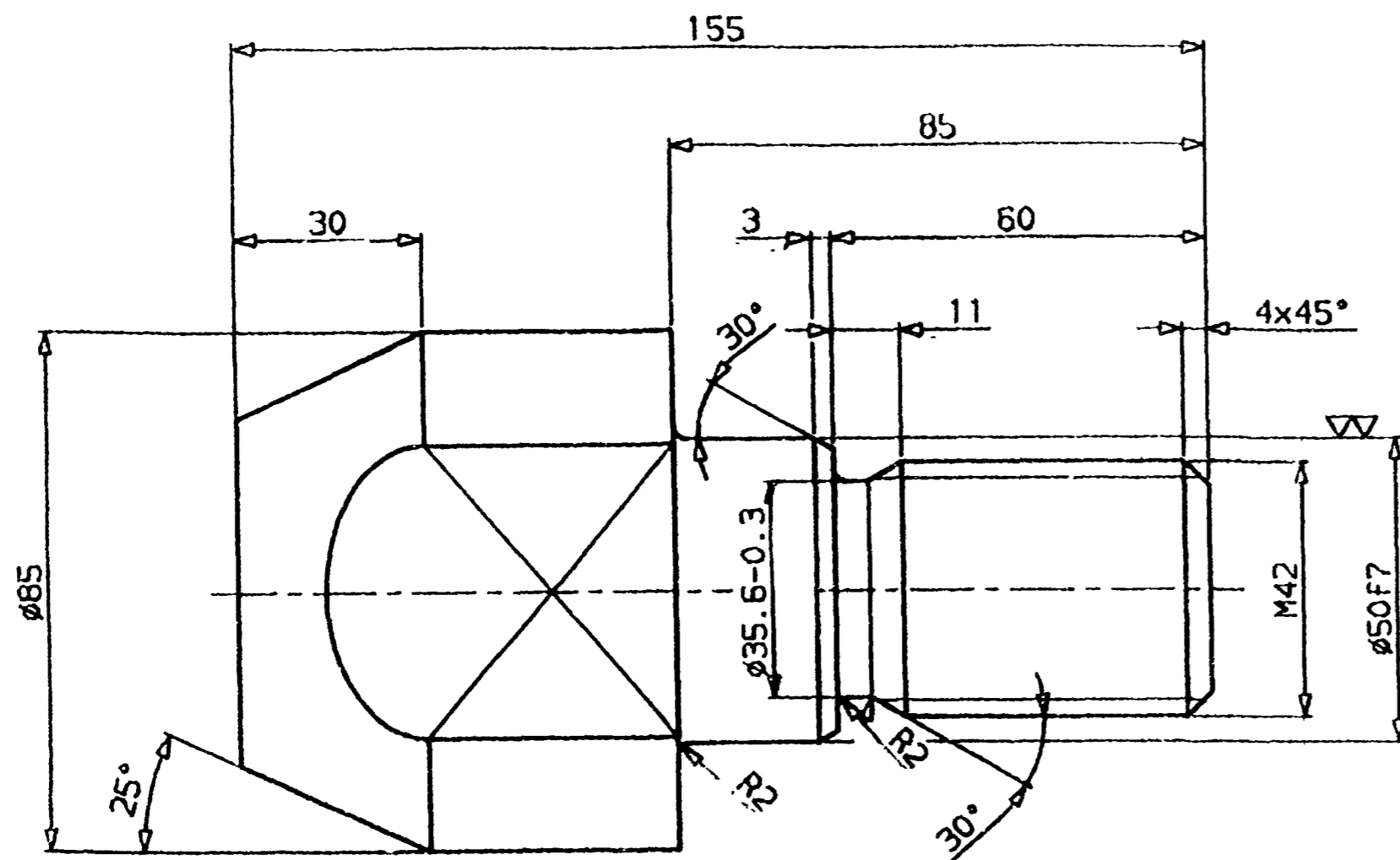
AS BUILT



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51A-Date	51A-Date	Modification	Date	Name	Date of Filing
STEEL AUTHORITY OF INDIA LTD. ROURKELA STEEL PLANT MODERNISATION PROJECT					
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT; MOULD				PACKAGE No. 104.2	
BASE FRAME ASS'Y; BOLT					
CONSULTING ENGINEERS		M. N. DASTUR & COMPANY LIMITED		CALCUTTA	
RSP DRG. No. 104.2-13-01-030100-01115-				SHEET-NO. 1 OF 1	
MANNESMANN DEMAG Hüttentechnik		Date of Filing: 07.95 39603030		Size: 2 01 Sheets	
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED		DRG. NO. MEC/		REV	
PDIR-169117					
SUBMITTED FOR		APPROVAL		SCALE 2:1 DATE	
APPROVAL		BY		DATE	
INFORMATION		BY		DATE	
CONSTRUCTION		BY		DATE	
		PPD BY: S. Kraener		22.04.93	
		CHKD BY: Nenec		/08.06.93	
		APPROV BY: Bartkowiak			
		DEPARTMENT		6414 TEL. 2854	

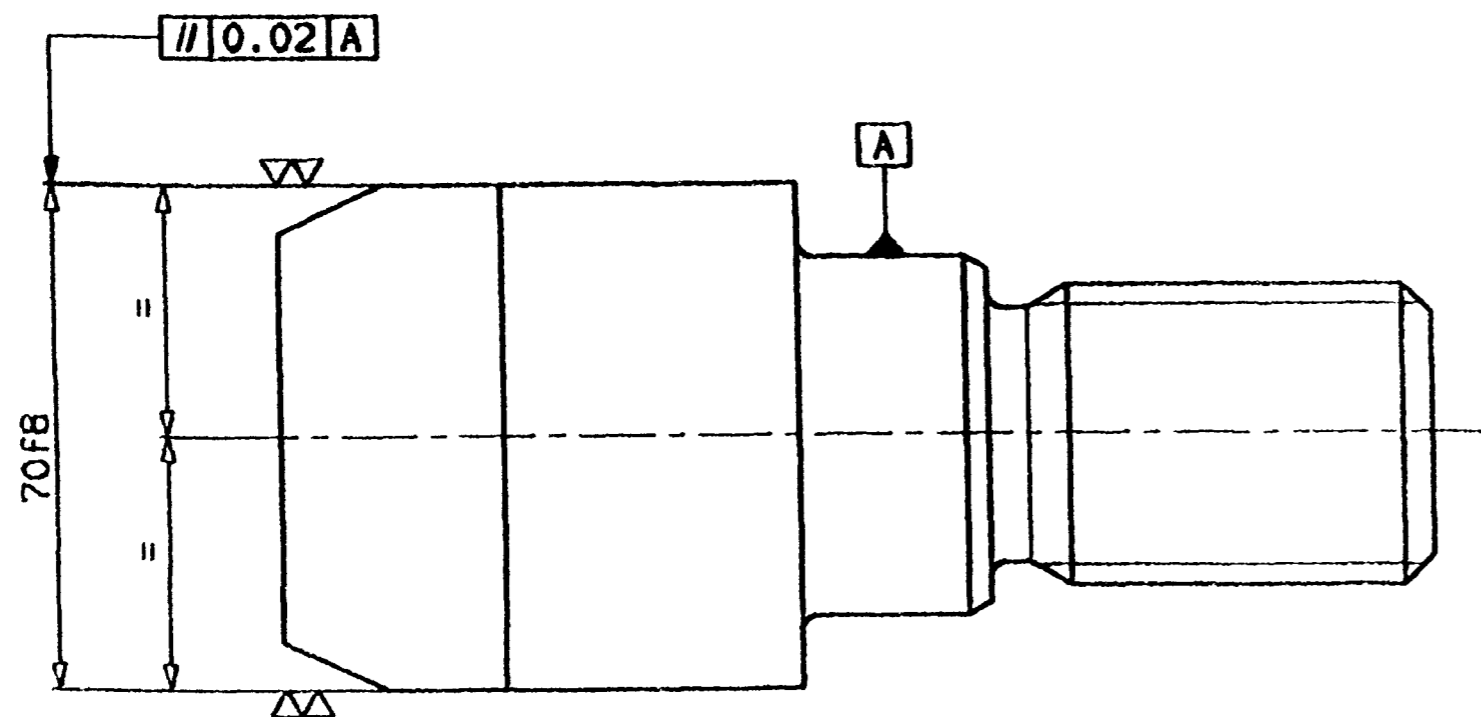
S. 331 ADL. 64101

E. 6414ROURE2 6414ROURE2 -FREM



CCM-II
MOULD SYSTEM

AS BUILT



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SIA-Date	Modification	Date	Note	Date of Filing

STEEL AUTHORITY OF INDIA LTD.
ROURKELA STEEL PLANT
MODERNISATION PROJECT

Title: SLAB CASTING SHOP IN SMS-2
CASTING MACHINE EQUIPMENT ; MOULD
BASE FRAME ASS'Y ; FIX PIN
PACKAGE No 104.2

CONSULTING ENGINEERS **M. N. DASTUR & COMPANY LIMITED** CALCUTTA

RSP DRG. No. 104.2-13-01-030100-0121-
SHEET-NO. 1 OF 1

MANNESMANN 07.95
DEMAG 39603630 2
Hüttentechnik JUNI 1993 Origin 3912430 Replaces Superseded by

METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED DRG.NO.MEC/ REV

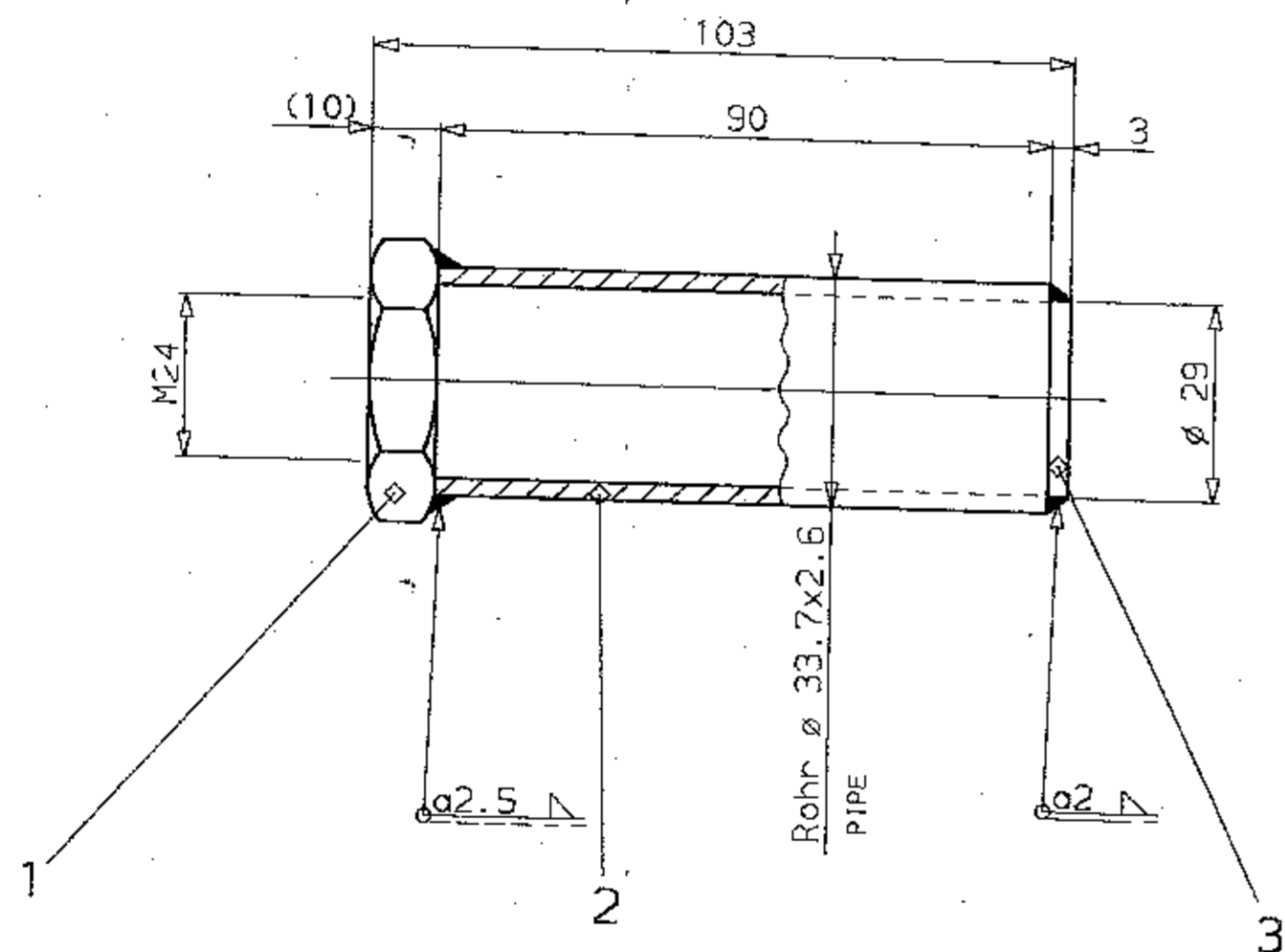
PDIR.169123

SUBMITTED FOR	APPROVAL	SCALE 1:1	DATE
APPROVAL	BY	DATE	PRPD BY s.kraemer 23.04.93
INFORMATION			CHKD BY Nemeo 02.09.93
CONSTRUCTION			APPVD BY Bartkowiak
			DEPART-MENT 6414 TEL. 2854

DIN 3141	DIN 150 1302
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓

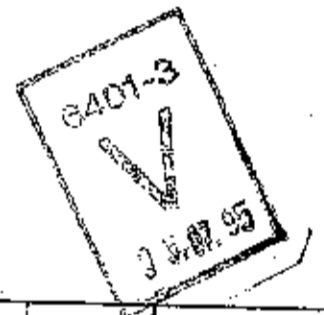
Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-5
Surface peak-to-valley height as per DIN-150 1302

70 F8	-0.030
70 F8	-0.060
50 F7	-0.025
50 F7	-0.050
Paper	Abmaß



CCM-II
MOULD SYSTEM

AS BUILT



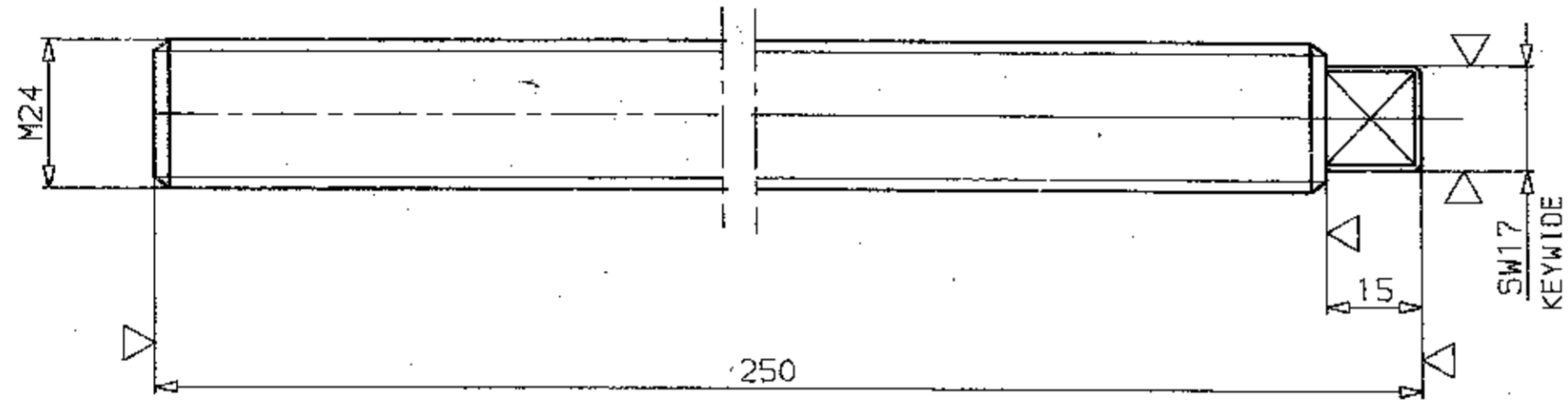
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SIA-Dec	Sta-tus	Modification	Date	Name	Date of Filing
STEEL AUTHORITY OF INDIA LTD. ROURKELA STEEL PLANT MODERNISATION PROJECT					
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT, MOULD NARROW FACE ADJUSTMENT ASS'Y, HEAD NUT					PACKAGE No. 104.2
CONSULTING ENGINEERS M. N. DASTUR & COMPANY LIMITED			CALCUTTA		
RSP DRG. No. 104.2-13-01-030100-0235-1					SHEET-No. 1 OF 1
MANNESMANN DEMAG Hüttentechnik		SIA-Tag 07.95	Language E	Cont.-No. 396111430	Size 01 Sheet 01 01 Sheets
Date of Filing 11.1.1993			Origin 39132630	Replaces	Superseded by
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED				DRG.NO.MEC/	REV
PDIR-169217					
SUBMITTED FOR		APPROVAL		SCALE 1:1	DATE
APPROVAL		BY	DATE	PRPD BY S. Kraemer	17.05.93
INFORMATION				CHKD BY Nemec	28.06.93
CONSTRUCTION				APPVD BY Bartkowiak	
				DEPART-MENT	6414 TEL. 2854

Schweißverbindungen: Bewertungsgruppen nach DIN 8563 Bl.3 entsprechend Arbeitsblatt 01624133	Welded joints: Quality criteria to DIN 8563, sheet 3, as per specification sheet 01624133
Abweichungen für Maße ohne Toleranzangabe bei Schweißkonstruktionen: BG DIN 8570	Deviations for dimensions without stated tolerance for welded structures: BG DIN 8570

DIN 3141	DIN 150 1302 Reihe 2	
	Rzµm	Raµm
✓	✓/Rz=100	✓/Ra=12,5
∇	✓/Rz=25	✓/Ra=3,2
∇∇	✓/Rz=6,3	✓/Ra=0,8
∇∇∇	✓/Rz=1	✓/Ra=0,1

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-5
Surface peak-to-valley height as per DIN-150 1302

KRAEMSI
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6414ROURE2



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MOULD SYSTEM

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DIN 9141	DIN ISO 1302 Rough Z	
	Rzµm	Raµm
▽	√/Rz100	12.5
▽▽	√/Rz25	3.2
▽▽▽	√/Rz6.3	0.8
▽▽▽▽	√/Rz1.6	0.2

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-S
Surface peak-to-valley height as per DIN-ISO 1302

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STA-Det	Sta- Eyes	Modification	Date	None	Date of Filing
STEEL AUTHORITY OF INDIA LTD. ROURKELA STEEL PLANT MODERNISATION PROJECT					
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT; MOULD					PACKAGE No. 104.2
NARROW FACE ADJUSTMENT ASS'Y; THREAD BOLT					
CONSULTING ENGINEERS		M. N. DASTUR & COMPANY LIMITED		CALCUTTA	
RSP DRG. No. 104.2-13-01-030100-0236-					SHEET-No. 1 OF 1
MANNESMANN DEAG Hütten-technik		91A-Dat. 07-95	Language E	Ident- No. 39611530	Size 2
		Date of Filing JUL 1993	Design 39132730	Replaces	Superseded by
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED				DRG. NO. MEC/ REV	
PDIR-169218					
SUBMITTED FOR		APPROVAL		SCALE 1:1	DATE
APPROVAL				BY S. Kraemer	17.05.93
INFORMATION				BY Nemea	28.06.93
CONSTRUCTION				BY Bartkowiak	
				DEPART- MENT	6414 TEL. 2854

KRAEMSS

-FRFM

RA14R01RF2

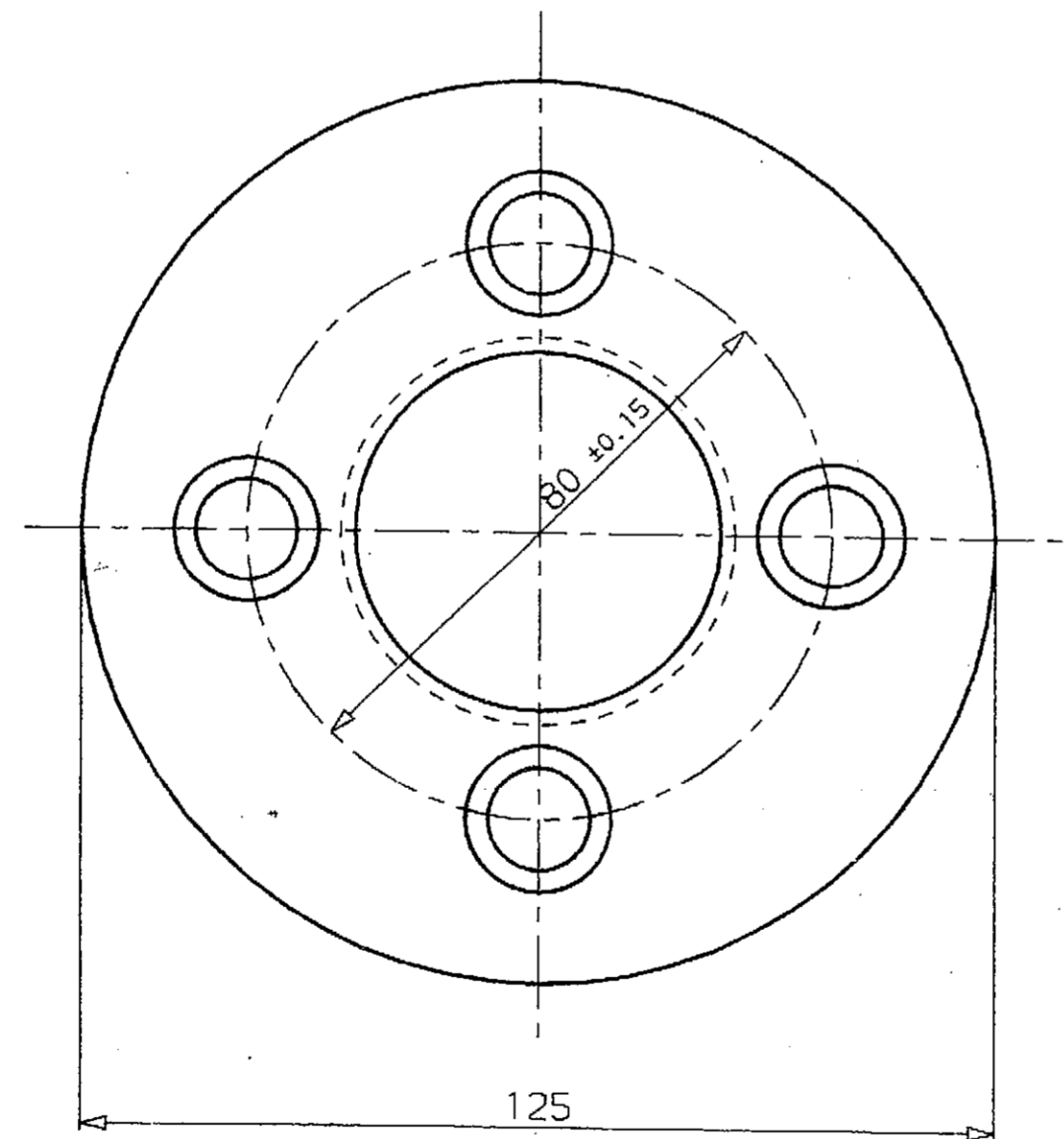
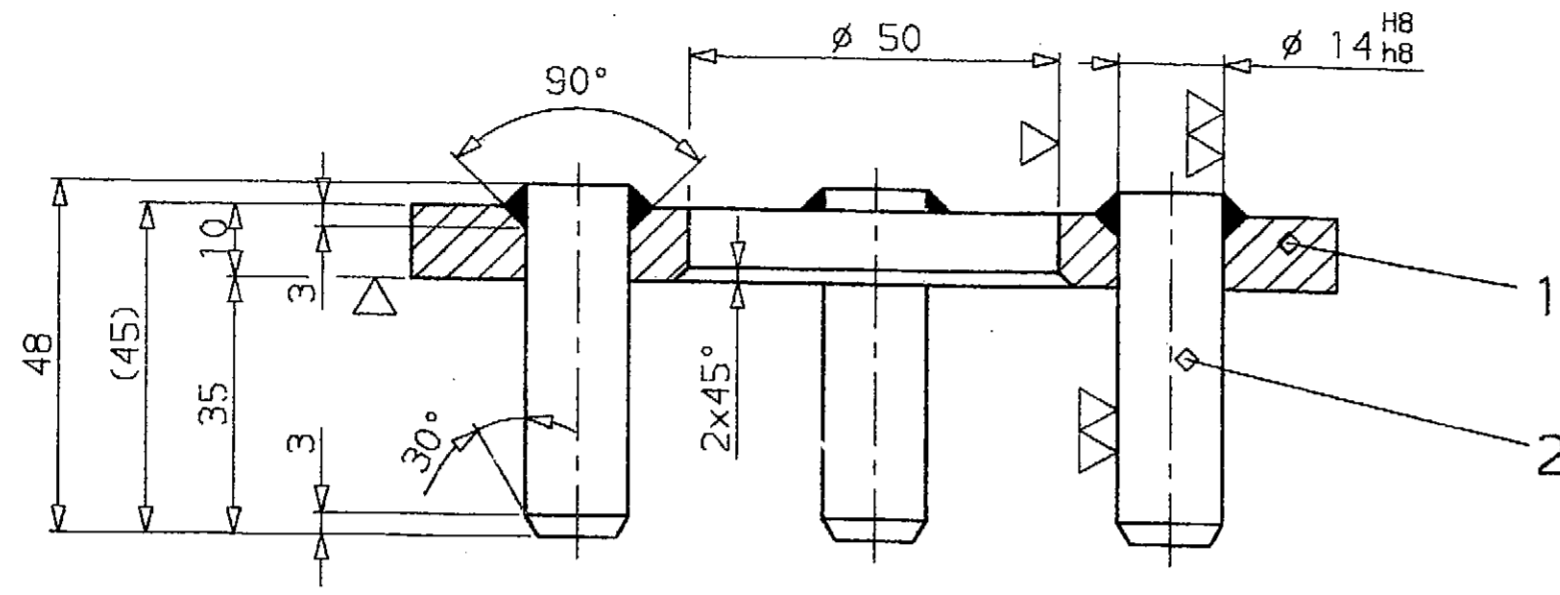
CA14R01RF2

REV

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REV

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CCM-II
MOULD SYSTEM

AS BUILT

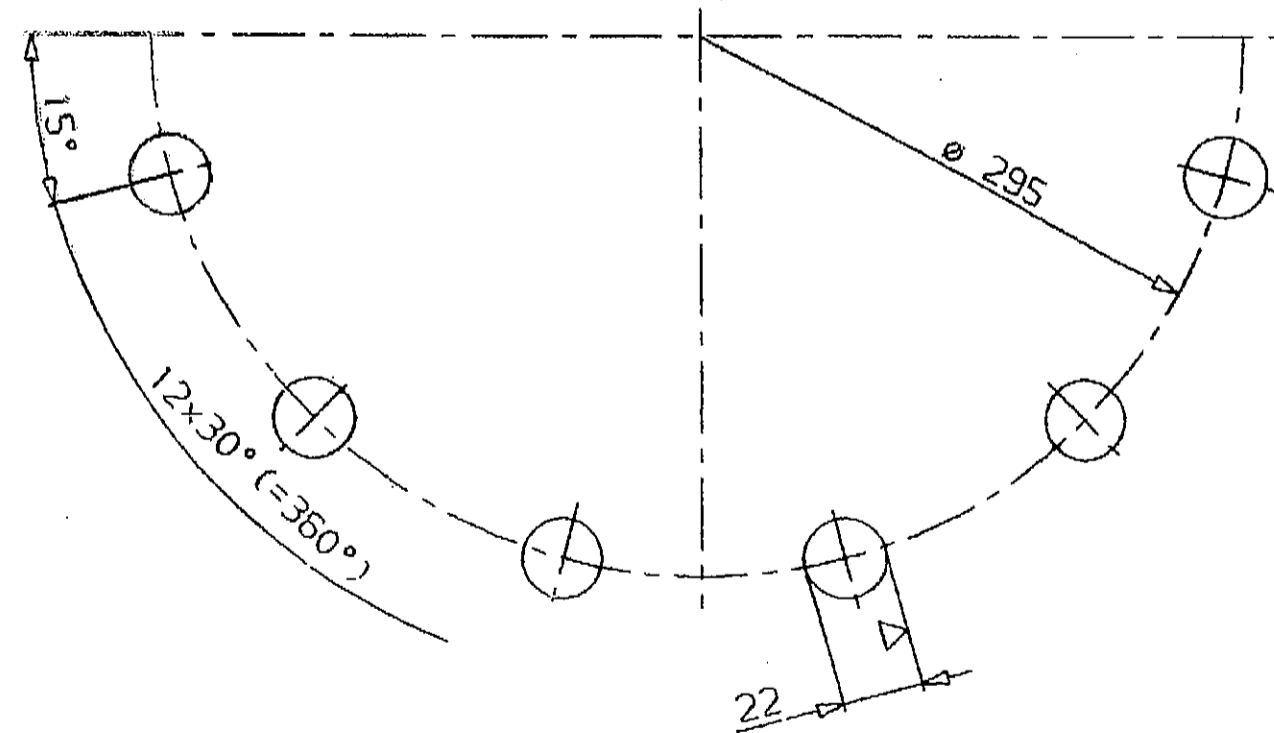
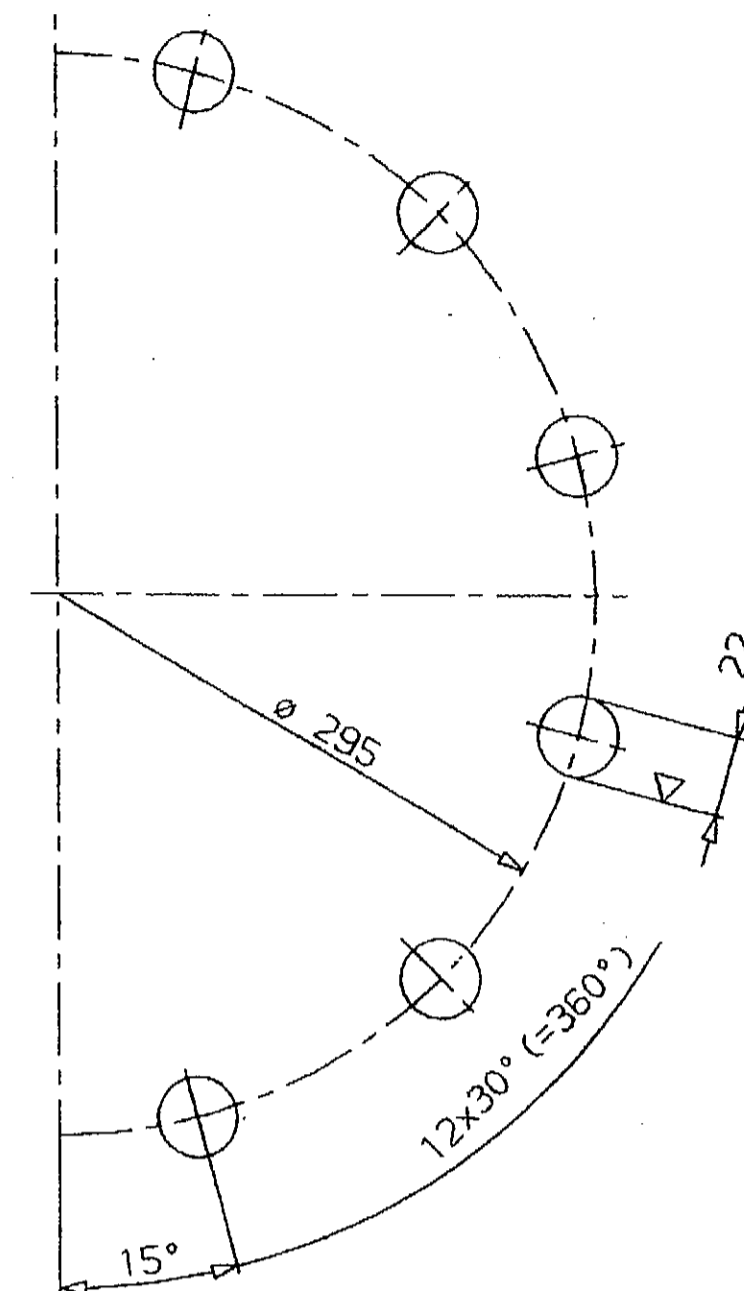
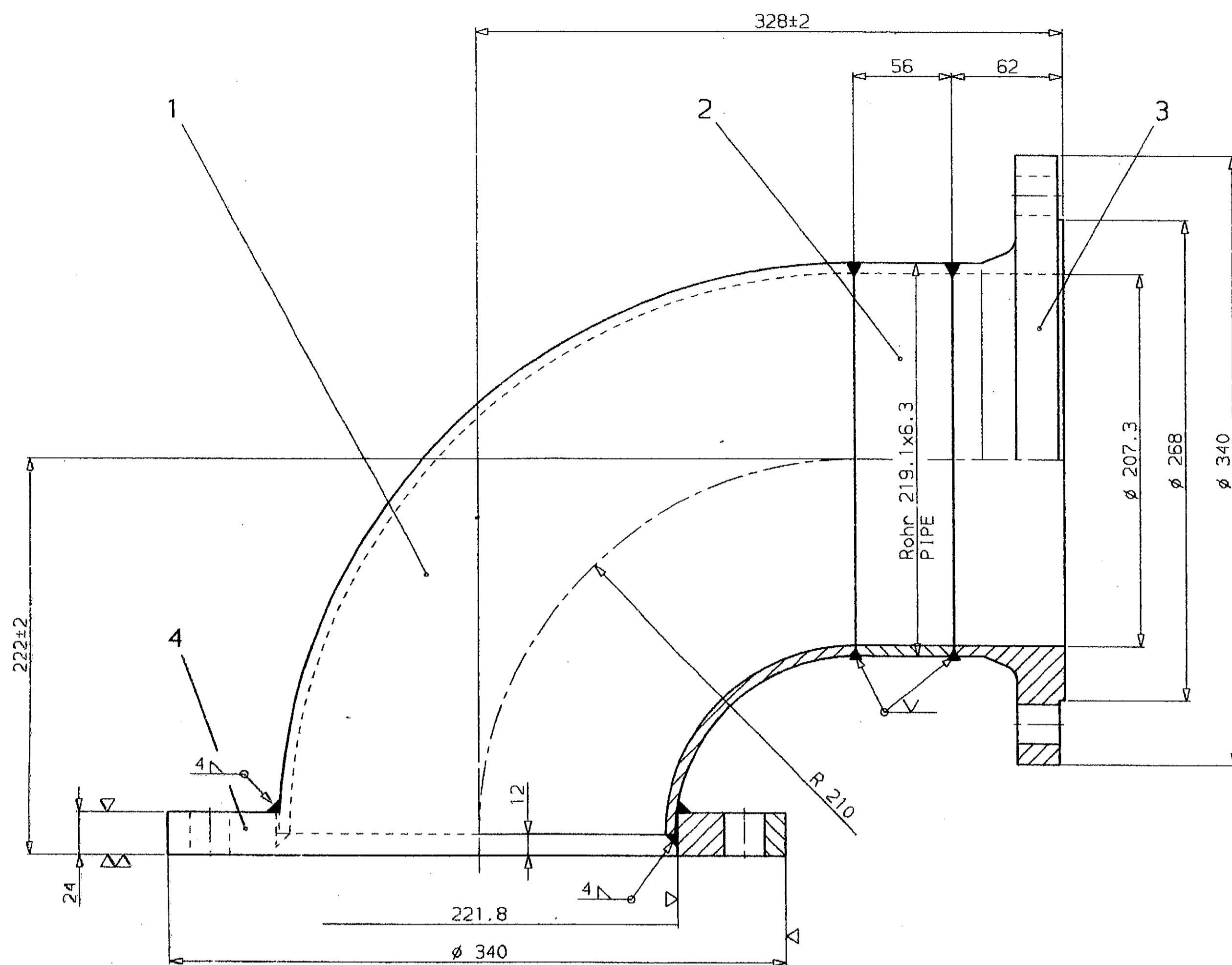
14 H8	+0.027
	0
14 h8	0
	-0.027
Paßmaß	Abmaß
TOLERANCE	ALLOWANCES
DIMENSION	

Schweißverbindungen: Bewertungsgruppen nach DIN 8563 Bl.3 entsprechend Arbeitsblatt 01624133	Welded joints : Quality criteria to DIN 8563, sheet 3, as per specification sheet 01624133
Abweichungen für Maße ohne Toleranzangabe bei Schweißkonstruktionen: BG DIN 8570	Deviations for dimensions without stated tolerance for welded structures : BG DIN 8570

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-5
Surface peak-to-valley height as per DIN-ISO 1302

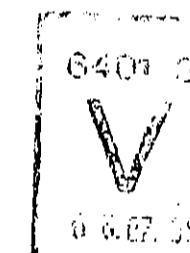
DIN 3141	DIN ISO 1302 Reihe 2	Rz=µm	Ra=µm
√xxx	√Rz=100	12.5	3.2
√vv	√Rz=25	6.3	0.8
√vvv	√Rz=6.3	0.8	0.1
√vvvv	√Rz=1	0.1	0.05

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SIA-Dat	Sto- tus	Modification	Date	Name	Date of filing
STEEL AUTHORITY OF INDIA LTD. ROURKELA STEEL PLANT MODERNISATION PROJECT					
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT; MOULD					PACKAGE No.
NARROW FACE ADJUSTMENT ASS'Y; COUPLING DISC					104.2
CONSULTING ENGINEERS			M. N. DASTUR & COMPANY LIMITED		CALCUTTA
RSP DRG. No.	104.2	-13	-01	-030100	-0237
SHEET-No. 1 OF 1					
MANNESMANN DEMAG Hüttentechnik		SIA-Dat. 07.95	Language E	Ident- No. 396111630	Size Sheet 01 01 Sheets
		Date of filing	Origin 24786730	Replaces	Superseded by
			METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED		DRG. NO. MEC/ REV
PDIR-169219					
SUBMITTED FOR		APPROVAL		SCALE 1:1	DATE
APPROVAL				BY	DATE
INFORMATION				PRPD BY S. Kraemer	24.05.93
CONSTRUCTION				CHKD BY NEMEC	28.06.93
				APPV BY BARTKOWIAK	
				DEPART- MENT	6414 TEL. 2854



CCM-II
MOULD SYSTEM.

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SIA-Date	Rev	Mod/Fraction	Date	Issue	Date of Filing
STEEL AUTHORITY OF INDIA LTD.					
ROURKELA STEEL PLANT					
MODERNISATION PROJECT					
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT ; MOULD MOULD COOLING ASS'Y; ELBOW					PACKAGE No. 104.2
CONSULTING ENGINEERS			M. N. DASTUR & COMPANY LIMITED		(CALCUTTA)
RSP DRG. No. 1104.2-13-01-030100-0321-0					SHEET-NO. 1 OF 1
MANNESMANN DEMAG Hottentechnik		Date of Filing 07.95	Ident- No. 396115030	Size 01	Sheet 01
Date of Filing 07.95			Origin 39128930	Replaces	Superseded by
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED				DRG. NO. MEC/	REV

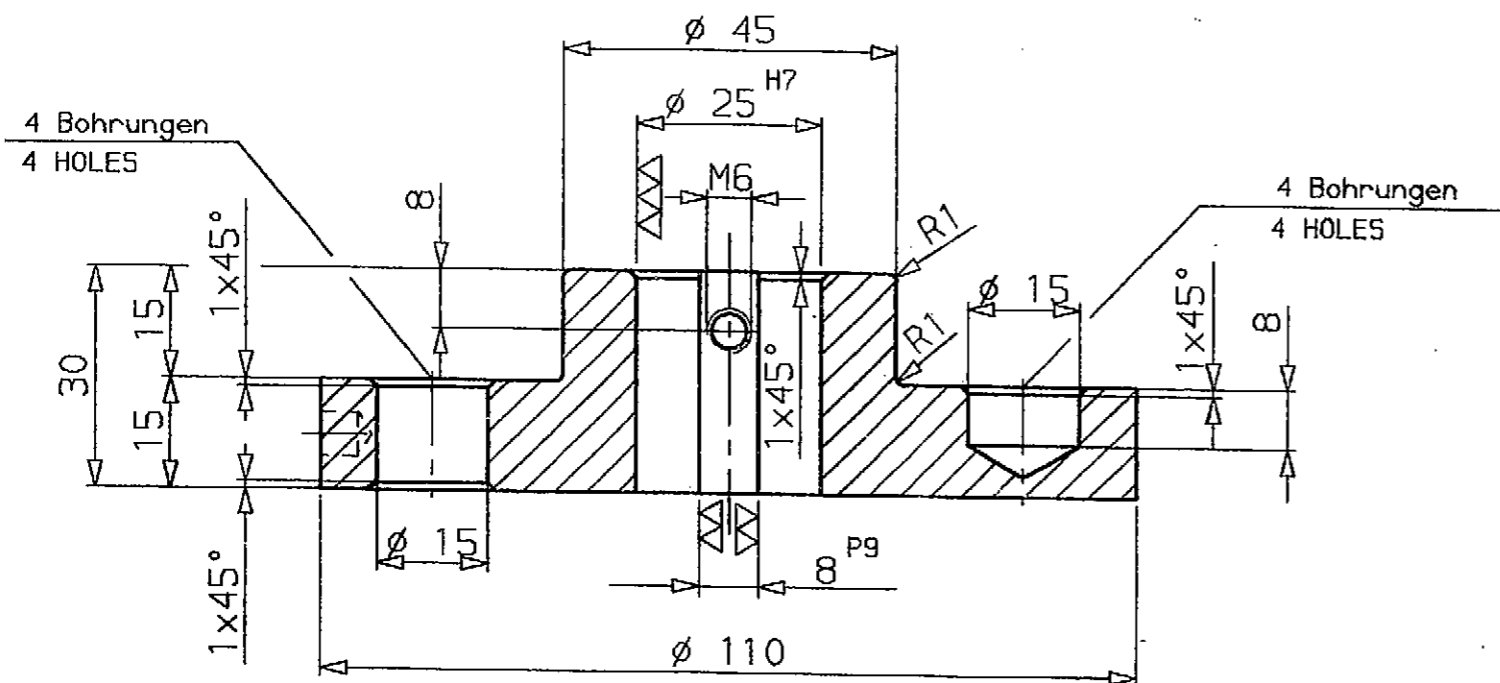
~ (▽▽)

Seal weld item...water tightness. Test pressure 10 bar gage!	Deviations for dimensions without stated tolerance for welded structures : B6 DIN 8570	Welded joints : Quality criteria to DIN 8563, sheet 3, as per specification sheet 01624133
Teil...wasserdicht geschweißt. Druckprobe 10 bar!	Abweichungen für Maße ohne Toleranzangabe bei Schweiß- konstruktionen: B6 DIN 8570	Schweißverbindungen: Bewertungs- gruppen nach DIN 8563 Bl. 3 entsprechend Arbeitblatt 01624133

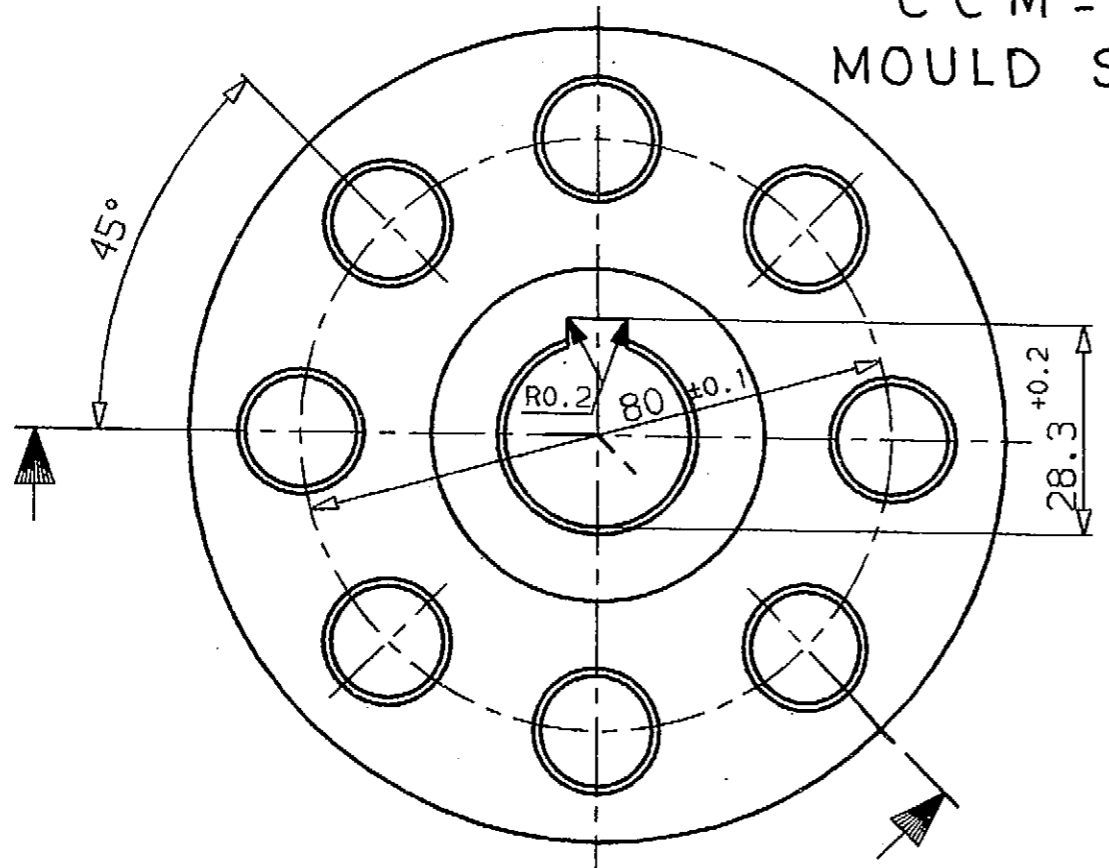
DIN 150 1302 Reize 2	
Reize	Reize
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓

Acceptable deviations of dimensions without
tolerances mean, as per DIN 7168 -m-5
Surface peak-to-valley height as per DIN-ISO 1302

SUBMITTED FOR	APPROVAL	SCALE 1:2	DATE
APPROVAL	BY DATE	PRP BY s. kroemer	26.04.93
INFORMATION	BY DATE	CHKD BY Nemeo	23.07.93
CONSTRUCTION	BY DATE	APPROV BY Bartkowiak	
		DEPART NENT	6414 TEL. 2854



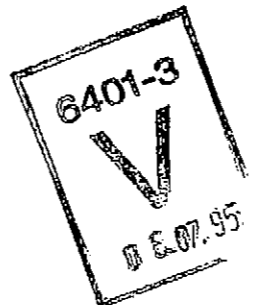
CCM-II
MOULD SYSTEM.



Durchgangslöcher auf Mittenachse
Sacklöcher unter 45° versetzt
THROUGH HOLE ϕ
BLIND HOLE 45°



AS BUILT



25 H7	+0.021
	0
8 P9	-0.015
	-0.051
Paßmaß	Abmaß
TOLERANCE DIMENSION	ALLOWANCES

DIN 3141		DIN ISO 1302 Reihe 2	
	Rz=µm	Ra=µm	
▽	√Rz=100	12,5	
▽▽	√Rz=25	3,2	
▽▽▽	√Rz=6,3	0,8	
▽▽▽▽	√Rz=1	0,1	

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-S
Surface peak-to-valley height as per DIN-ISO 1302

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SIA-Dat	Sto- tus	Modification	Date	Name
				Date of filming

STEEL AUTHORITY OF INDIA LTD.
ROURKELA STEEL PLANT
MODERNISATION PROJECT

Title: SLAB CASTING SHOP IN SMS-2
CASTING MACHINE EQUIPMENT; MOULD
NARROW FACE ADJUSTMENT ASS'Y; HALVE COUPLING
PACKAGE No. 104.2

CONSULTING ENGINEERS **M. N. DASTUR & COMPANY LIMITED** CALCUTTA

RSP DRG. No. 104.2-13-01-030100-0255-
SHEET-NO. 1 OF 1

MANNESMANN DEMAG Hüttentechnik	SIA-Dat. 07.95 Date of filming JULI 1993	Language E	Ident- No. 39679930	Size 3	Sheet 01 01 Sheets
	Origin	24789930	Replaces	Superseded by	

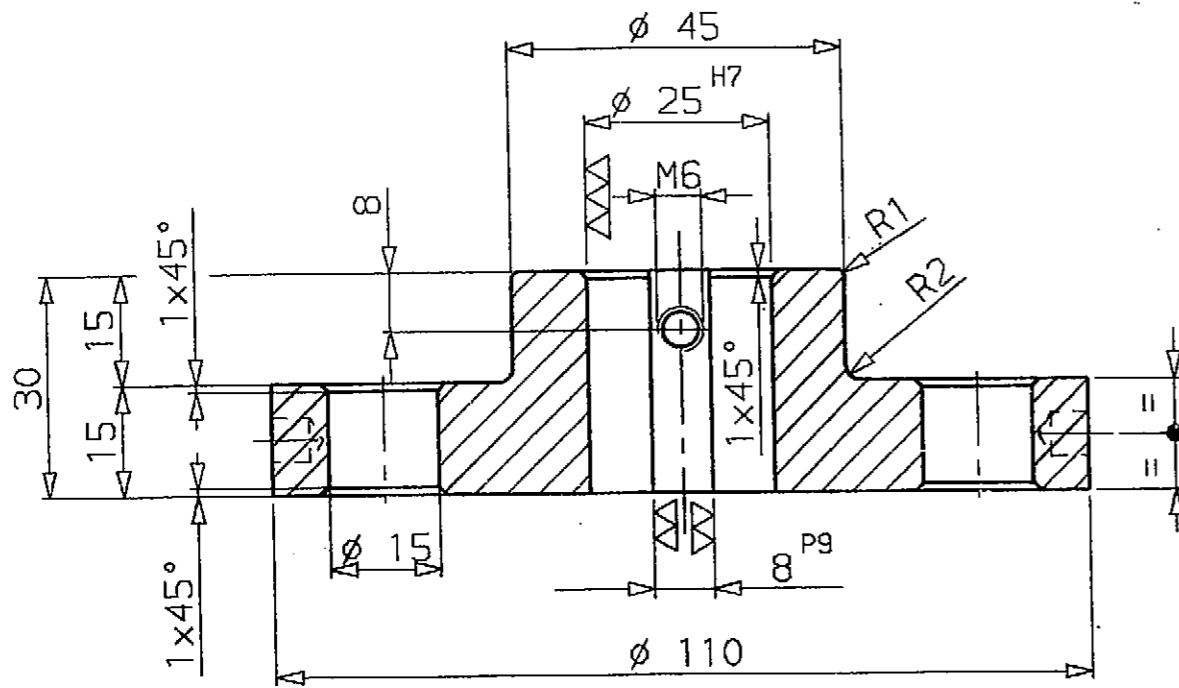
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED
DRG.NO.MEC/
REV

PDIR-169308

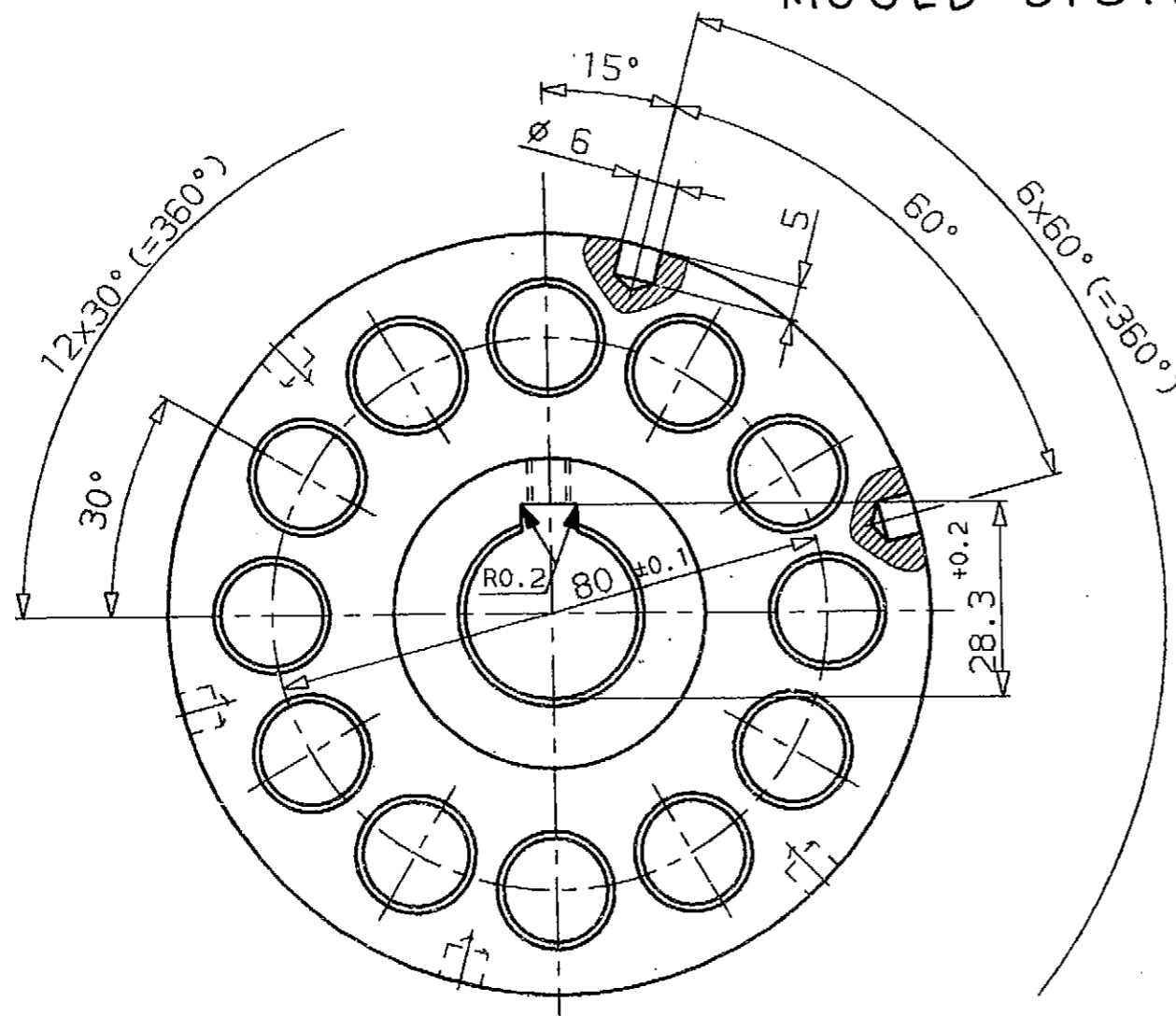
SUBMITTED FOR	APPROVAL	SCALE 1:1	DATE
APPROVAL	BY	DATE	PRPD BY S.Kraemer 28.05.93
INFORMATION			CHKD BY NEMEC 29.06.93
CONSTRUCTION			APPVD BY BARTKOWIAK
			DEPART- MENT 6414 TEL 2854

S 531 Abt. 64181

KRAEM551
-FREMD
6414ROURE3
E 6414ROURE3



CCM-II
MOULD SYSTEM.



AS BUILT



25 H7	+0.021
	0
8 P9	-0.015
	-0.051
Paßmaß	Abmaß
TOLERANCE DIMENSION	ALLOWANCES

DIN 3141		DIN ISO 1302	
		Reihe 2	
	Rz=µm	Ra=µm	
▽	√Rz=100	12,5	
▽▽	√Rz=25	3,2	
▽▽▽	√Rz=6,3	0,8	
▽▽▽▽	√Rz=1	0,1	

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-5
Surface peak-to-valley height as per DIN-ISO 1302

E				
D				
C				
B				
A				
SIA-Dat	Sta-tus	Modification	Date	Name
STEEL AUTHORITY OF INDIA LTD.				
ROURKELA STEEL PLANT				
MODERNISATION PROJECT				
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT; MOULD				PACKAGE No. 104.2
NARROW FACE ADJUSTMENT ASS'Y; HALVE COUPLING				
CONSULTING ENGINEERS	M. N. DASTUR & COMPANY LIMITED			CALCUTTA
RSP DRG. No.	104.2-13-01-030100-0256-			SHEET-No. 1 OF 1
MANNESMANN	SIA-Dat	Language	Ident-No.	Size
DEMAG	07.95	E	39680030	3
Hüttentechnik	Date of Filming	Origin	Replaces	Superseded by
		24790030		
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED				REV
DRG. NO. MEC/				
PDIR-169309				
SUBMITTED FOR		APPROVAL		SCALE 1:1
APPROVAL		BY	DATE	DATE
INFORMATION				PRPD BY S.Kraemer 27.05.93
CONSTRUCTION				CHKD BY NEMEC 29.06.93
				APPVD BY BARTKOWIAK
				DEPART-MENT 6414 TEL 2854

S 531 Abt. 64181

KRAEM551

-FREM

6414ROURE3

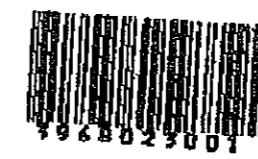
E 6414ROURE3

CCM-II
MOULD SYSTEM

AS BUILT



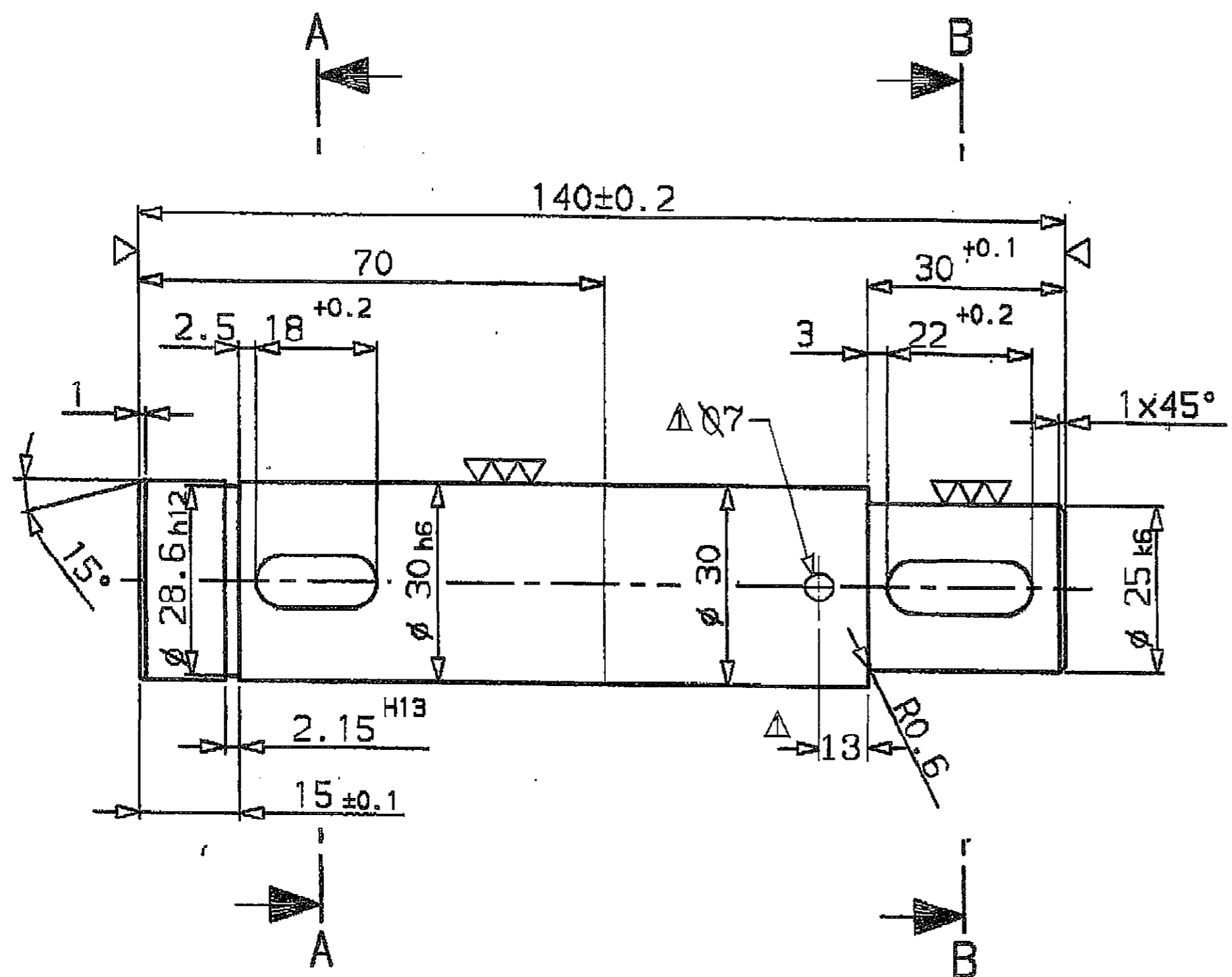
DIN 9141	DIN ISO 1302 Reihe 2	
	Rz=µm	Ra=µm
▽	√Rz=100	12.5
▽▽	√Rz=25	3.2
▽▽▽	√Rz=6.3	0.8
▽▽▽▽	√Rz=1	0.1



Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-S

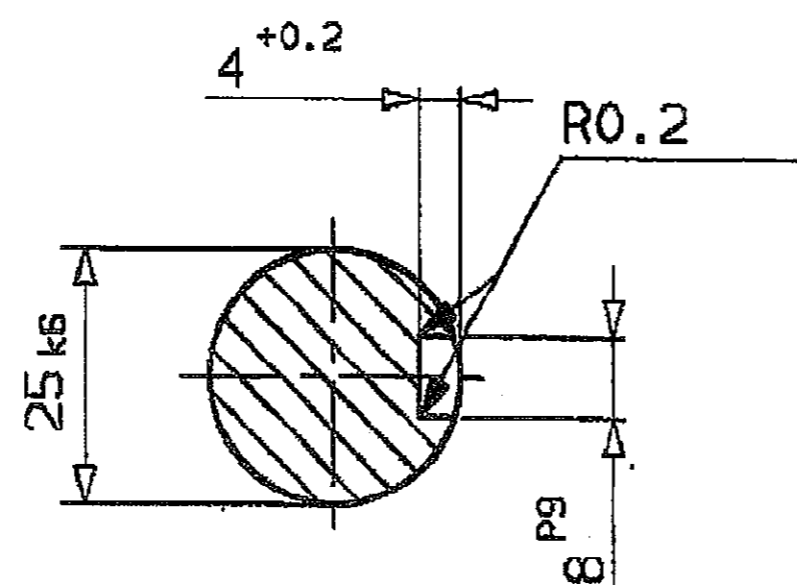
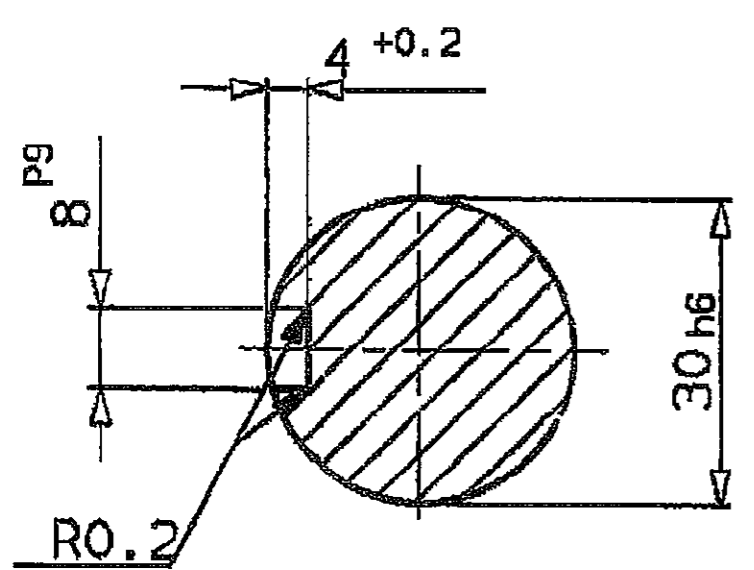
Surface peak-to-valley height as per DIN-ISO 1302

2.15 H13	+0.140
	0
8 P9	-0.015
	-0.051
25 k6	+0.015
	+0.002
28.6 h12	0
	-0.210
30 h6	0
	-0.013
Paßmaß	Abmaß
TOLERANCE DIMENSION	ALLOWANCES



SECTION A-A

SECTION B-B



E				
D				
C				
AS MARKED VIDE W.O.No 009000031692	01.06.17	SS		
Maß 142mm in 140mm geändert	26.06.95	Brodka		
SIA-Date	Modifikation	Date	Name	Date of Filing

STEEL AUTHORITY OF INDIA LTD.
ROURKELA STEEL PLANT
MODERNISATION PROJECT

Title: SLAB CASTING SHOP IN SMS-2
CASTING MACHINE EQUIPMENT; MOULD
NARROW FACE ADJUSTMENT ASS'Y; SHAFT

PACKAGE No.
104.2

CONSULTING ENGINEERS **M. N. DASTUR & COMPANY LIMITED** CALCUTTA

RSP DRG. No. 104.2-13-01-030100-0258-A SHEET-NO. 1 OF 1

MANNESMANN DEMAG Hüttentechnik	SIA-Date	Language	Ident- No.	Size	Sheet 01
	Date of Filing		39680230	3	01 Sheets
		Origin	24790230	Replaces	Superseded by

METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED

DRG.NO.MEC/ REV 1

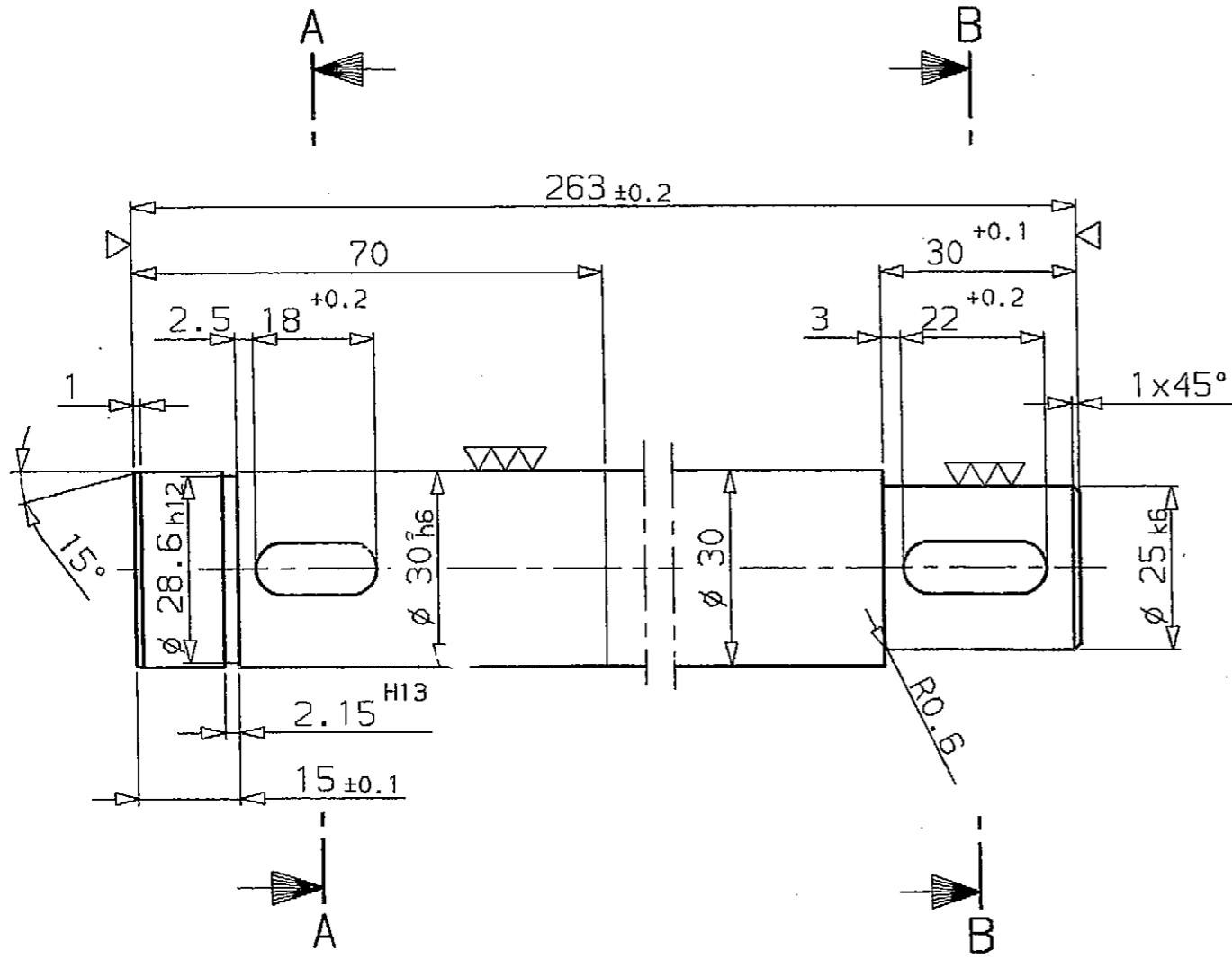
PDIR-169311 R1

SUBMITTED FOR	APPROVAL	SCALE	DATE
APPROVAL	BY: S. Kraemer	1:1	28.05.93
INFORMATION	BY: NEMEC		30.06.93
CONSTRUCTION	BY: BARTKOWIAK		
	DEPARTMENT	6414 TEL 2854	

S. 531 Abt. 64181

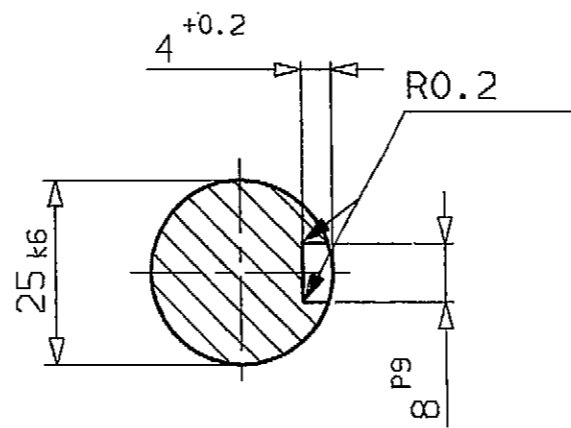
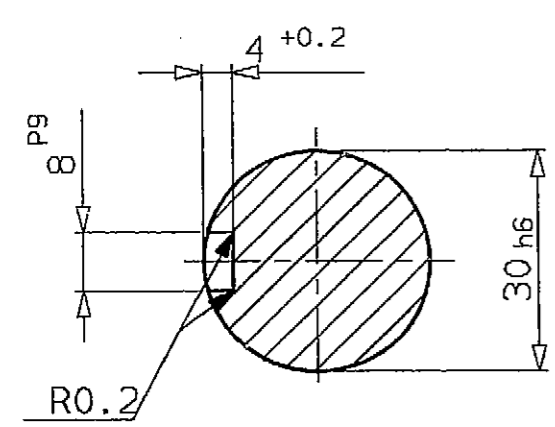
BRODK5CR

E 6414ROURE3 6414ROURE3 -FREM



SECTION A-A

SECTION B-B



CCM-II
MOULD SYSTEM.

2.15 H13	+0.140
	0
8 P9	-0.015
	-0.051
25 k6	+0.015
	+0.002
28.6 h12	0
	-0.210
30 h6	0
	-0.013
Paßmaß	Abmaß
TOLERANCE DIMENSION	ALLOWANCES

AS BUILT



DIN 3141		DIN ISO 1302 Reihe 2	
		Rz=µm	Ra=µm
√	√	√Rz=100	12,5
√√	√√	√Rz=25	3,2
√√√	√√√	√Rz=6,3	0,8
√√√√	√√√√	√Rz=1	0,1

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-S
Surface peak-to-valley height as per DIN-ISO 1302

SIA-Dat.	Sta-tus	Modification	Date	Name	Date of filing
			26.06.95	Brodka	

STEEL AUTHORITY OF INDIA LTD.
ROURKELA STEEL PLANT
MODERNISATION PROJECT

Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT; MOULD NARROW FACE ADJUSTMENT ASS'Y; SHAFT	PACKAGE No. 104.2
CONSULTING ENGINEERS M. N. DASTUR & COMPANY LIMITED	CALCUTTA

RSP DRG. No. 104.2-1B-01-030100-0259-A	SHEET-NO. 1 OF 1
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MANNESMANN DEMAG Hüttentechnik	SIA-Dat.	Language	Ident- No.	Size	Sheet 01
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	Date of Filing	Origin	24790330	Replaces	Superseded by

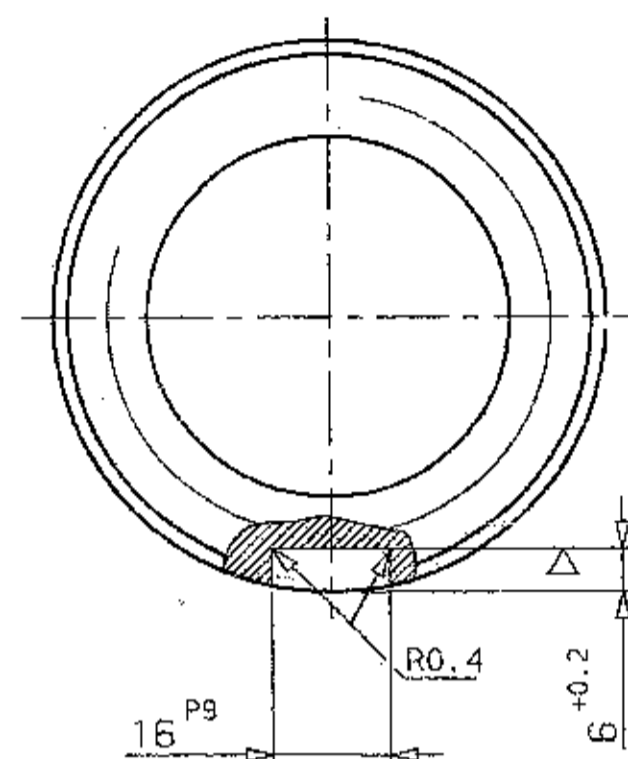
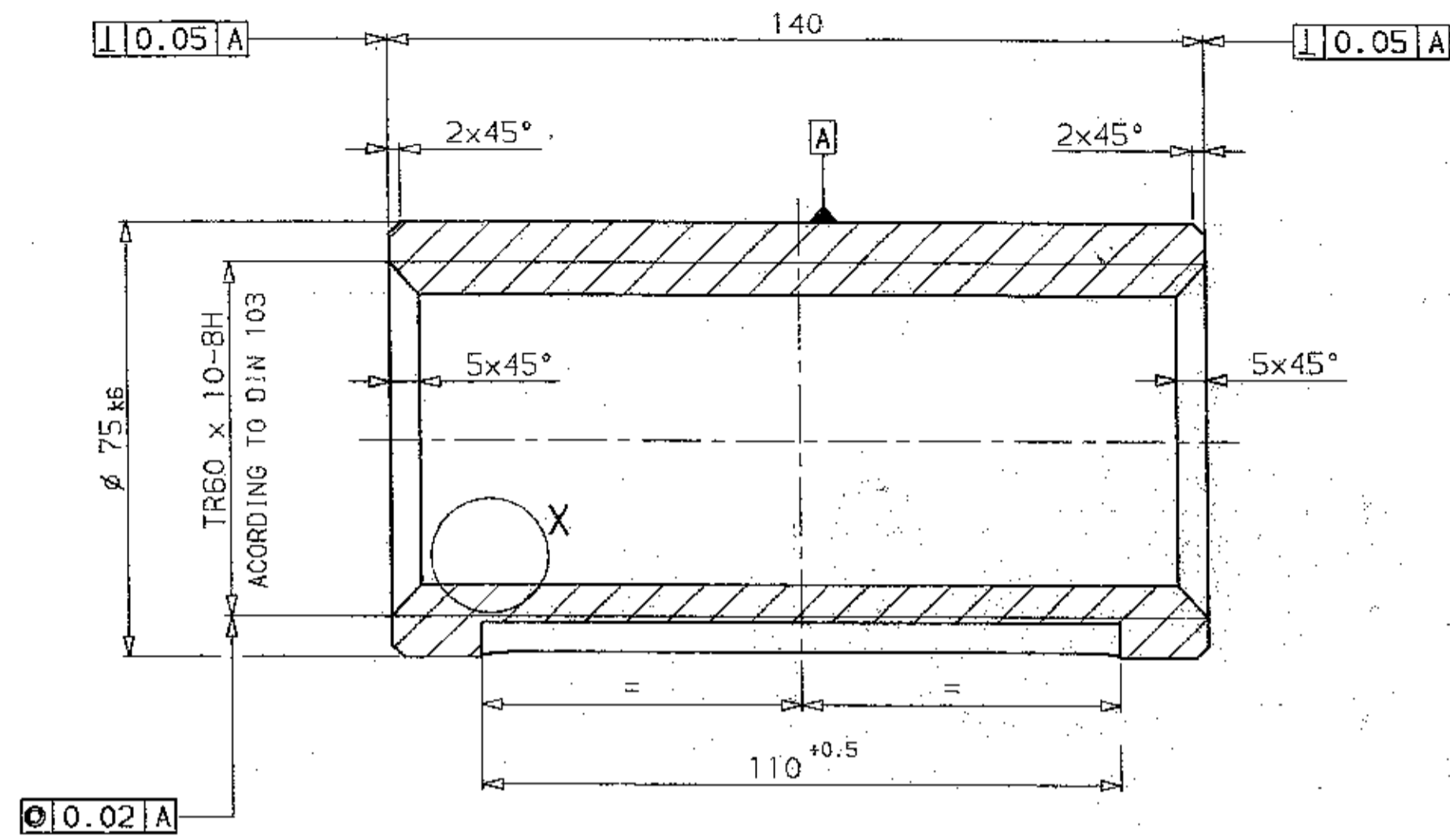
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED	DRG. NO. MEC/	REV
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PDIR-169312

SUBMITTED FOR	APPROVAL	SCALE 1:1	DATE
APPROVAL	BY	PRPD BY S. Kraemer	28.05.93
INFORMATION		CHKD BY NEMEC	30.06.93
CONSTRUCTION		APPVD BY BARTKOWIAK	
		DEPART-MENT	6414 TEL 2854

S 531 Abt. 64181

BRODK5CR
-FREM
6414R0URE3

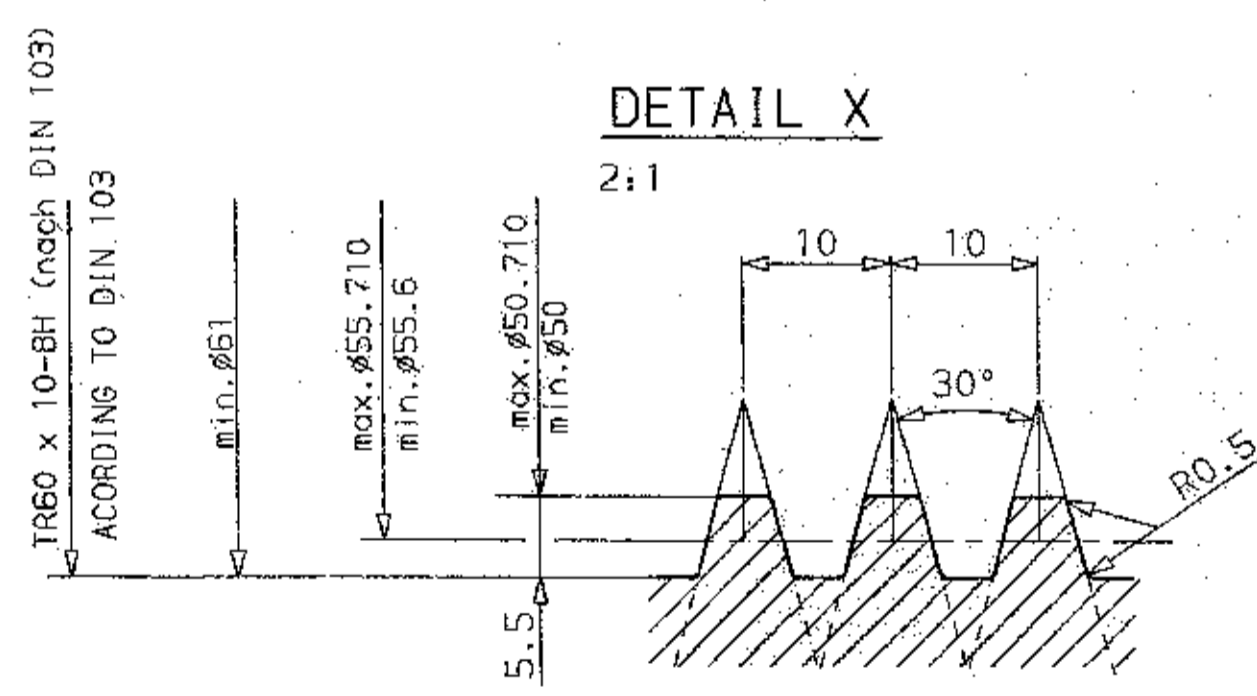


AS BUILT



Gewinde passend zur Spindel Id.Nr.39610630
 THREAD FITTED TO SPINDLE RSP-NO.104.2-13-01-030100-0227

**CCM-II
 MOULD SYSTEM**



DIN 3141	DIN 150-1302 Reihe 2
✓	✓
✓	✓
✓	✓
✓	✓
✓	✓

Acceptable deviations of dimensions without tolerances mean, as per DIN 7168 -m-S
 Surface peak-to-valley height as per DIN-150 1302

TOLERANCE DIMENSION	ALLOWANCES
75 k6	+0.021 +0.002
16 p9	-0.018 -0.061
Размер	Abmaß

E					
D					
C					
B					
A					
SIA-Date	Sto-Date	Modification	Date	Name	Date of Filing
STEEL AUTHORITY OF INDIA LTD. ROURKELA STEEL PLANT MODERNISATION PROJECT					
Title: SLAB CASTING SHOP IN SMS-2 CASTING MACHINE EQUIPMENT; MOULD				PACKAGE No. 104.2	
PINOL: PIPE ASS'Y;		NUT TR60 X 10			
CONSULTING ENGINEERS		M. N. DASTUR & COMPANY LIMITED		CALCUTTA	
RSP DRG. No. 104.2-13-01-030100-0263-1				SHEET-No. 1 OF 1	
MANNESMANN DELAG Hüttentechnik		Date of filing JULI 1993		Ident. No. 39680730 Size 01 Sheet 01	
METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LIMITED		DRG. NO. MEC/		REV	
Pd/R.169316					
SUBMITTED FOR		APPROVAL		SCALE 1:2 DATE	
APPROVAL		BY		DATE	
INFORMATION		BY		DATE	
CONSTRUCTION		BY		DATE	
		PRPD BY S. Kraemer		17.05.93	
		CHKD BY Nemecc		28.06.93	
		APPROV BY Bartkowiak			
		DEPART-MENT		6414 TEL. 2854	

M MANNESMANN W DEMAG			Parts List				DT = Document Type RP = Repeat Part AO = Advance Order AN = Amendment No.			Weight B/F in kg			
Item No.	Quantity per unit*	QU	ID-No. Part	R e v	Designation, Abbr., Dimensions	Weight each (fin.) in kg	ID.-No. Unfin. Part	S P C	D T P	R P O	A O	Remarks, Certificate, Advance Ident.	Weight per Quantity in kg
*relating to one assembly			ID-No. Documents	S	Standard, Material		ID- No.	Pattern Die	List				
1	1	1		7	Hex nut M 24 DIN 936 8.8	0,06							0,06
2	1	1		7	Pipe 33,7 x 2,6 x 90 DIN 2448 St 35	0,22							0,22
3	1	1		7	PL 3 x dia 29 DIN 1543 RSt 37-2	0,01							0,01
Remarks UNIT = 1 HEAD NUT CCM-II MOULD SYSTEM.				Designation HEAT NUT				Weight p.Unit in kg 0,3		Sub-Total in kg 0,3			
Customer ROURKELA STEEL				Order No. 1.412.3590		Qty.per Order 24		Weight per Order in kg 7					
Filmed on:	Date: 16.07.93	24.07.93		E D C B A	Filmed on	Rev	Amendm.No.	Date	Name	Size	RSP No. 104.2-13-01- 030100-0235-0	Sheet No. 1	List
Dept.: 6414	Name: Brodka Design Bartkowiak Contr.Mngt. Nemec Parts-List Control	Lang.	Ident No. C396114.30							Sheets 1			

AS BUILT

PDIR-205408

M MANNESMANN W DEMAG			Parts List				DT = Document Type RP = Repeat Part AO = Advance Order AN = Amendment No.			Weight B/F in kg			
Item No.	Quantity per unit*	QU	ID-No. Part	Rev	Designation, Abbr., Dimensions	Weight each (fin.) in kg	ID.-No. Unfin. Part	S C	D T	R P	A O	Remarks, Certificate, Advance Ident.	Weight per Quantity in kg
*relating to one assembly			ID-No. Documents	S	Standard, Material		ID-No.	Pattern Die	List				
1	1	1		7	Tube bend 90°-219,1 x 6,3 - 2 d W.N. 01159630 St35	10,-						with chamfer 21	10,-
2	1	1		7	Pipe 219,1 x 6,3 x 56 DIN 2448 St35	1,5							1,5
3	1	1		7	Flange C 200 DIN 2633 RSt 37-2	11,-							11,-
4	1	1		7	PL dia 340 x 24 DIN 1543 RSt 37-2	8,-						machined	8,-
Remarks UNIT = 1 ELBOW CCM-II MOULD SYSTEM.						Designation ELBOW					Weight p.Unit in kg 30,5	Sub-Total in kg 30,5	
Customer ROURKELA STEEL						Order No. 1.412.3590					Qty. per Order 24	Weight per Order in kg 732	
Filmed on:	Date: 02.08.93		17.08.93		E D C B A		Size		RSP No. 104.2-13-01- 030100-0321-0		Sheet No. 1		List
Dept.: 6414	Name: Brodka Design		Bartkowiak Contr.Mngt.		Nemec Parts-List Control		Filmed on	Rev	Amendm.No.	Date	Name	Ident No. C396150.30	Sheets 1.

AS BUILT

PDIR-205423

M HANNESMANN W DEMAG			Parts List				DT = Document Type RP = Repeat Part AO = Advance Order AN = Amendment No.			Weight B/F in kg			
Item No.	Quantity per unit*	QU	ID-No. Part	Rev	Designation, Abbr., Dimensions	Weight each (fin.) in kg	ID.-No. Unfin. Part	S P C	D T P	R I P O	Remarks, Certificate, Advance Ident.	Weight per Quantity in kg	
*relating to one assembly			ID-No. Documents	S	Standard, Material		ID- No. Pattern Die	List					
1	1	1		7	Pipe 48,3 x 2,6 x 1280 DIN 2462 1.4571	3,8						3,8	
2	1	1		7	Pipe 48,3 x 2,6 x 52 DIN 2462 1.4571	0,31					PDIR-205433	0,31	
3	1	1		7	Tube bent 90 - 48,3 x 2,6 W.N. 01159699 1.4571	0,19					with chamfer 21	0,19	
4	4	1		7	Pipe 17,2 x 2,3 x 81 DIN 2462 1.4571	0,08						0,36	
5	5	1		7	Pipe 17,2 x 2,3 x 196 DIN 2462 1.4571	0,18					bent	0,9	
6	9	1		9	Nipple Fu 3 Fix Type 066.410.17	0,06					Supplier Lechler D-70736 Fellbach	0,54	
7	2	1		7	PL 3 x dia 44 DIN 1543 1.4571	0,04						0,08	
8	1	1		9	Coupling 48,3 x 2,6 Type FCL-316L-48,3-S-V	0,5					Sandvik, D-40549 Düsseldorf	0,5	
9	2	1		7	PL 10 x 60 x 110 DIN 1543 RSt 37-2	0,5						1,-	
Remarks UNIT = 1 SPRAY PIPE BROADF.INSIDE CCM-II MOULD SYSTEM.					Designation SPRAY PIPE BROADFACE INSIDE					Weight p.Unit in kg 7,5		Sub-Total in kg 7,32	
Customer ROURKELA STEEL					Order No. 1.412.3590					Qty.per Order 6		Weight per Order in kg 45	
Filmed on:		Date: 12.07.93		15.07.93		E D C B A		Size I Lang.		RSP No. 104.2-13-01- 030100-0341-0		Sheet No. 1	List
Dept.: 6414		Name: Brodka Design		Bartkowiak Contr.Mngt.		Nemec Parts-List Control		Ident No. C396165.30		Sheets 1			
Filmed on		Rev		Amendm.No.		Date		Name					

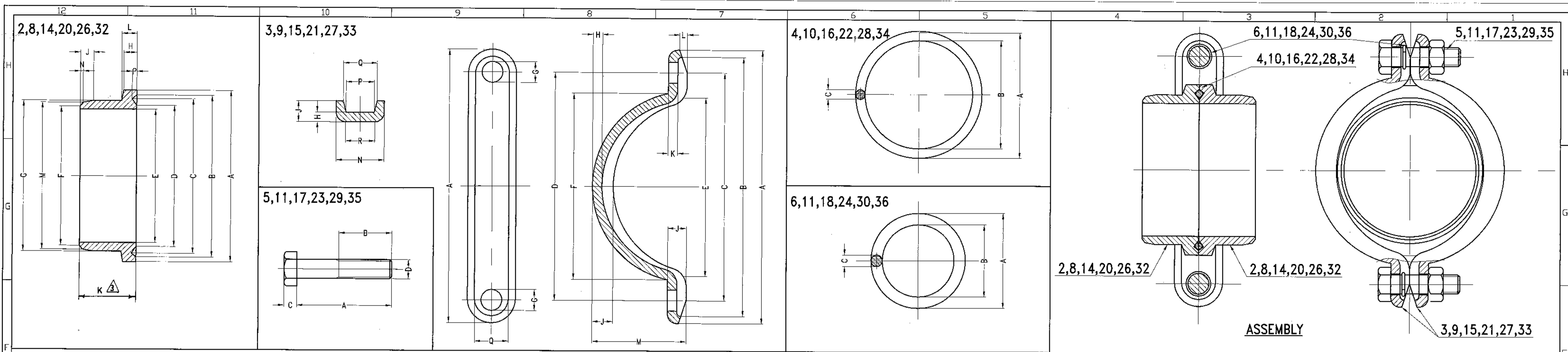
AS BUILT

MANNESMANN W. DEMAG			Qu = Quantity Unit Rev = Revision S = Size SpC = Split Code				Parts List				DT = Document Type RP = Repeat Part AO = Advance Order AN = Amendment No.				Weight B/F in kg		
Item No.	Quantity per unit*	QU	ID-No.	Part	Rev	Designation, Abbr., Dimensions	Weight each (fin.) in kg	ID-No.	Unfin. Part	S	D	R	A	Remarks, Certificate, Advance Ident.		Weight per Quantity in kg	
*relating to one assembly			ID-No. Documents	S		Standard, Material		ID-No.	Pattern Die	List							
1	1	1		7		Pipe 48,3 x 2,6 x 1280 DIN 2462 1.4571	3,8									3,8	
2	1	1		7		Pipe 48,3 x 2,6 x 52 DIN 2462 1.4571	0,31									0,31	
3	1	1		7		Tube bent 90 - 48,3 x 2,6 W.N. 01159699 1.4571	0,19							with chamfer 21		0,19	
4	4	1		7		Pipe 17,2 x 2,3 x 92 DIN 2462 1.4571	0,08									0,36	
5	5	1		7		Pipe 17,2 x 2,3 x 201 DIN 2462 1.4571	0,18							Bent		0,9	
6	9	1		9		Nipple Fu 3 Fix Type 066.410.17	0,06							Supplier Lechler D-70736 Fellbach		0,54	
7	2	1		7		PL 3 x dia 44 DIN 1543 1.4571	0,04									0,08	
8	1	1		9		Coupling 48,3 x 2,6 Type FCL-316L-48,3-S-V	0,5							Supplier Sandvik, D-40549 Düsseldorf		0,5	
9	2	1		7		PL 10 x 60 x 105 DIN 1543 RSt 37-2	0,5									1,-	
Remarks						Designation						Weight p. Unit in kg		Sub-Total in kg			
UNIT - 1 SPRAY PIPE BROADF. OUTSIDE						SPRAY PIPE BROADFACE OUTSIDE						7,5		7,32			
CCM- \uparrow						Customer						Order No.		Qty. per Order		Weight per Order in kg	
MOULD SYSTEM.						ROURKELA STEEL						1.412.3590		6		45	
Filmed on:		Date: 12.07.93		15.07.93		E D C B A		Size		RSP No.		Sheet No.		List			
Dept.:		Name:				Rev		Lang.		104.2-13-01-030100-0342-0		1					
6414		Brodka Design		Bartkowiak Contr.Mngt.		Amendm.No.		Date		Name		1					
		Nemec		Parts-List Control		Filmed on		Date		Name		Sheets 1					

AS BUILT

PDIR
205434

M MANNESMANN W DEMAG			Parts List				DT = Document Type RP = Repeat Part AO = Advance Order AN = Amendment No.				Weight B/F in kg		
Item No.	Quantity per unit*	QU	ID-No. Part	Rev	Designation, Abbr., Dimensions	Weight each (fin.) in kg	ID.-No. Unfin. Part	S	D	R	A	Remarks, Certificate, Advance Ident.	Weight per Quantity in kg
*relating to one assembly			ID-No. Documents	S	Standard, Material		ID- No.	Pattern Die	List				
1	1	1		7	Pipe 42,4 x 2,6 x 700 DIN 2462 1.4571	1,8							1,8
2	3	1		7	Pipe 17,2 x 2,3 x 40,6 DIN 2462 1.4571	0,04							0,12
3	1	1		7	Pipe 17,2 x 2,3 x 37,2 DIN 2462 1.4571	0,03							0,03
4	1	1		7	Pipe 17,2 x 2,3 x 48 DIN 2462 1.4571	0,04							0,04
5	4	1		7	Flat bar 12 x 45 x 50 DIN 1017 RSt 37-2	0,21							0,84
6	1	1		9	Socket 1 1/4" DIN 2986 1.4571	0,21							0,21
7	2	1		7	PL 3 x dia 38 DIN 1543 1.4571	0,03							0,06
8	2	1		9	Socket 3/8" DIN 2986 1.4571	0,03							0,06
9	3	1		9	Nipple Fu 3 fix Type 066.410.17	0,06						Supplier Lechler D-70736 Fellbach	0,18
AS BUILT													
PDIR-205435													
Remarks UNIT = 1 SPRAY PIPE NARROW FACE CCM-II MOULD SYSTEM.				Designation SPRAY PIPE NARROW FACE				Weight p.Unit in kg 3,3		Sub-Total in kg 3,32			
Customer ROURKELA STEEL				Order No. 1.412.3590				Qty.per Order 12		Weight per Order in kg 40			
Filmed on: Date: 12.07.93 15.07.93		Name: Brodka Design		Bartkowiak Contr.Mngt.		Nemec Parts-List Control		Size RSP No. 104.2-13-01- 030100-0343-0		Sheet No. 1		List	
Dept.: 6414		Filmed on		Rev		Amendm.No.		Date		Name		Ident No. C396167.30	Sheets 1



TABLE

		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	QTY.	REMARKS		
RECD. 2 OFF	2	FLANGE	#90	#85	#81	#74	#70	#73	#79	7	7	30	8	-	-	2.5	-	-	-	2		
	3	CLAMP	144	142	120	120	91	98	#11	5	11	5	4	50	25.5	15	18	20	R45	2		
	4	'O' RING	#85	#75	#5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	5	HEX.BOLT	51	28	6	M10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	6	RING	#12.5	#9.5	#1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	RECD. 2 OFF	8	FLANGE	#74	#69	#64	#57	#54.5	#56	#63	7.5	7	30	8.5	#60	1.5	2.5	-	-	-	2	
9		CLAMP	130	125	105	104	70	62	#11	4	11	4	2	41	25	15	18	20	R37	2		
10		'O' RING	#67	#57	#5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
11		HEX.BOLT	51	50	6	M10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
12		RING	#12.5	#9.5	#1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
RECD. 2 OFF		14	FLANGE	#74	#69	#64	#57	#54.5	#56	#73	7.5	7	30	8.5	#60	1.5	2.5	-	-	-	2	
	15	CLAMP	130	125	105	104	70	62	#11	4	11	4	2	41	25	15	18	20	R37	2		
	16	'O' RING	#67	#57	#5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	17	HEX.BOLT	51	50	6	M10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	18	RING	#12.5	#9.5	#1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	RECD. 2 OFF	20	FLANGE	#59	#56	#51	#43	#43	#46	#49	6	1.5	30	7.5	#49	1.5	2.5	-	-	-	2	
21		CLAMP	106	101	85	84	60	64	#9	4	8	4	2	32	22.5	14	16	18	R30	2		
22		'O' RING	#55	#45	#5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
23		HEX.BOLT	51	40	6	M8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
24		RING	#12.5	#7.5	#1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
RECD. 2 OFF		26	FLANGE	#42	#42	#37	#31	#28	#31	#34	4	1.5	25	5.5	#34	1.5	2	-	-	-	2	
	27	CLAMP	80	77	65	63	46	47	#7	3	6	3	2	23.5	17	10	11.5	12	R21	2		
	28	'O' RING	#40	#32	#4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	29	HEX.BOLT	30	30	4	M6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	30	RING	#8.5	#5.5	#1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	RECD. 1 OFF	32	FLANGE	#42	#42	#37	#31	#28	#31	#34	4	1.5	25	5.5	#34	1.5	2	-	-	-	2	
33		CLAMP	80	77	65	63	46	47	#7	3	6	3	2	23.5	17	10	11.5	12	R21	2		
34		'O' RING	#40	#32	#4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
35		HEX.BOLT	30	30	4	M6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
36		RING	#8.5	#5.5	#1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	

DRAWN FROM SAMPLE

NOTE:-

1) ONE SET TO BE TRIED FOR PERFORMANCE BEFORE BULK SUPPLY.

* SHORE HARDNESS-90±3

TOTAL WT. ≈ 11.0 Kg.

NO.	DESCRIPTION	SPECIFICATION	MATERIAL	QTY.	STOCK	SPAREPART	CATLG.	TOTAL KG.
36	RING #8.5/5.5x1.5	-	Fe 410 WA	2	-	-	-	-
35	HEX.BOLT M6x30 N (FULL THREAD)	-	A-6 S.S-304	2	-	-	-	-
34	'O' RING #40/32x4	-	* VITON	1	-	-	-	-
33	CLAMP	-	SS-304(FORGED)	2	-	-	0.2	-
32	FLANGE	-	S.S-304	2	-	-	0.1	-
31	COUPLING 33.7x2.6, PN40(PT.32-36)	-	-	(1)	-	-	-	-
30	RING #8.5/5.5x1.5	-	Fe 410 WA	2	-	-	-	-
29	HEX.BOLT M6x30 N (FULL THREAD)	-	A-6 S.S-304	2	-	-	-	-
28	'O' RING #40/32x4	-	* VITON	2	-	-	-	-
27	CLAMP	-	SS-304(FORGED)	2	-	-	0.15	0.3
26	FLANGE	-	S.S-304	2	-	-	0.15	0.3
25	COUPLING 33.7x2.6, PN40(PT.26-30)	-	-	(1)	-	-	-	-
24	RING #10.5/7.5x1.5	-	Fe 410 WA	2	-	-	-	-
23	HEX.BOLT M8x40 N (FULL THREAD)	-	A-6 S.S-304	2	-	-	0.05	0.1
22	'O' RING #55/45x5	-	* VITON	2	-	-	-	-
21	CLAMP	-	SS-304(FORGED)	2	-	-	0.4	0.8
20	FLANGE	-	S.S-304	2	-	-	0.3	0.6
19	COUPLING 48.3x2.6, PN40(PT.20-24)	-	-	(1)	-	-	-	-
18	RING #12/9.5x1.5	-	Fe 410 WA	2	-	-	-	-
17	HEX.BOLT M10x50 N (FULL THREAD)	-	A-6 S.S-304	2	-	-	0.1	0.2
16	'O' RING #67/57x5	-	* VITON	2	-	-	-	-
15	CLAMP	-	SS-304(FORGED)	2	-	-	0.5	1.0
14	FLANGE	-	S.S-304	2	-	-	0.5	1.0
13	COUPLING 60.3x2.9, PN40(PT.14-18)	-	-	(1)	-	-	-	-
12	RING #12/9.5x1.5	-	Fe 410 WA	2	-	-	-	-
11	HEX.BOLT M10x50 N (FULL THREAD)	-	A-6 S.S-304	2	-	-	0.1	0.2
10	'O' RING #67/57x5	-	* VITON	2	-	-	-	-
9	CLAMP	-	SS-304(FORGED)	2	-	-	0.5	1.0
8	FLANGE	-	S.S-304	2	-	-	0.5	1.0
7	COUPLING 60.3x2.9, PN40(PT.8-12)	-	-	(1)	-	-	-	-
6	RING #12/9.5x1.5	-	Fe 410 WA	2	-	-	-	-
5	HEX. BOLT M10x50 N	-	A-6 S.S-304	2	-	-	0.1	0.2
4	'O' RING #85/75x5	-	* VITON	2	-	-	-	-
3	CLAMP	-	SS-304(FORGED)	2	-	-	0.6	1.2
2	FLANGE	-	S.S-304	2	-	-	0.7	1.4
1	COUPLING 76.1x2.9, PN25(PT.2+6)	-	-	(1)	-	-	-	-

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED

Dimension K added vide D-1033
Matl. changed vide D-171/04

MARKING DELETED & QTY. CHANGED VIDE-D-44853

राउरकेला इस्पात संयंत्र
ROURKELA STEEL PLANT
अभिकल्प विभाग
DESIGN DEPARTMENT

R.No: ZONE BRIEF RECORD DATE APPD. 2001 DATE NAME 3. S.M.S.-II (B.O.F. SHOP) CCM-II

REVISION
DGN. DRN 01.01.01
CHD. Sd. r. S. Mohapatra

REF.DRG. SCALE 1:1 APPROVED SUPERSEDES Drawing Number PD/R-218314

JOB D-42441