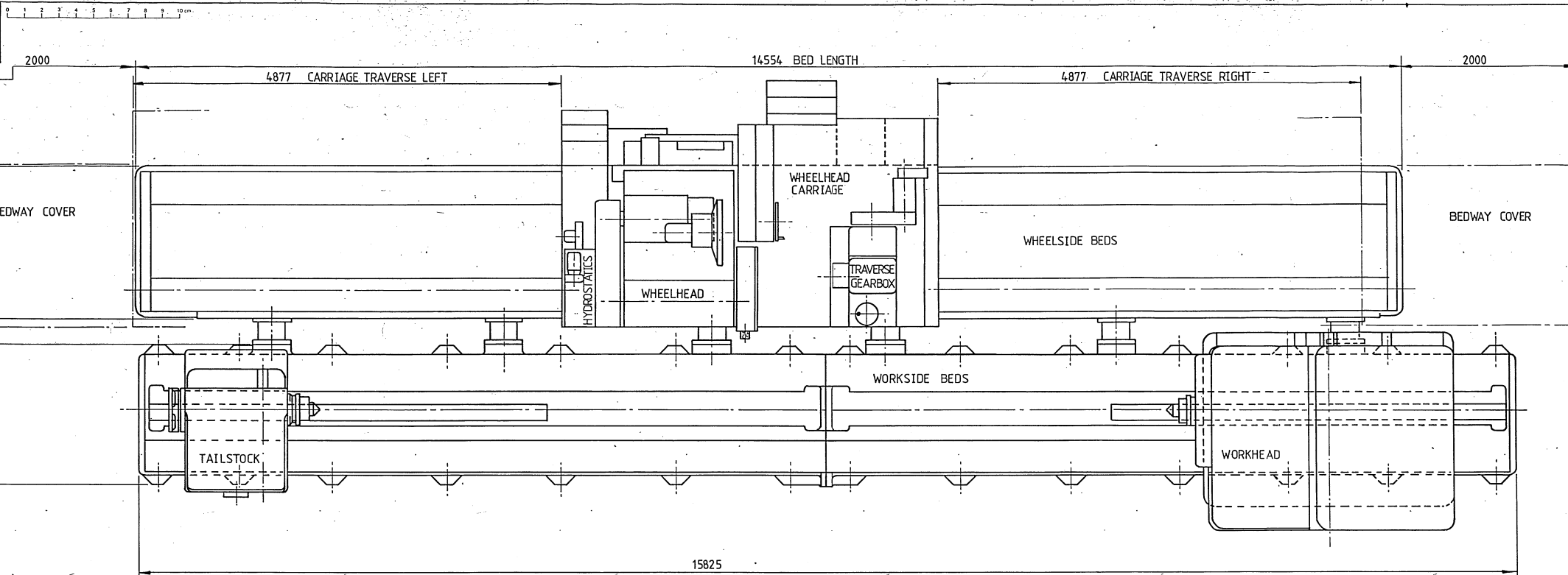


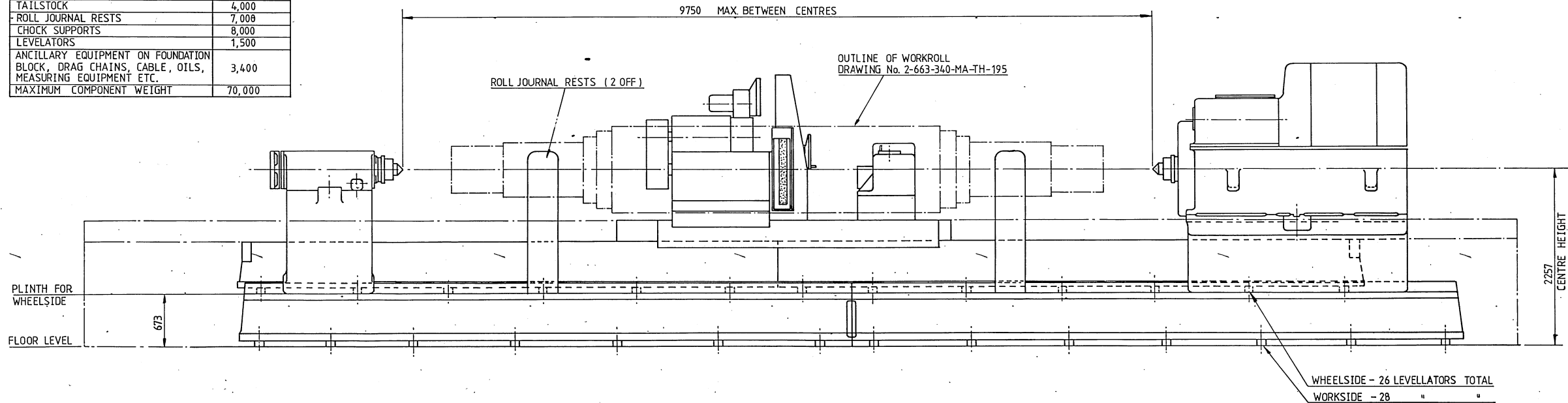
2-669-720-MA-TH-001

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DESCRIPTION	WEIGHT KG.
WHEELSIDE BEDS	32,000
WHEELSIDE CARRIAGE INCLUDING CARRIAGE, WHEELHEAD, CAMBERING GEARBOX, TRAVERSE GEARBOX, CONTROL STATION, HYDRAULIC UNIT	25,850
BEDWAY COVERS - TOTAL (2 OFF)	2,500
TIE BARS	4,000
WORKSIDE BEDS	30,000
WORKHEAD	27,000
TAILSTOCK	4,000
ROLL JOURNAL RESTS	7,000
CHOCK SUPPORTS	8,000
LEVELATORS	1,500
ANCILLARY EQUIPMENT ON FOUNDATION BLOCK, DRAG CHAINS, CABLE, OILS, MEASURING EQUIPMENT ETC.	3,400
MAXIMUM COMPONENT WEIGHT	70,000

CARRIAGE TRAVERSE	75-4190 mm/MIN
WHEELHEAD TRAVERSE	457 mm/MIN. MAXIMUM
WORKHEAD LONGITUDINAL	1490 mm/MIN
WORKHEAD CROSS	171 mm/MIN
TAILSTOCK LONGITUDINAL	2570 mm/MIN
TAILSTOCK CROSS	HAND
WHEEL SPEED	500-1000 RPM
WORKHEAD SPEED	7-60 RPM



DKS No CEM-R03- 001

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.

NEWALL ENGINEERING 02T43-030
 DRAWN BY: P.S. CHECKED BY: AWM. APPROVED BY: DATE: 16-12-82

REVISION	REVISO	APROBO	FECHA	REVISION	REVISO	APROBO	FECHA

NO	FECHA	REVISOR	DESCRIPCION	PROYECTOR	FECHA	PROYECTOR

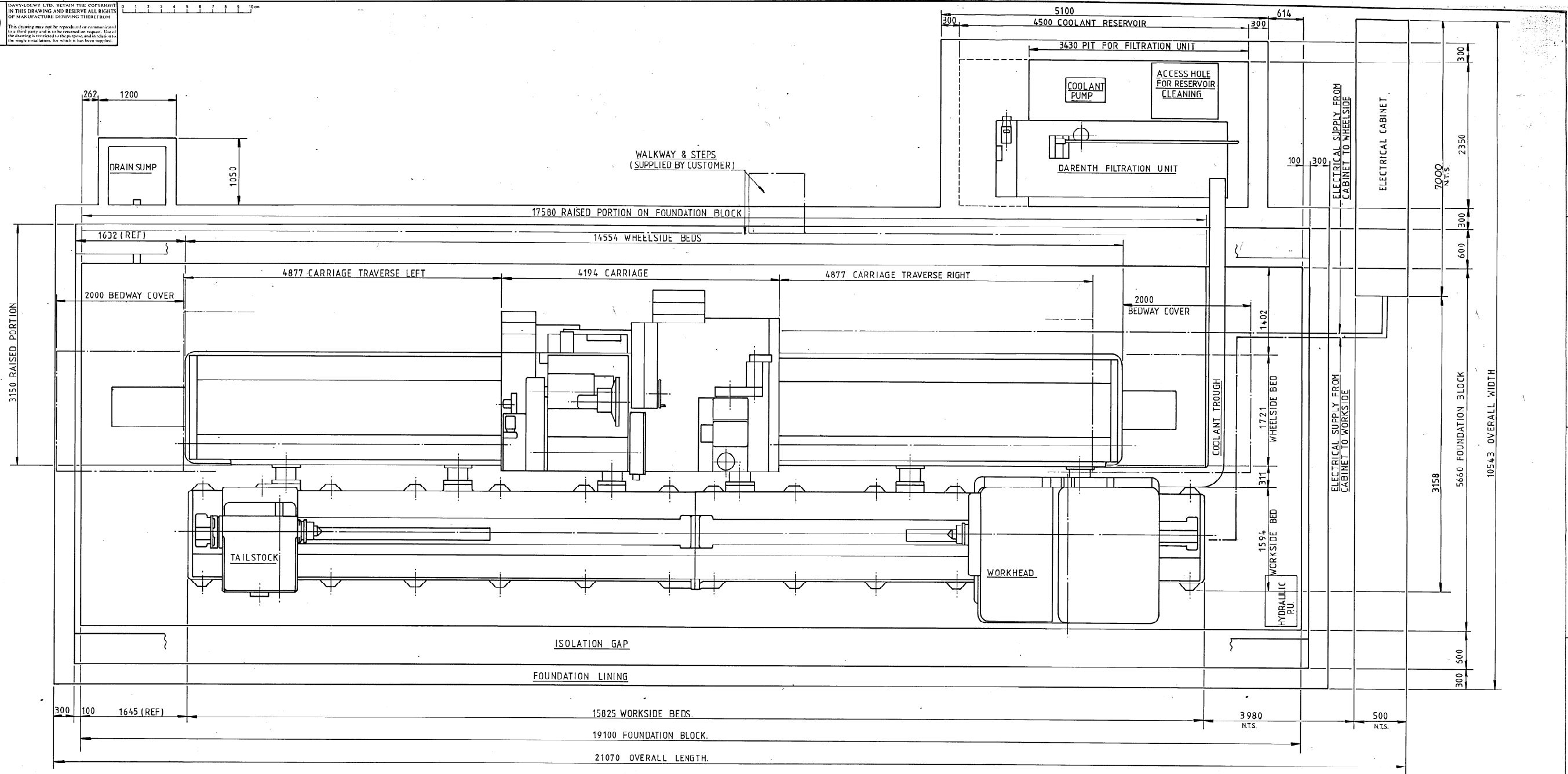
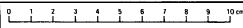
SIDERURGICA LAZARO GARDENAS - LAS TRUCHAS S.A.
 WORK ROLL GRINDING MACHINE.
 MODEL TWB.

Proyector: FECHA: ACOF: ESC:
 Diseñó: Aprobó: 2-669-720-MA-TH-001

2-669-720-MA-TH-002



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SEE DRAWING 2-669-720-MC-TH-001 FOR SERVICES
HEAVIEST SINGLE UNIT 30 TONNES

DKS No CEM-R03-002

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		A ELECTRICAL CABINET RESITED P.G.S. A HYD. P.U POSITIONED 19-12-86 O DKS Nº 2-669-720-MA-TH-002 Cal. C. AUTOR ED. 2-669-720-MA-TH-002
SUB CONTRACTOR NEWALL ENGINEERING 02T 43-026	SUB CONTRACTOR NO. 02T 43-026	
DRAWN BY P.G.S.	CHECKED BY APPROVED BY DATE	FECHA No. REVISION REVISOR APROBADO FECHA No. REVISION REVISOR APROBADO

PLANO No.	TITULO	PLANO No.	TITULO
PLANOS DE REFERENCIA		PLANOS DE REFERENCIA	

SIDERURGICA LAZARO GARDENAS - LAS TRUCHAS S.A. TWB WORK ROLL GRINDER FLOOR PLAN.		Proyecto: FECHA: APROBADO: [Signature] Dibujo: Revisó: 2-669-720-MA-TH-002
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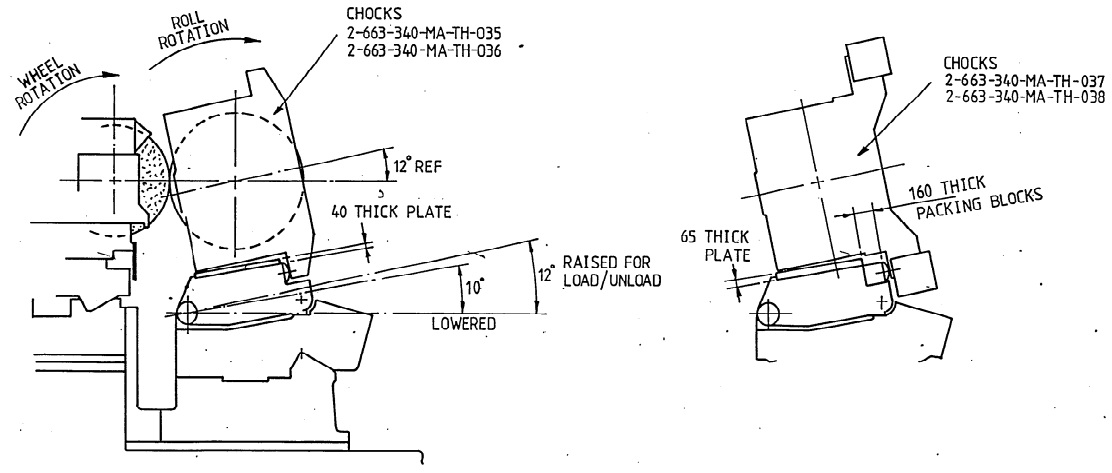
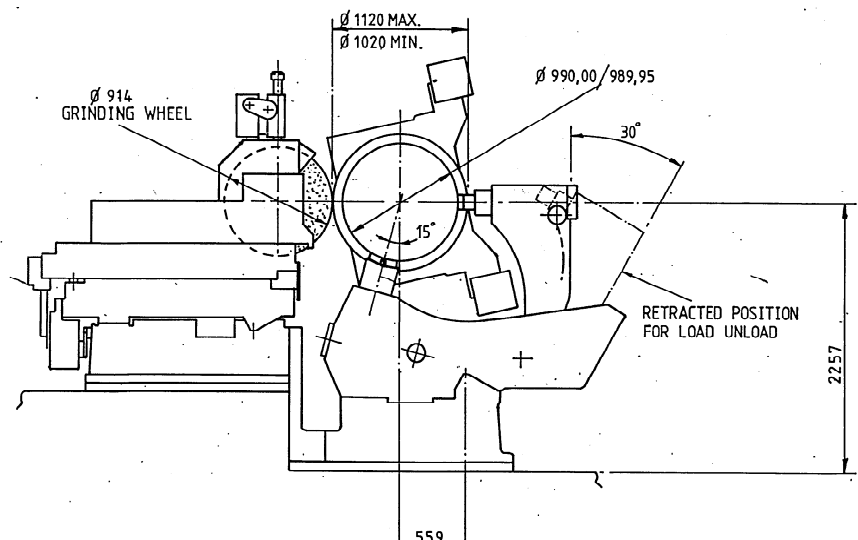
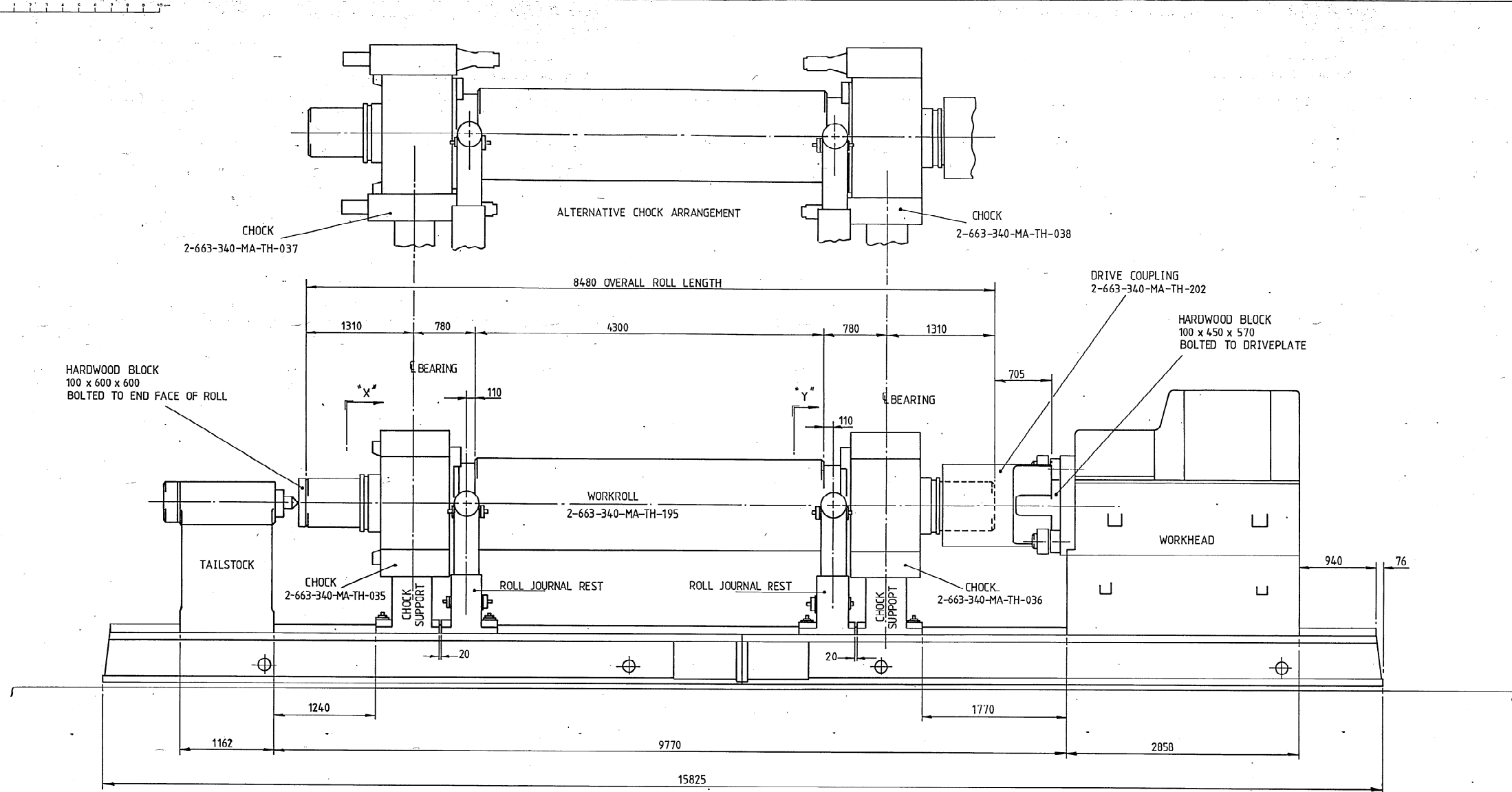
NO.	FECHA	REVISOR	DESCRIPCION	PROYECTISTA	REVISOR

UNIFORMED DIMENSIONS UNIFORMED DIMENSIONS UNIFORMED DIMENSIONS UNIFORMED DIMENSIONS	DIMENSIONAL FINISH DIMENSIONAL FINISH DIMENSIONAL FINISH DIMENSIONAL FINISH
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PLANOS DE REFERENCIA PLANOS DE REFERENCIA	PLANOS DE REFERENCIA PLANOS DE REFERENCIA
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2-669-720-MA-TH-005

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SECTIONS ON 'X' SHOWING CHOCKS AND SUPPORTS (ASSY. DRG. 2-669-MA-TH-001)

SECTION ON 'Y' SHOWING ROLL JOURNAL RESTS 'B' TYPE. ASSY. DRGS. 2-669-722-MA-TH-005, 2-669-722-MA-TH-006, 2-669-722-MA-TH-007

DKS No CEM-R03-005

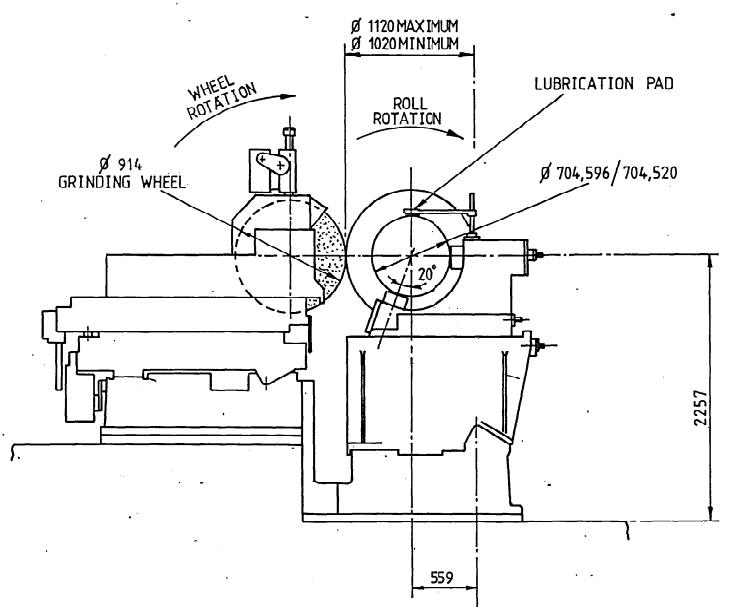
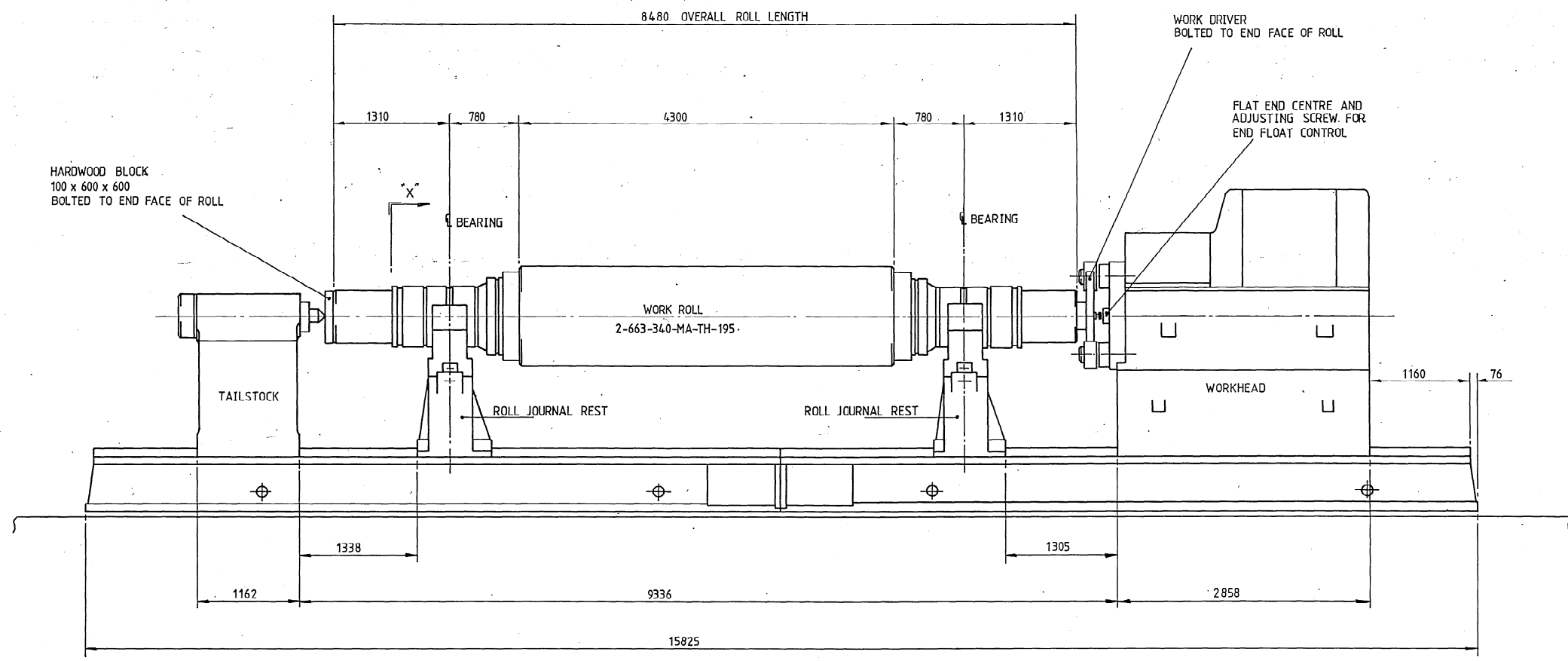
DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		SUB CONTRACTOR		SUB CONTRACTOR DWG. No.	
NEWALL ENGINEERING		99T43-036			
DESIGNED BY	CHECKED BY	APPROVED BY	DATE	FECHA	REVISION
J.H.			18.6.83		
REVISOR	APROBADO	FECHA	REVISION	REVISO	APROBADO

PLANO No	TITULO	PLANO No	TITULO
	PLANOS DE REFERENCIA		PLANOS DE REFERENCIA

NO. OF	ITEM	MATERIAL	DESCRIPTION	DATE	PRODUCTION	SCALE	NO. OF SHEETS
		J.H.		18.6.83			
UNLESS SHOWN TO THE CONTRARY DIMENSIONS TO BE IN MILLIMETERS UNLESS SPECIFIED ALL DIMENSIONS TO BE IN MILLIMETERS DIMENSIONAL TOLERANCES TO BE AS SHOWN SURFACE FINISH TO BE AS SHOWN HOLE DIMENSIONS TO BE AS SHOWN							
SIDERURGICA LAZARO GARDENAS - LAS TRUCHAS S.A. TOOL LAYOUT WORK ROLL 2-663-340-MA-TH-195 TWB WORK ROLL GRINDER							
PLANO No		TITULO		PLANO No		TITULO	
		PLANOS DE REFERENCIA				PLANOS DE REFERENCIA	
Proyector				FECHA		ACOT.	
Dibujado				Aprobado		2-669-720-MA-TH-005	
Revisado						1:20	

2-669-720-MA-TH-006

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DKS No. CEM-R03-006

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		SUB-CONTRACTOR DAVIS No. 99T43-037	
NEWALL ENGINEERING	99T43-037	APPROVED BY	DATE
J.H.		18-6-83	
REVISION	REVISO	APROBADO	FECHA

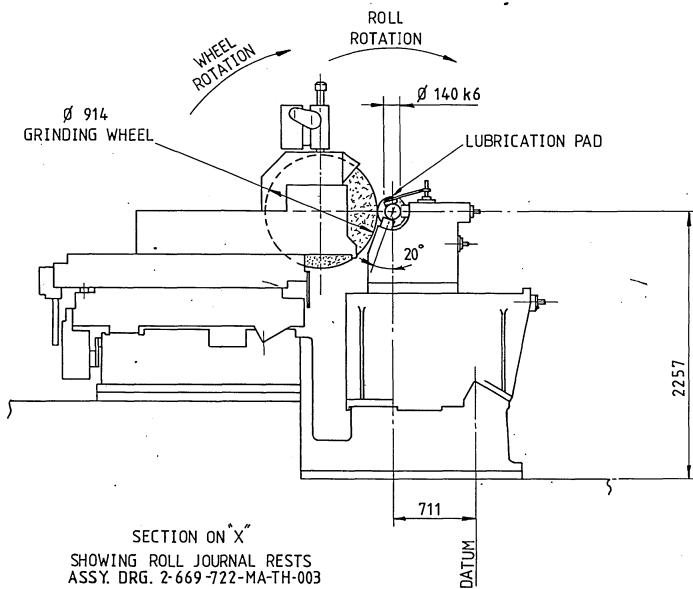
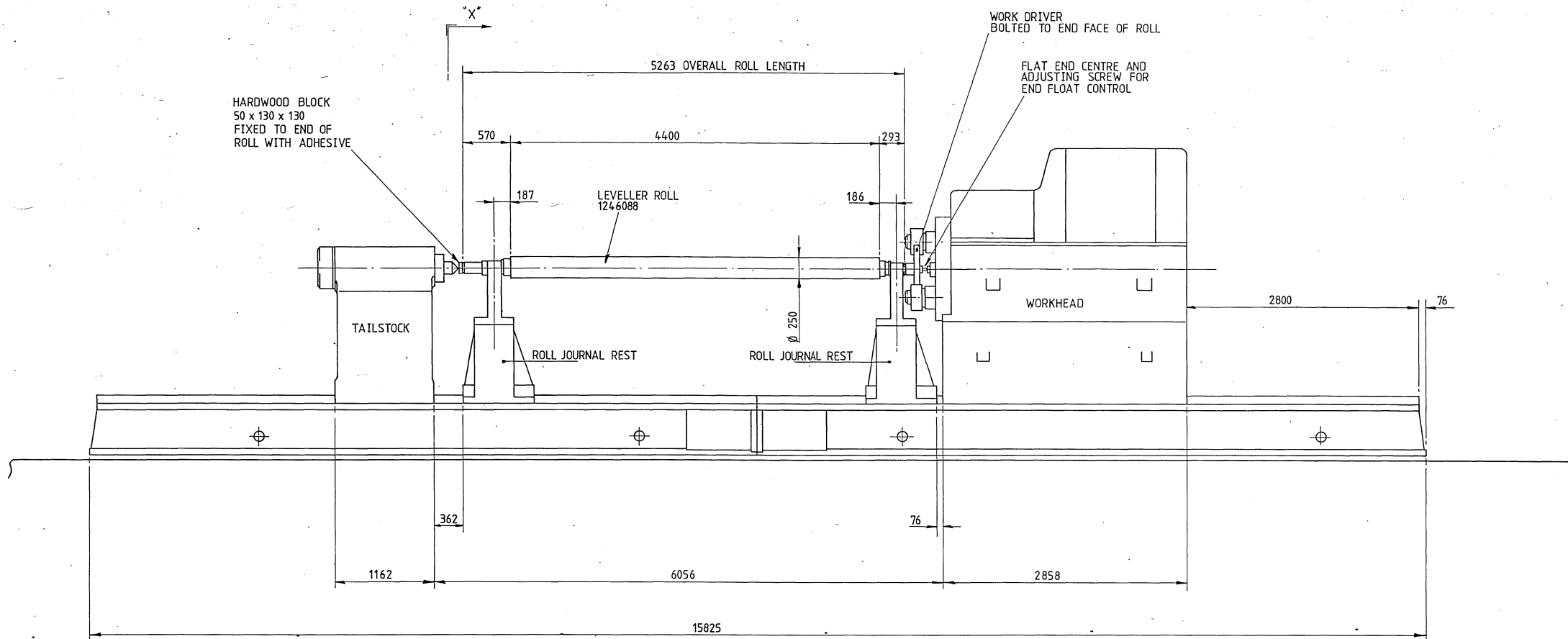
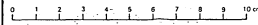
PLANO No.	TITULO	PLANO No.	TITULO
	PLANOS DE REFERENCIA		PLANOS DE REFERENCIA

QUANTITY	CHECKED	APPROVED	DATE	PROJECTION	SCALE
J.H.			18.6.83		1:20
SIDERURGICA LAZARO GARDENAS-LAS TRUCHAS S.A.					
TOOL LAYOUT					
WORK ROLL 2-669-340-MA-TH-195					
MODEL TWB WORK ROLL GRINDER					
PLANO No.	TITULO	PLANO No.	TITULO	FECHA	APROBADO
	PLANOS DE REFERENCIA		PLANOS DE REFERENCIA		2-669-720-MA-TH-006

2-669-720-MA-TH-007



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DKS No CEM-R03-007

NO. OFF.	ITEM NO.	MATERIAL	REV. NO.	DATE	PROJECTION	SCALE
		J.H.		21.6.83	1st Angle	1:1
UNLESS SPECIFIED DIMENSIONS TO BE IN MILLIMETERS		DIMENSIONS TO BE IN MILLIMETERS		DIMENSIONS TO BE IN MILLIMETERS		DIMENSIONS TO BE IN MILLIMETERS
UNLESS SPECIFIED DIMENSIONS TO BE IN MILLIMETERS		DIMENSIONS TO BE IN MILLIMETERS		DIMENSIONS TO BE IN MILLIMETERS		DIMENSIONS TO BE IN MILLIMETERS
PLANO No	TITULO	PLANO No	TITULO	Proyectó	FECHA	ACOT
PLANOS DE REFERENCIA	PLANOS DE REFERENCIA	2-669-720-MA-TH-007				ESC 1:1 2D

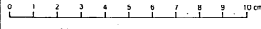
DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.	
SUB-CONTRACTOR	SUB-CONTRACTOR DWS No
NEWALL ENGINEERING	99T43-038
DRAWN BY	DATE
J.H.	21.6.83

REVISION	REVISO	APROBO	FECHA	REVISION	REVISO	APROBO

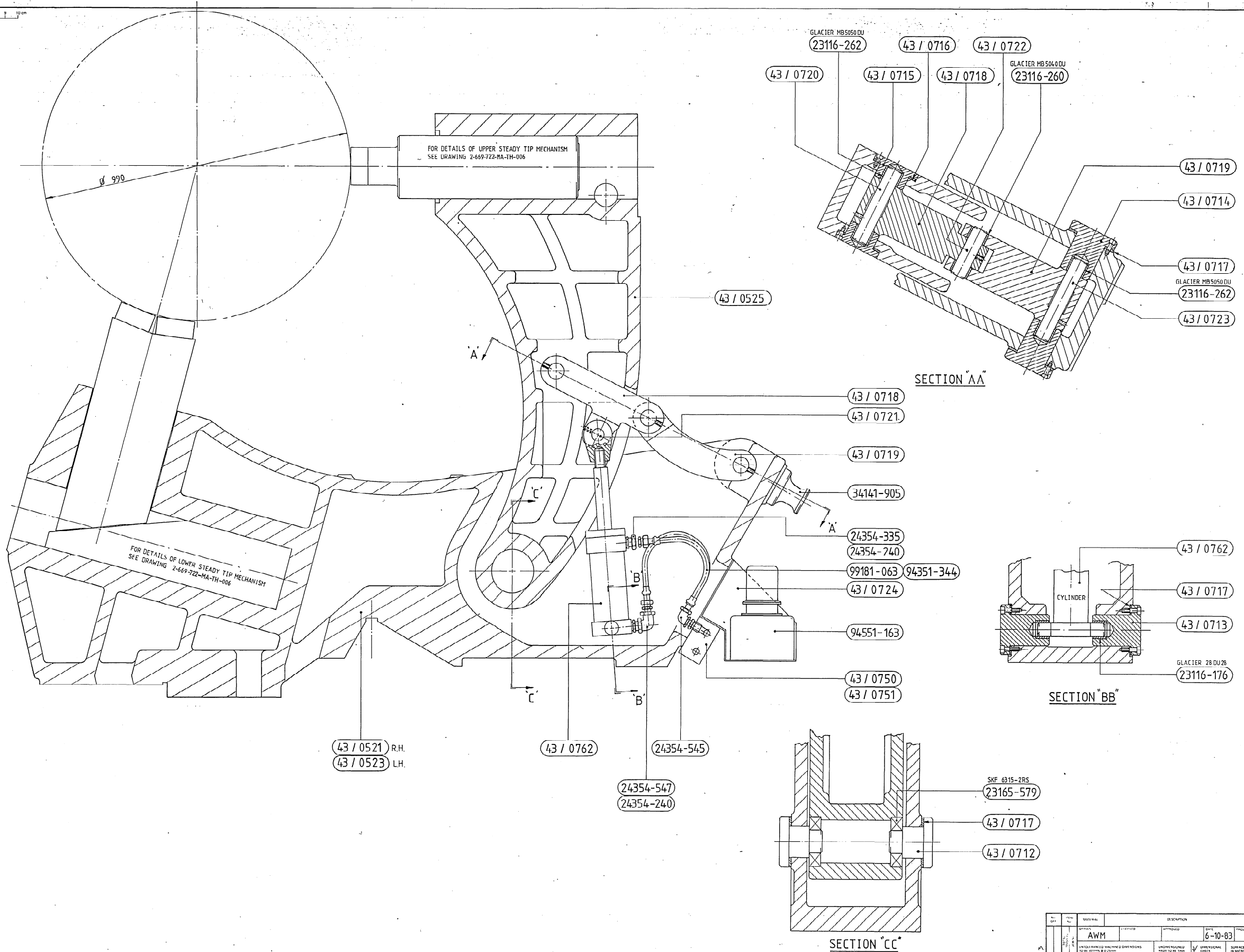
2-669-722-MA-TH-005



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FOR ALL OTHER VIEWS SEE DRAWING NUMBERS 2-669-722-MA-TH-006 AND 007



DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		SUB CONTRACTOR DWG No		56M43-029 SHT 1/3	
NEWALL ENGINEERING	AWM	DESIGNED BY	APPROVED BY	DATE	6-10-83
REVISION	REVISOR	APPROB	FECHA	REVISION	REVISOR

PLANO No	TITULO	PLANO No	TITULO
PLANOS DE REFERENCIA	PLANOS DE REFERENCIA		

AWM	6-10-83	PRODUCTION	1
SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.			
ROLL JOURNAL REST 'B' TYPE			
TWB WORK ROLL GRINDER			
PROYECTO	FECHA	ACER	ESP. 1:4
2-669-722-MA-TH-005			

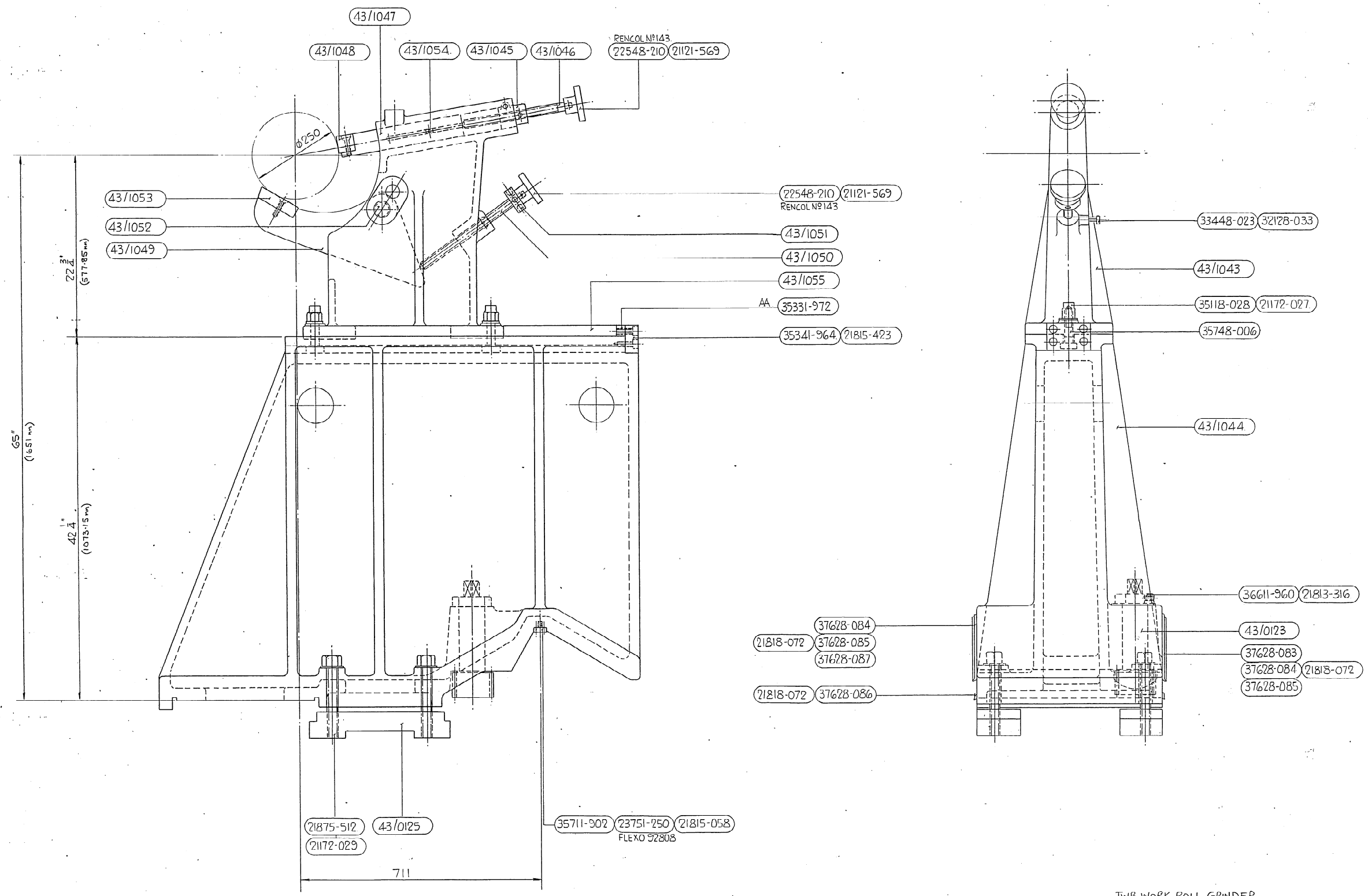
DKS No CEM-R03-029

2-669-722-MA-TH-008

56M43-031

SHEET OF 1

CHANGE - DATE INITIALS - D.O.I.



NEWALL DRAWING NUMBER
56M43-031

FOR STANDARD TOLERANCES, DATUMS, SYMBOLS, ETC.
SEE NEWALL STANDARD DRAWING NO. S150

NEWALL MACHINE TOOLS LTD.
PETERBOROUGH

THIRD ANGLE PROJECTION

MACHINE SERIES 43

DETAIL ASSEMBLY ROLL STEADY REST.

SCALE MATERIAL TREATMENT LOCATION A 0 SHEET 1 OF 1 FILMED

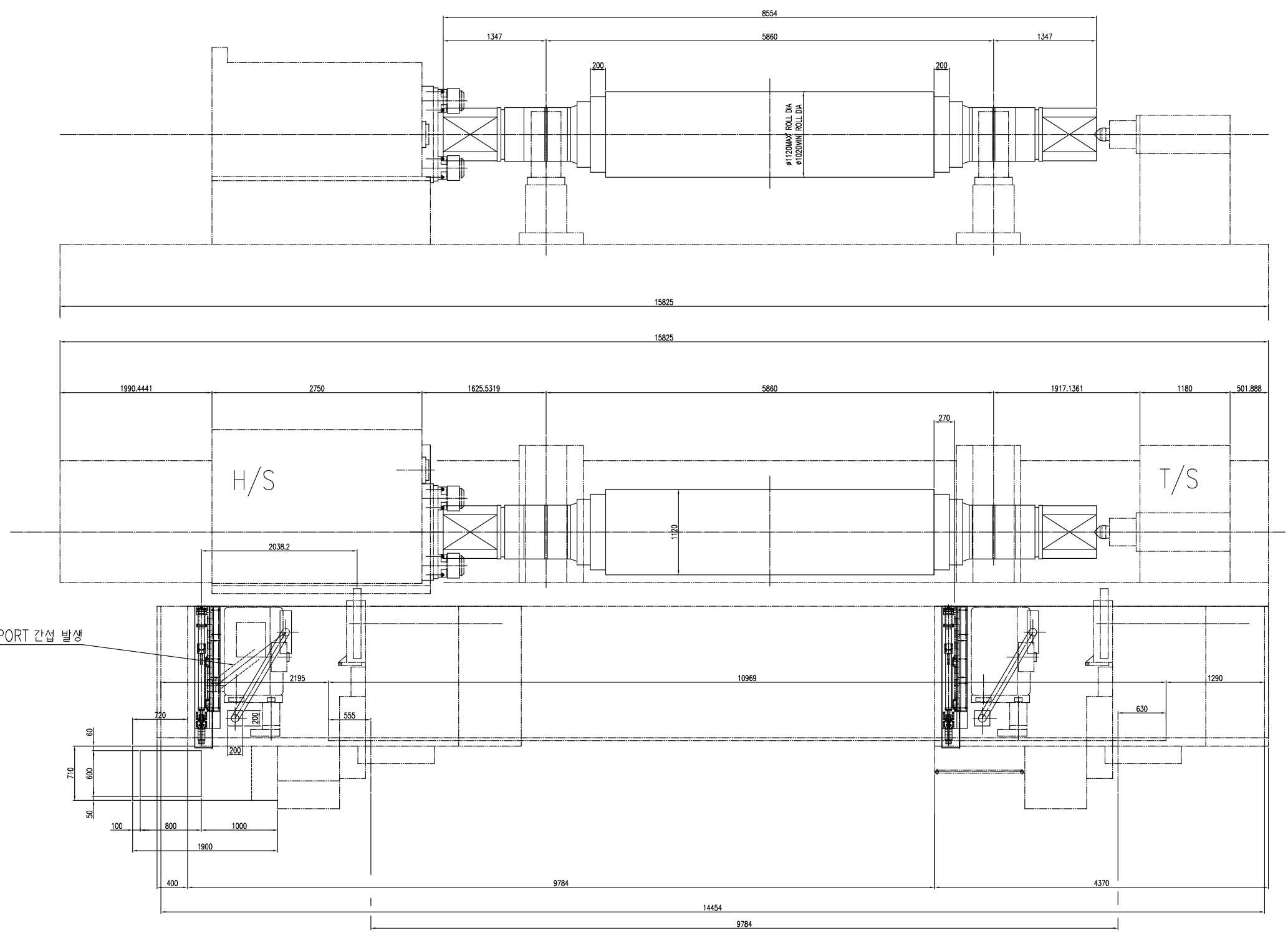
TWS WORK ROLL GRINDER.

2-669-722-MA-TH-008

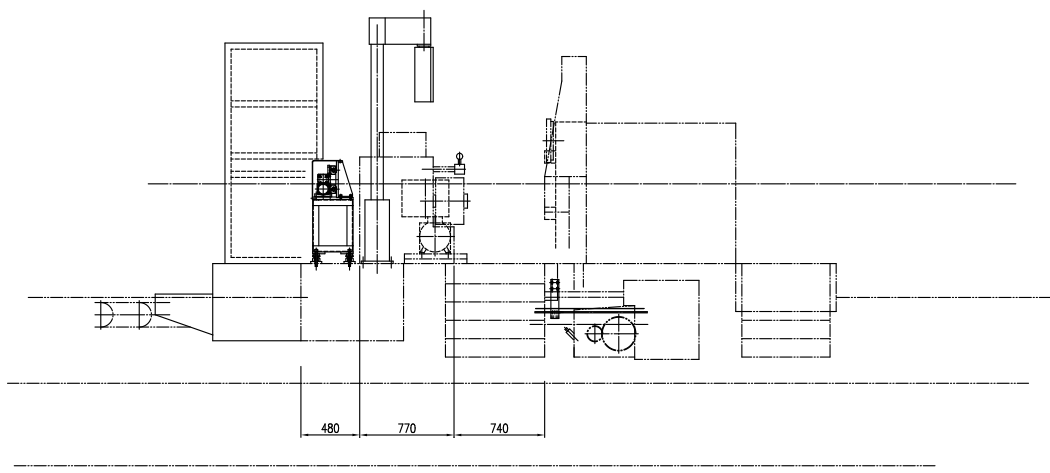
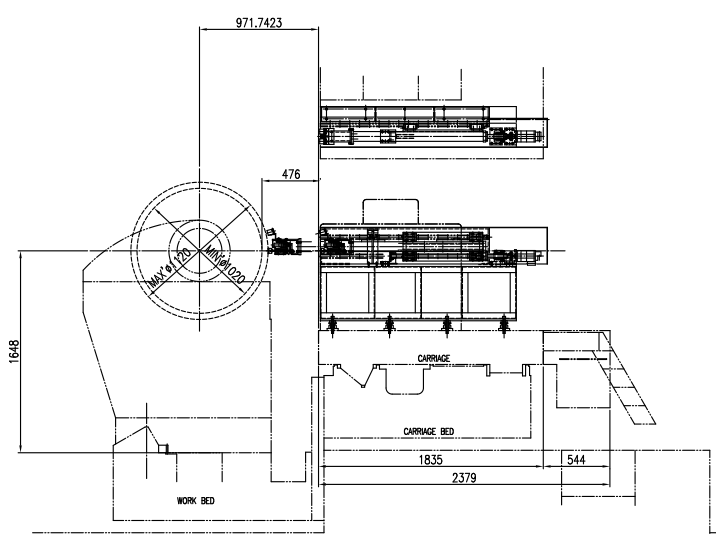
DRAWN	P.G.S.	9.5.84
TRACED		
CHECKED		
RAW MATERIAL NUMBER		

DKS No CEM-R03-032

NO.	DATE	REVISION & DESCRIPTION	SIGNATURE
△			
△			
△			

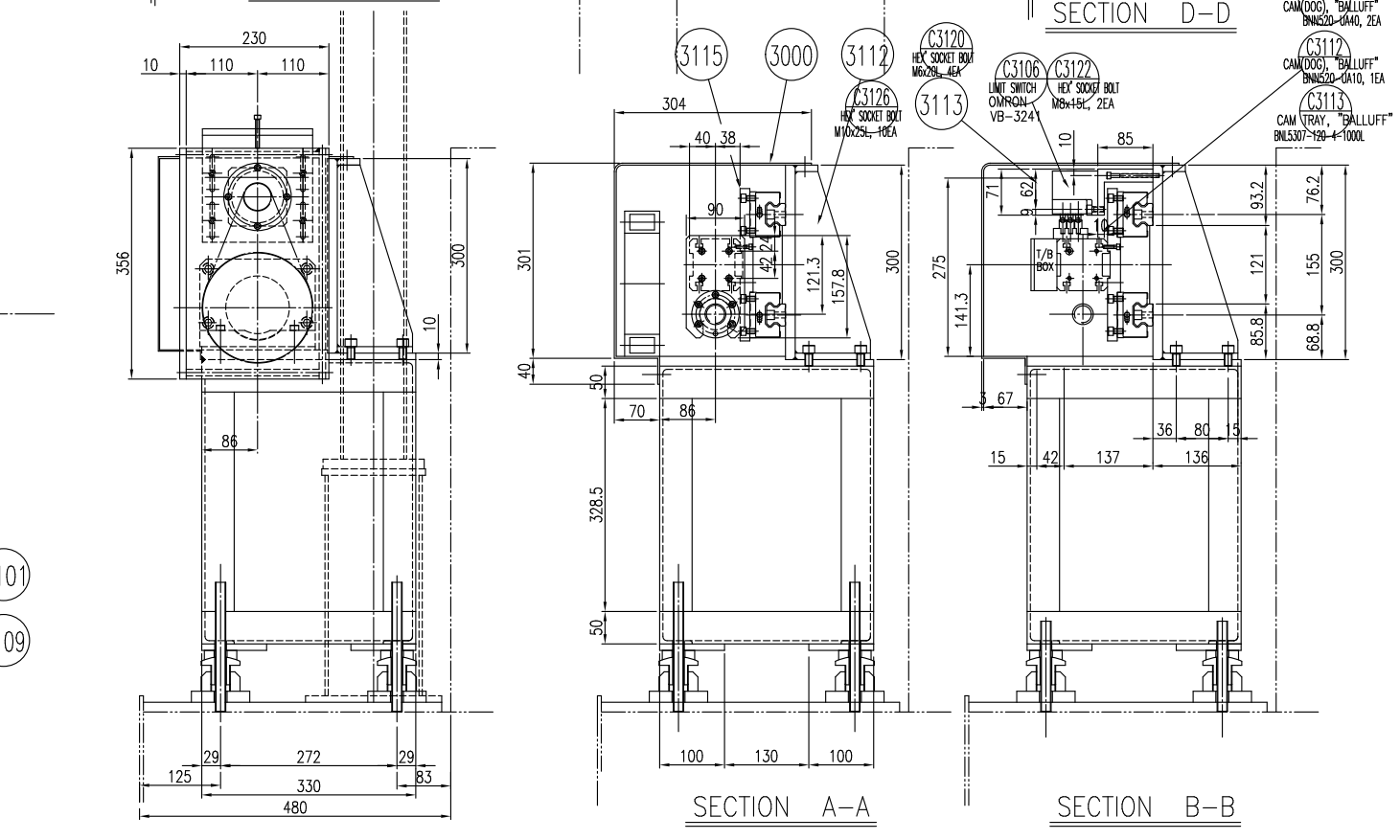
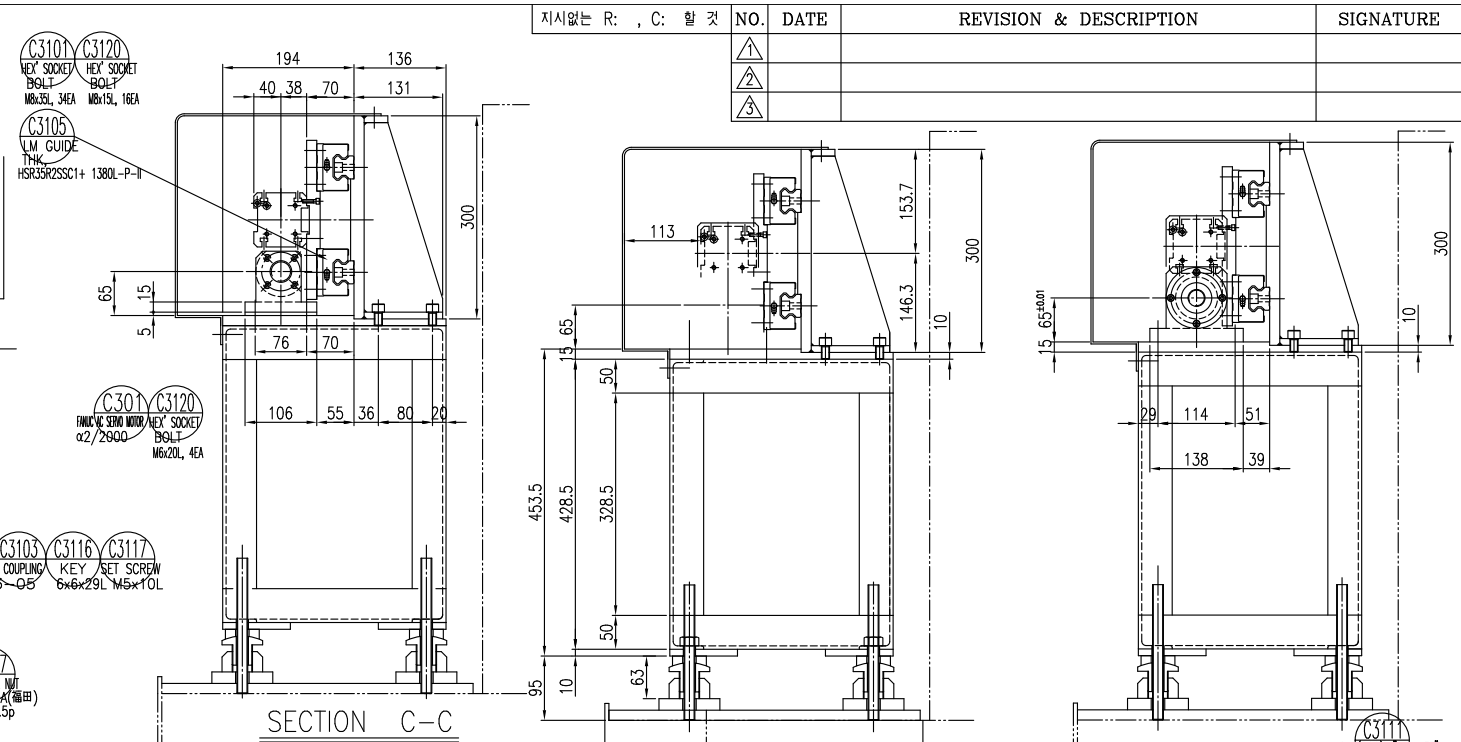
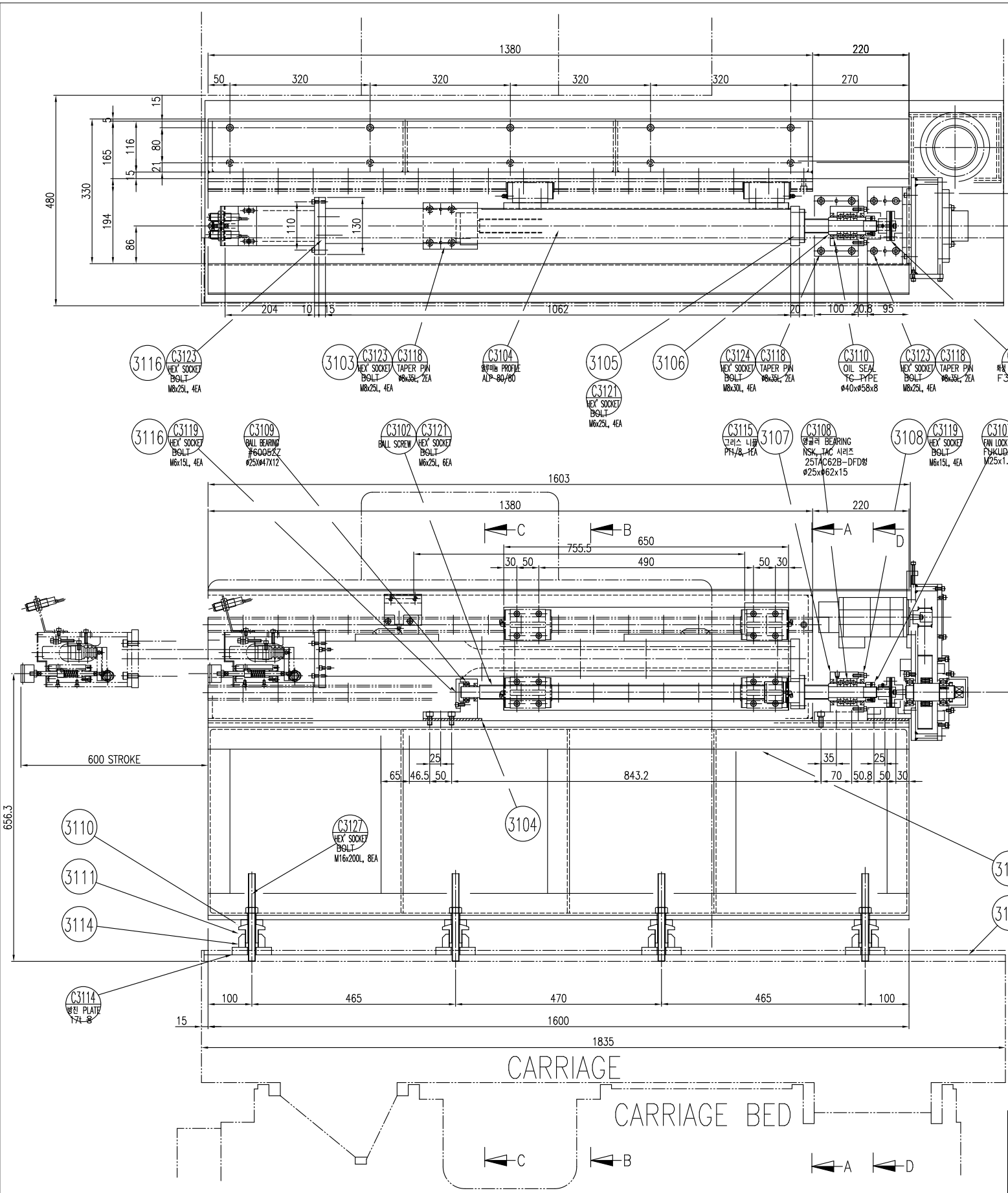


기존 SUB PANEL SUPPORT 간섭 발생



DKS No CEM-R03-101

NO.	DESCRIPTION	MAT'	PERSET	REMARK'S	WE'(kg)
3000	ROLL 측정장치 전체 ASS'Y			-	-
SEJOONG ENGINEERING CO., LTD. 韓日合作 SUGIYAMA MECHARETRO					
SCALE	PROJECTION	DIMENSION	SIZE	동국제강 2 후 판 공장	
1/1	①	mm	A1	WORK ROLL GRINDER O/H 및 ROLL 측정 장치 신설	
DRAWN	CHECKED	REVIEWED	APPROVED	ROLL 측정 장치 전체 ASS'Y	
				제조지시NO.	2001 - R - 315
				DWG. NO.	R315 - 3000



C3127	HEX' SOCKET BOLT	구 매 품	8	M16x130L
C3126	HEX' SOCKET BOLT	구 매 품	10	M10x25L
C3125	HEX' SOCKET BOLT	구 매 품	34	M8x35L
C3124	HEX' SOCKET BOLT	구 매 품	4	M8x30L

C3111	CAM(DOG) ,0.18	구 매 품	2	BALLUFF, BNN520-UB40
C3110	OIL SEAL	구 매 품	2	NOK, TC TYPE $\phi 40 \times \phi 58 \times 8$
C3109	BALL BEARING	구 매 품	1	NTN, #6005ZZ, $\phi 25 \times \phi 47 \times 12$
C3108	영구러 BEARING	구 매 품	1	NSK, TAC시리즈, 25TAC62B-DFD#, $\phi 25 \times \phi 62 \times 15$
C3107	FAN LOCK NUT	구 매 품	1	FUKUDA, FAN25x1.5p
C3106	LIMIT SWITCH	구 매 품	1	OMRON, VB-3241
C3105	LM GUIDE	구 매 품	1	THK, HSR35R2SSC1+1400L-P-II
C3104	알루미늄 PROFILE	구 매 품	1	GUDEL, ALP80/80x1062L
C3103	COUPLING	구 매 품	1	화상, F3-05
C3102	BALL SCREW	구 매 품	1	REXROTH, DF32x5rx3.5-4(전조 나사)
C3101	AC SERVO MOTOR	구 매 품	1	FANUC, $\alpha 2/2000$

3111	ADJUST BOLT	S45C	8	
3110	TOP SPACER	S45C	8	
3109	BASE PLATE	SS41	1	
3108	BEARING COVER	SS41	1	
3107	BEARING HOUSING	S45C	1	
3106	SPACER	SCM435	2	
3105	PLATE	SS41	1	
3104	SPACER	SS41	1	
3103	BEARING HOUSING	S45C	1	
3102	BEARING COVER	SS41	1	
3101	BODY	SS41	1	
3100	ROLL 측정 장치 ASS'Y	1SET	-	-

SEJOONG ENGINEERING CO., LTD. 韓日合作 SUGIYAMA MECHARETRO

SCALE 1/1 PROJECTION DIMENSION SIZE 1:1 mm A1 등극 제강 2후판 공장

DRAWN CHECKED REVIEWED APPROVED WORK ROLL GRINDER O/H & 측정 장치 신발명 변경 교체(PLC) ROLL 측정 장치 ASS'Y

제조지시NO. 2001-R-315

DWG. NO. R315-3100