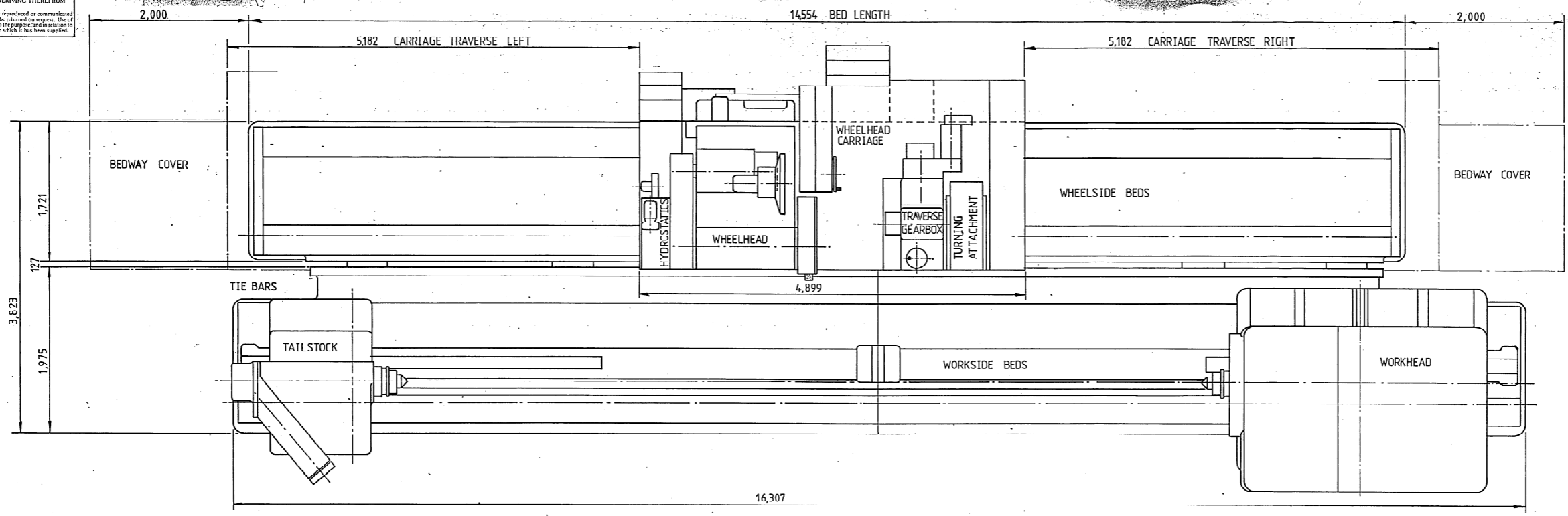


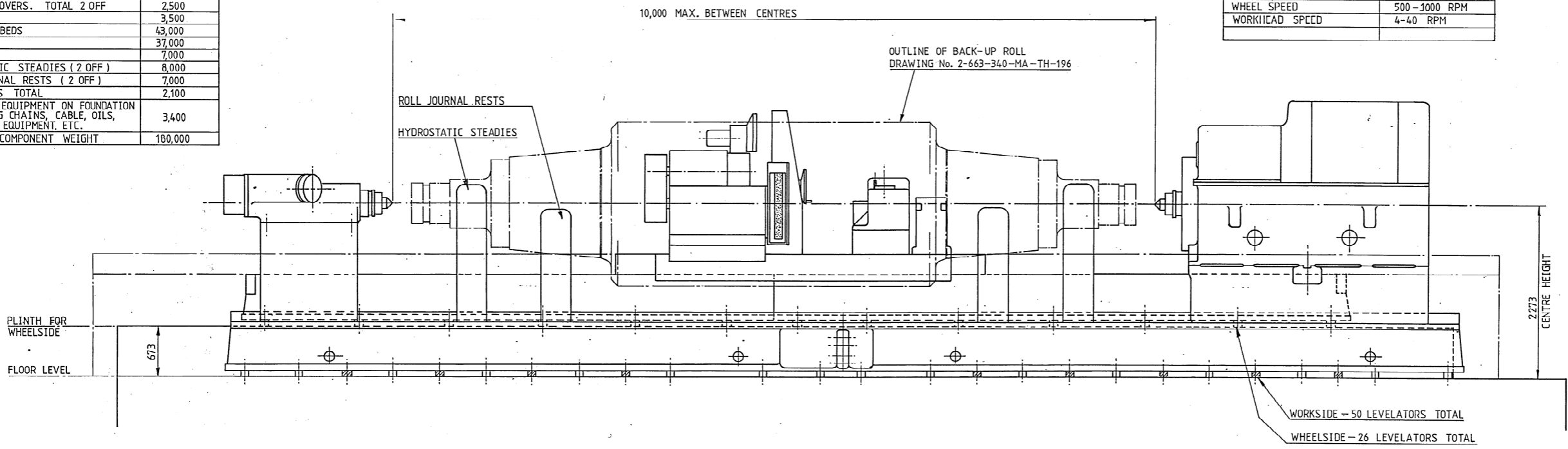
2-663-710-MA-TH-001

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	WEIGHT	KG.
WHEELSIDE BEDS	32,000	
WHEELSIDE CARRIAGE INCLUDING CARRIAGE, WHEELHEAD, CAMBER GEARBOX, TRAVERSE GEARBOX, CONTROL STATIONS, HYDRAULIC POWER UNIT.	25,850	
TURNING ATTACHMENT	1,500	
BEDWAY COVERS. TOTAL 2 OFF	2,500	
TIE BARS	3,500	
WORKSIDE BEDS	43,000	
WORKHEAD	37,000	
TAILSTOCK	7,000	
HYDROSTATIC STEADIES (2 OFF)	8,000	
ROLL JOURNAL RESTS (2 OFF)	7,000	
LEVELATORS TOTAL	2,100	
ANCILLARY EQUIPMENT ON FOUNDATION BLOCK, DRAG CHAINS, CABLE, OILS, MEASURING EQUIPMENT, ETC.	3,400	
MAXIMUM COMPONENT WEIGHT	180,000	

CARRIAGE TRAVERSE	0-75-4190mm/MIN.
WHEELHEAD TRAVERSE	457mm/MIN. MAX
WORKHEAD LONGITUDINAL	1825mm/MIN
WORKHEAD CROSS	106mm/MIN
TAILSTOCK LONGITUDINAL	1880mm/MIN
TAILSTOCK CROSS	HAND
WHEEL SPEED	500-1000 RPM
WORKHEAD SPEED	4-40 RPM



DKS No CEM-R02-001

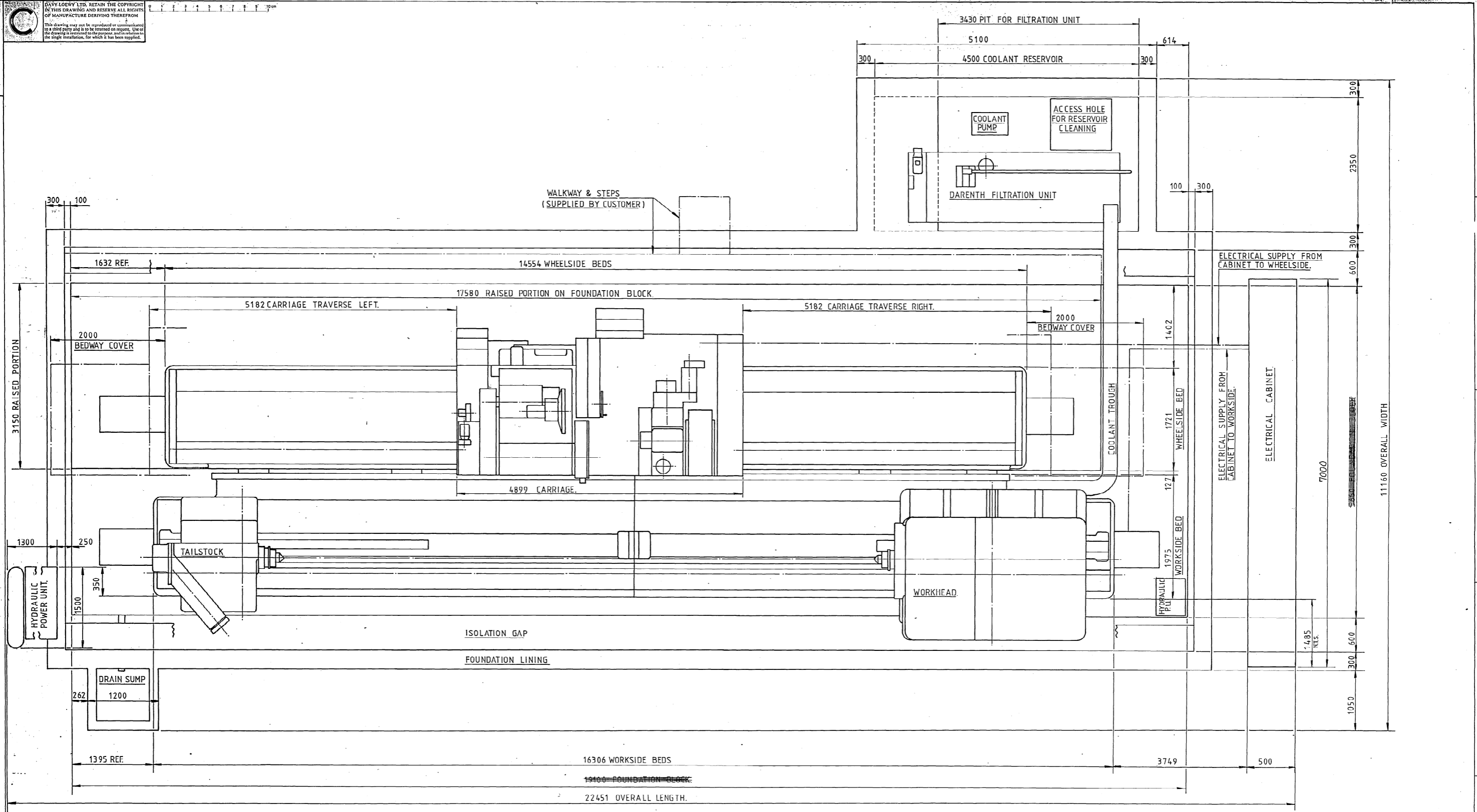
DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.  
 NEWALL ENGINEERING 02743-048  
 15-12-82

REVISION	REVISOR	APROBADO	FECHA	REVISION	REVISOR	APROBADO	FECHA

PROJECT	DATE	PROJECTION	SCALE
SIDERURGICA LAZARO GARDENAS - LAS TRUCHAS S.A.			
BACK UP ROLL GRINDER			
TWR MODEL.			
Project: 2-663-710-MA-TH-001			

2-669-710-MA-TH-002

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SEE DRAWING 2-669-710-MA-TH-001 FOR SERVICES

HEAVIEST SINGLE UNIT 35 TONNES

DKS No CEM-R02-002

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

NEWALL ENGINEERING 02T-43-027

A	ELECTRICAL CABINET RE-SITED.	P.G.S.							
A	HYD. P.U. POSITIONED								
3/28/0	DRAWING NUMBER	P.G.S.							
	2-669-710-MA-TH-002								
	ALT TO READ								
	2-669-710-MA-TH-002								
FECHA	No	REVISION	REVISO	APROBO	FECHA	No	REVISION	REVISO	APROBO

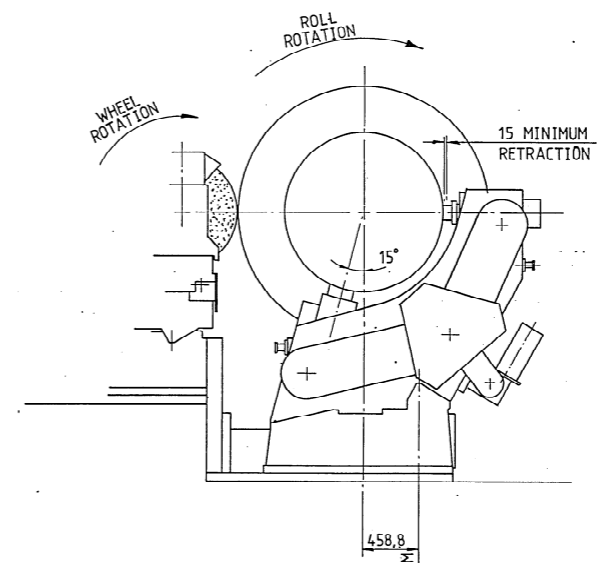
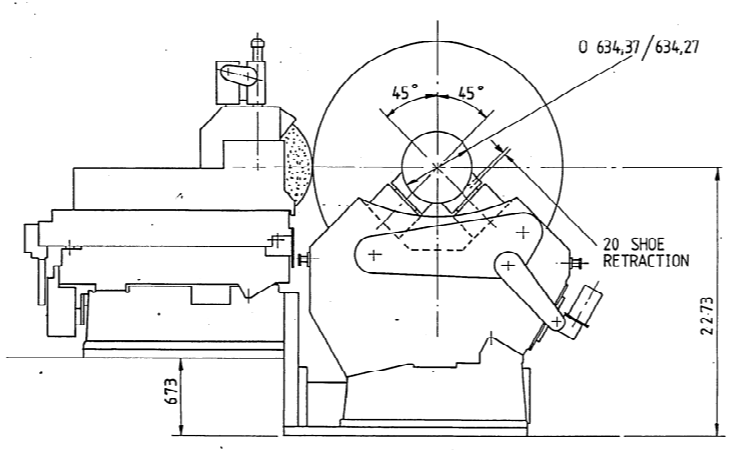
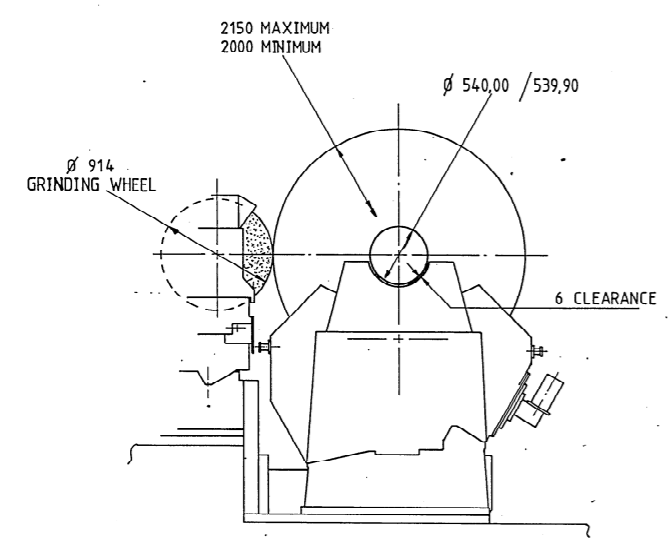
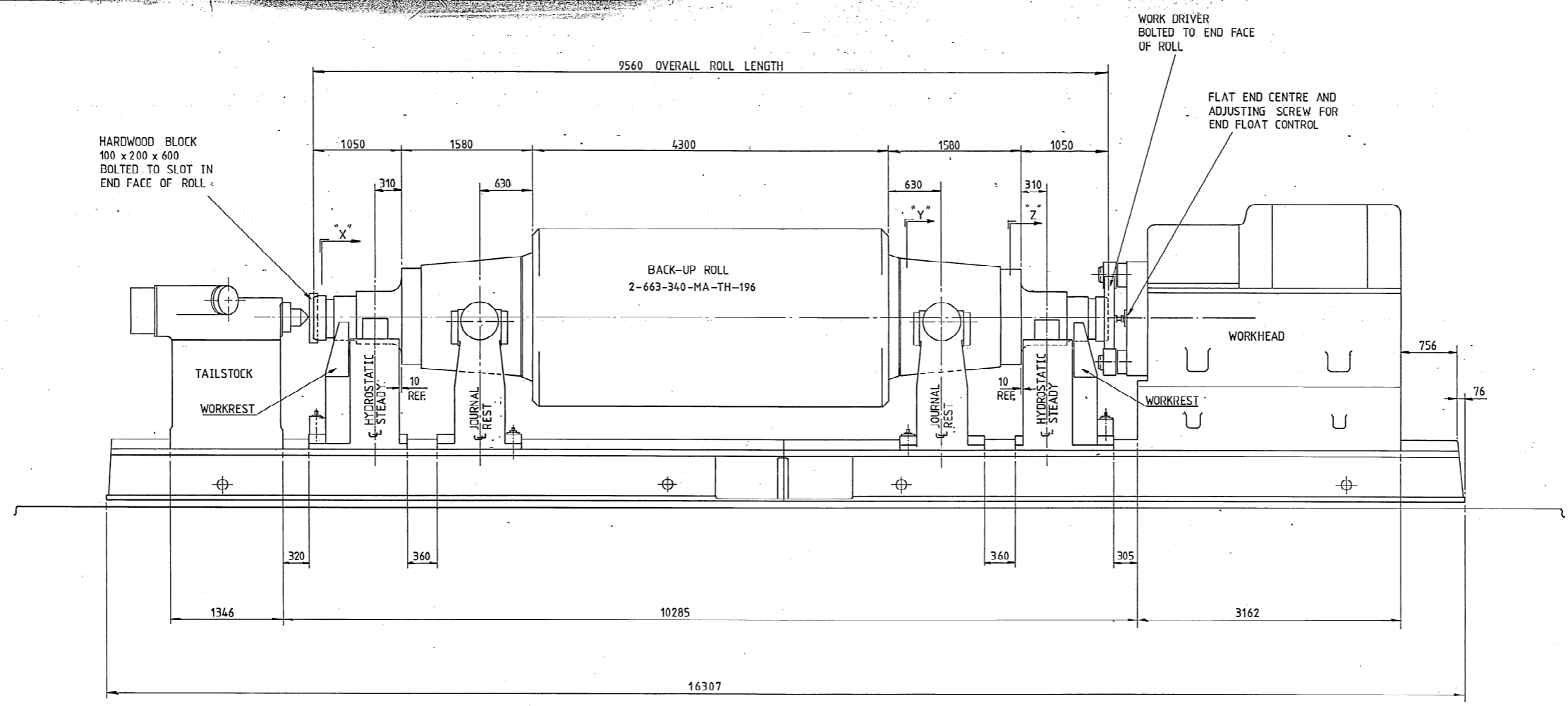
SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A. TWR BACK-UP ROLL GRINDER FLOOR PLAN.

2-669-710-MA-TH-002

2-669-710-MA-TH-005



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DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.	
SUB-CONTRACTOR	SUB-CONTRACTOR DWS No
NEWALL ENGINEERING	99 T 43 - 039
DRAWN BY	DATE
J.H.	4. 5. 83

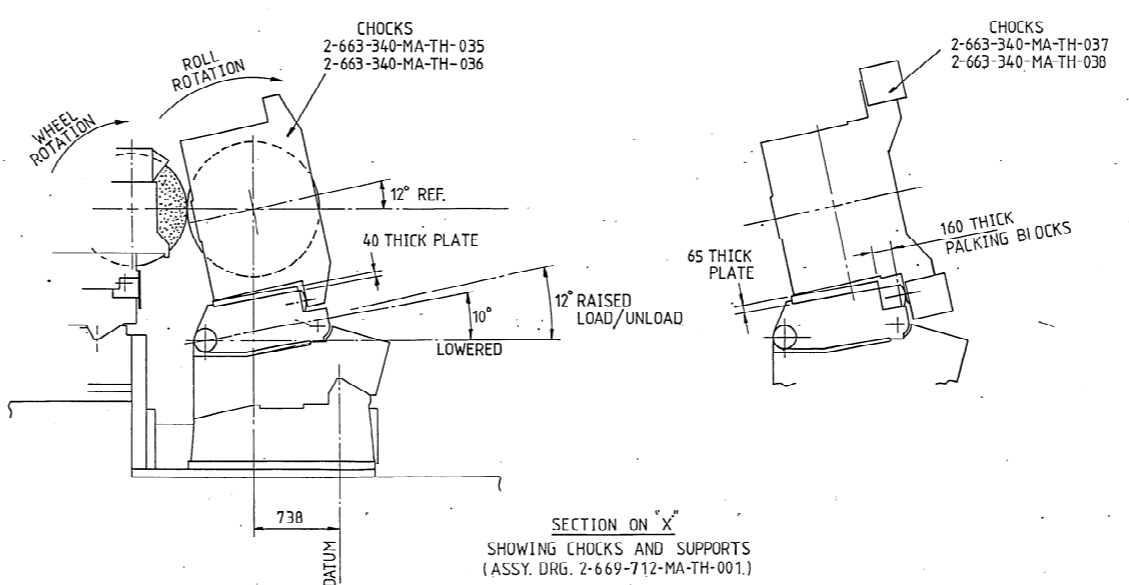
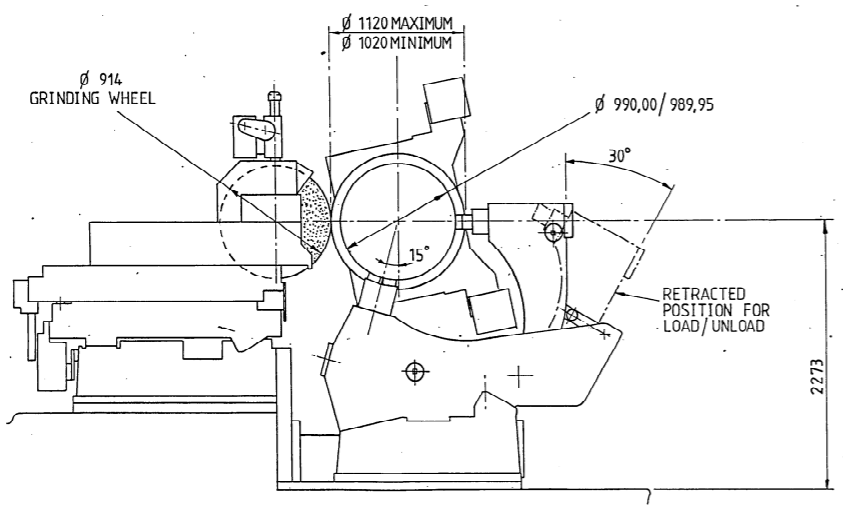
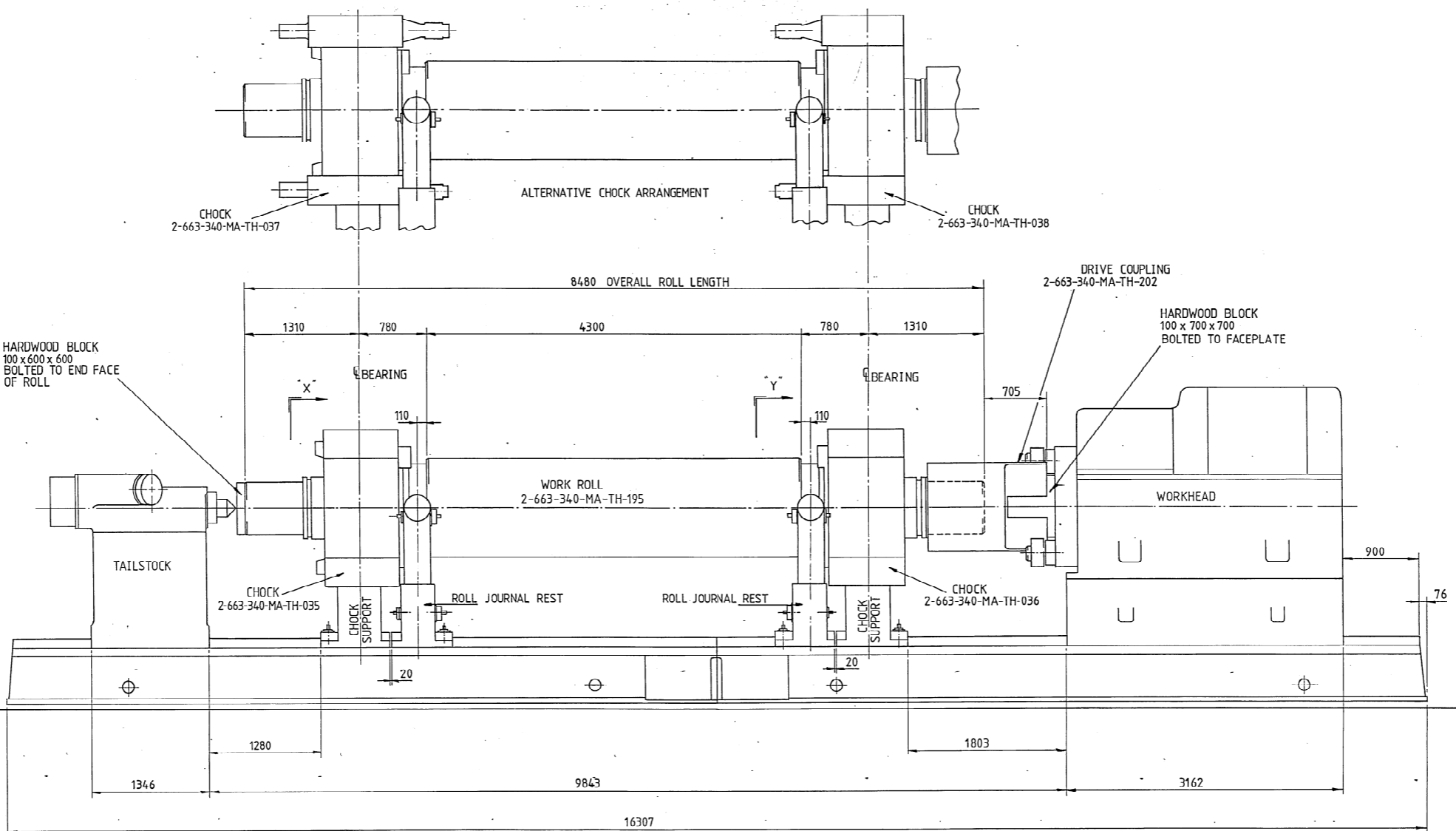
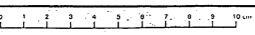
REVISION	REVISO	APROB	FECHA	REVISION	REVISO	APROB	FECHA

PLANO No	TITULO	PLANO No	TITULO

DKS No CEM-R02-005			
DRIVER	APPROVED	DATE	PROJECTION
J.H.		4. 5. 83	
SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.			
TOOL LAYOUT			
BACK UP ROLL 2-663-340-MA-TH-196			
MODEL TWR BACK UP ROLL GRINDER			
Projeteó:	FECHA:	ASIST.	ESC 1: 20
Dibujó:	Apróbo:		
Revisó:			2-669-710-MA-TH-005



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DKS No CEM-R02-006

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		SUB-CONTRACTOR NO. 99T43-040	
DESIGNED BY J.H.	CHECKED BY	APPROVED BY	DATE 7-6-83
TECH. No.	REVISION	REVISO	APROBADO
TECH. No.	REVISION	REVISO	APROBADO

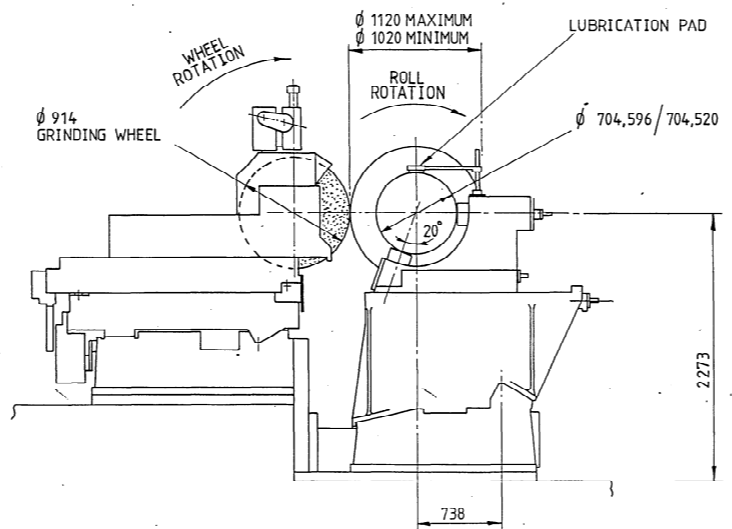
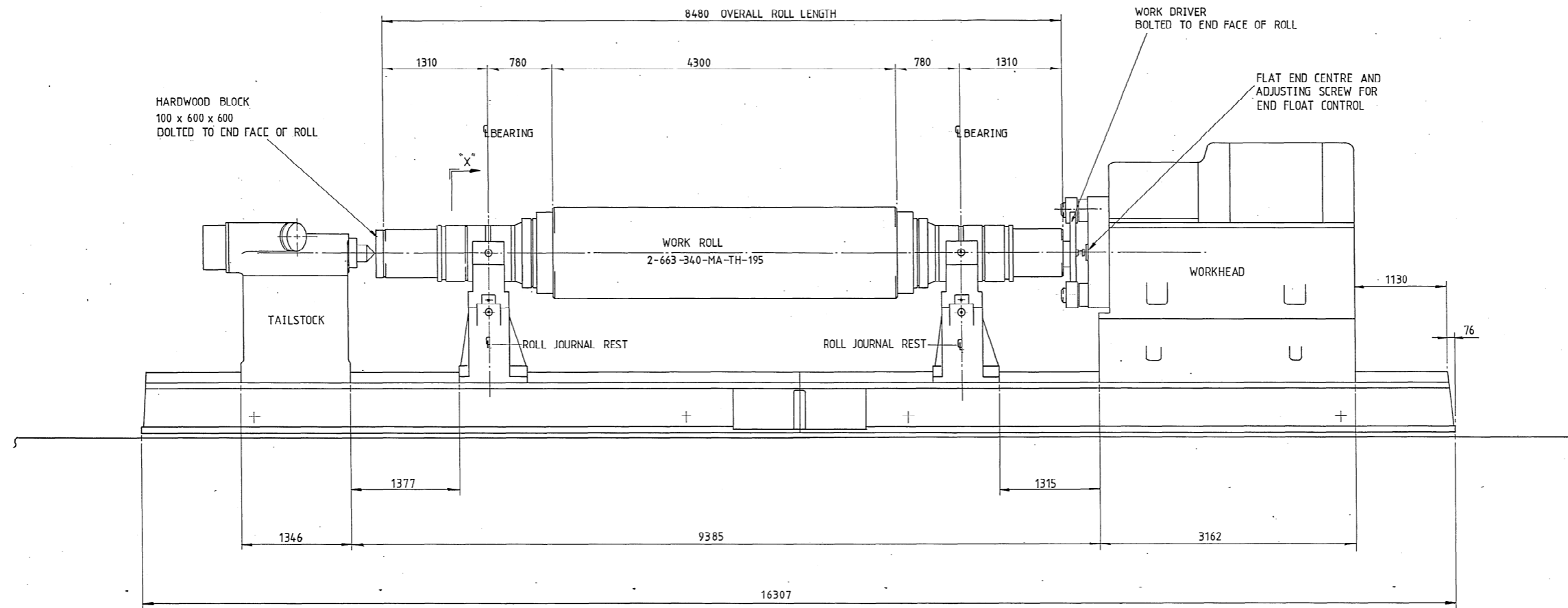
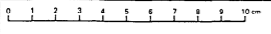
PLANO No.	TITULO	PL. ANTO No.	TITULO
PLANOS DE REFERENCIA	PLANOS DE REFERENCIA		

PROYECTO	FECHA	ACOT	ESC. 1:120
2-669-710-MA-TH-006			

2-669-710-MA-TH-007



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DKS No CEM-R02-007

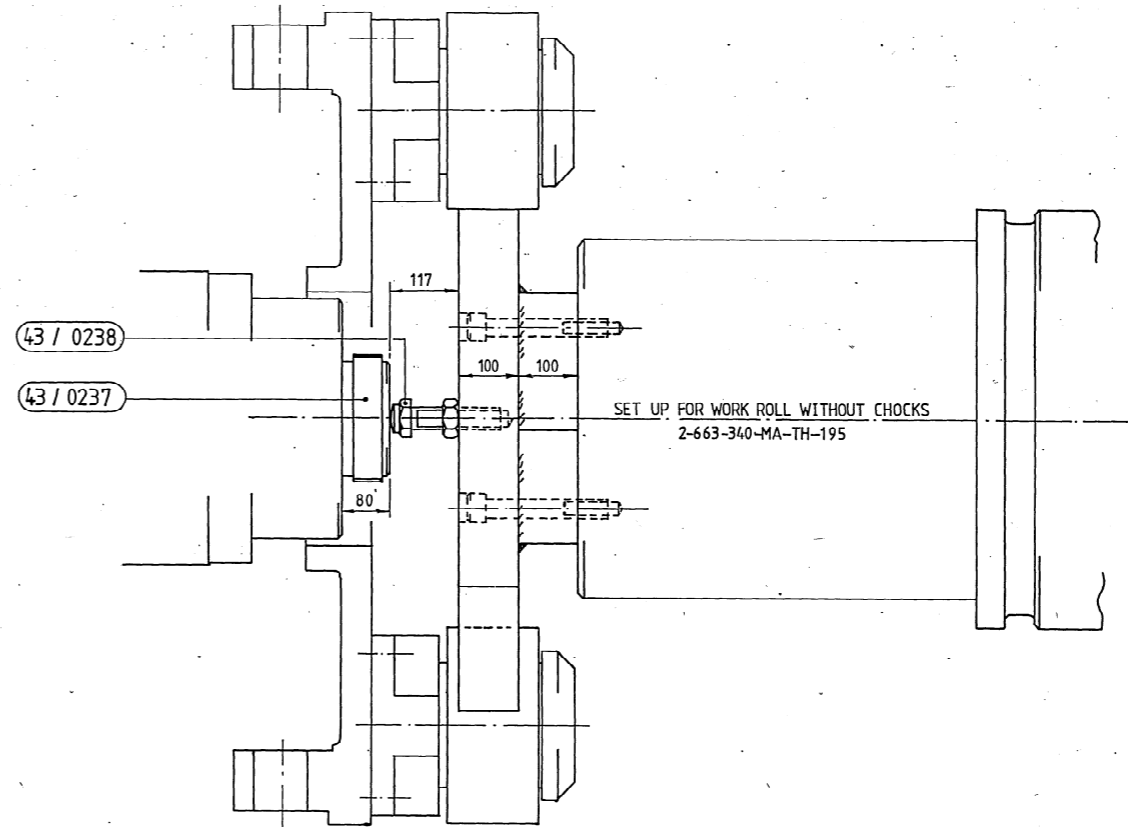
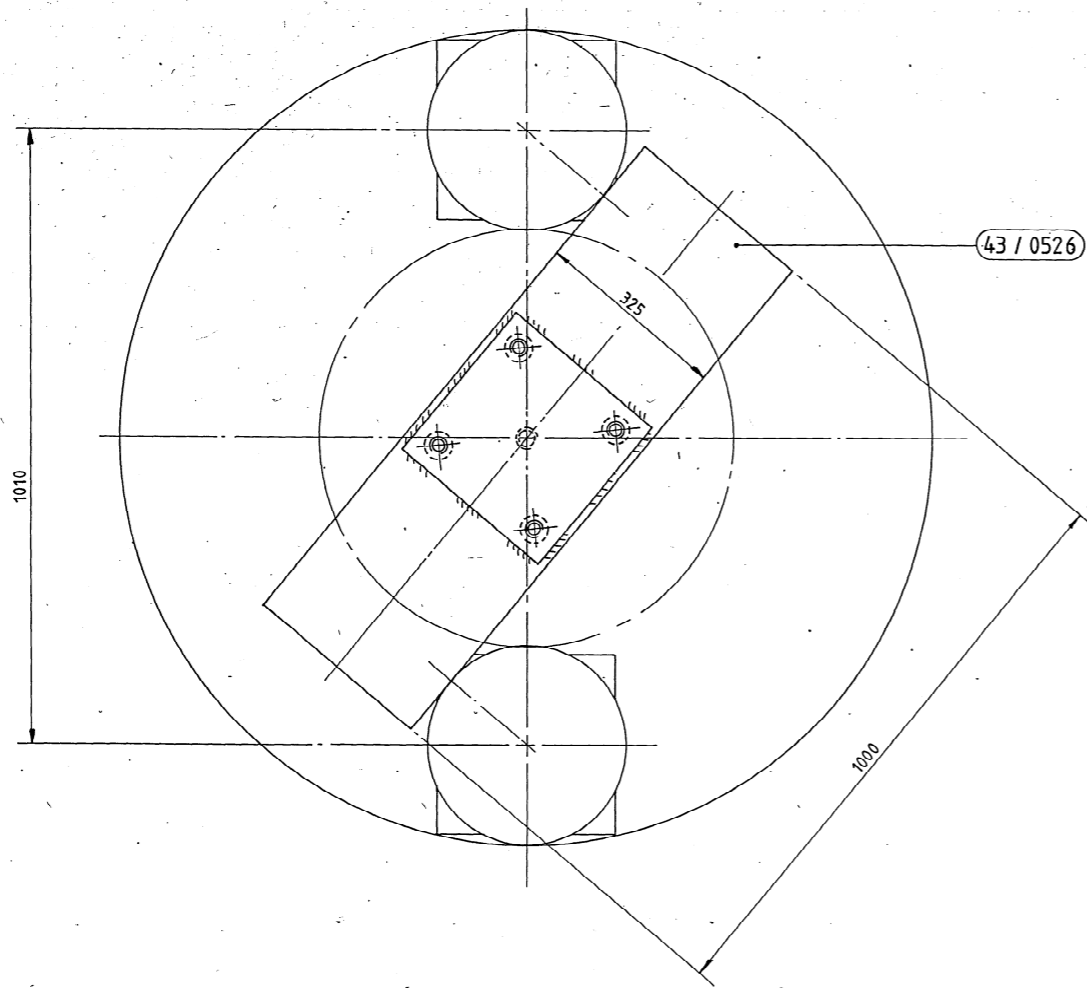
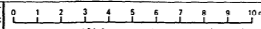
NO. OF SHEETS	1	MATERIAL		DESCRIPTION		MATERIAL FROM	MADE BY
DATE		DRAWN	J.H.	CHECKED		APPROVED	7.6.83
PRODUCTION		DESIGNER		DATE		PRODUCTION	
PROJEKTO		FECHA		ACORD		ESC	1:20
Dibujó		Aprobó		2-669-710-MA-TH-007		REV	
Revisó							

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.							
CONTRACTOR	NEWALL ENGINEERING	SUB CONTRACTOR DRG. NO.	99T43-041				
DRAWN	J.H.	CHECKED		DATE	7.6.83	FECHA	
REVISION		REVISO		APROBO		FECHA	

2-669-711-MA-TH-004



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SEE ALSO 2-669-711-MA-TH-001

DKS No CEM-R02-017

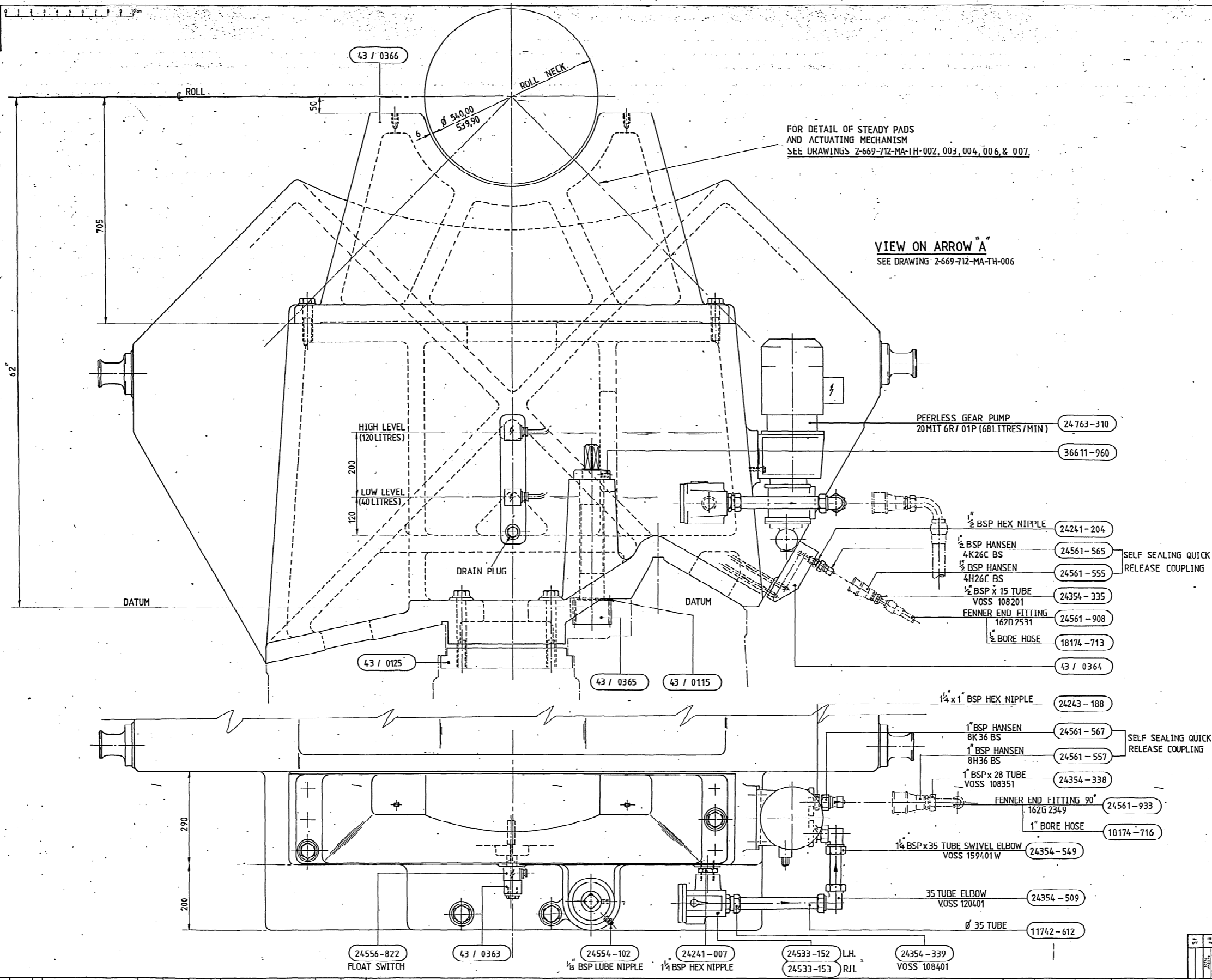
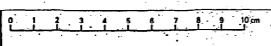
DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		SUB-CONTRACTOR - NEWALL ENGINEERING		SUB-CONTRACTOR DWS No 44M43-041 SHT 2/2	
DRAWN BY J.H.	CHECKED BY	APPROVED BY	DATE 9.6.83	FECHA	NO.
REVISION	REVISO	APROBADO	FECHA	NO.	REVISION
REVISO	APROBADO	FECHA	NO.	REVISION	REVISO

PLANO No	TITULO	PLANO No	TITULO

DRAWN BY J.H.	CHECKED BY	APPROVED	DATE 9-6-83	PROJECTION
UNDIMENSIONED MACHINED DIMENSIONS TO BE WITHIN ± 0.25mm		UNDIMENSIONED RADIUS TO BE 1mm	UNDIMENSIONED CHAMFER	UNDIMENSIONED SURFACE FINISH IN MICRONS
SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.				
WORK DRIVER				
MODEL TWR BACK UP ROLL GRINDER				
Project:	FECHA:	ACOR:	ESC: 1:4	
Dibujó:	Aprobó:	2-669-711-MA-TH-004		
Revisó:				

2-669-712-MA-TH-005

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DKS No CEM-R02-030

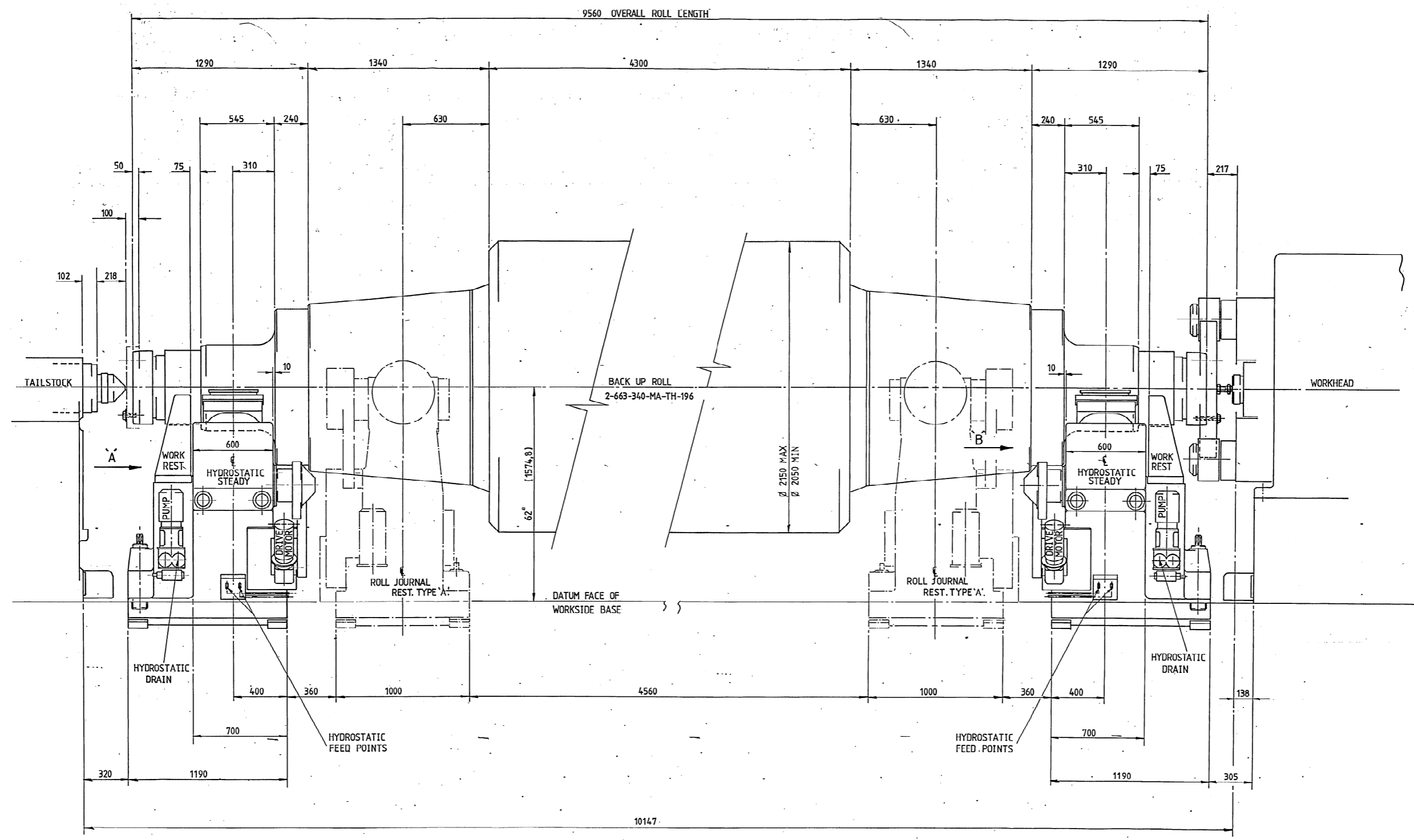
DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		SUB CONTRACTOR ENG. NO.		DATE	
NEWALL ENGINEERING 56M43-023 SHT 2/6				7.3.83	
DESIGNED BY	CHECKED BY	APPROVED BY	DATE	REVISION	REVISOR
J.H.					

24556-822	43 / 0363	24554-102	24241-007	24533-152 L.H.	24533-153 R.H.	24354-339	VOSS 108401
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NO.	REV.	DATE	DESCRIPTION	BY	CHKD.	APPROVED	DATE	PRODUCTION
				J.H.			7.3.83	
SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.								
HYDROSTATIC STEADY MODEL TWR BACK UP ROLL GRINDER								
PLANS DE REFERENCIA			PLANS DE REFERENCIA			2-669-712-MA-TH-005		

2-669-712-MA-TH-006

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SEE ALSO DRGS 2-669-712-MA-TH-002, 003, 004, 005, & 007.

DKS No CEM-R02-031

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.  
 NEWELL ENGINEERING 56M43-023 SHT 1/6  
 CHECKED BY: JH APPROVED BY: DATE: 7.3.83

REVISION	REVISO	APROB	FECHA	REVISION	REVISO	APROB

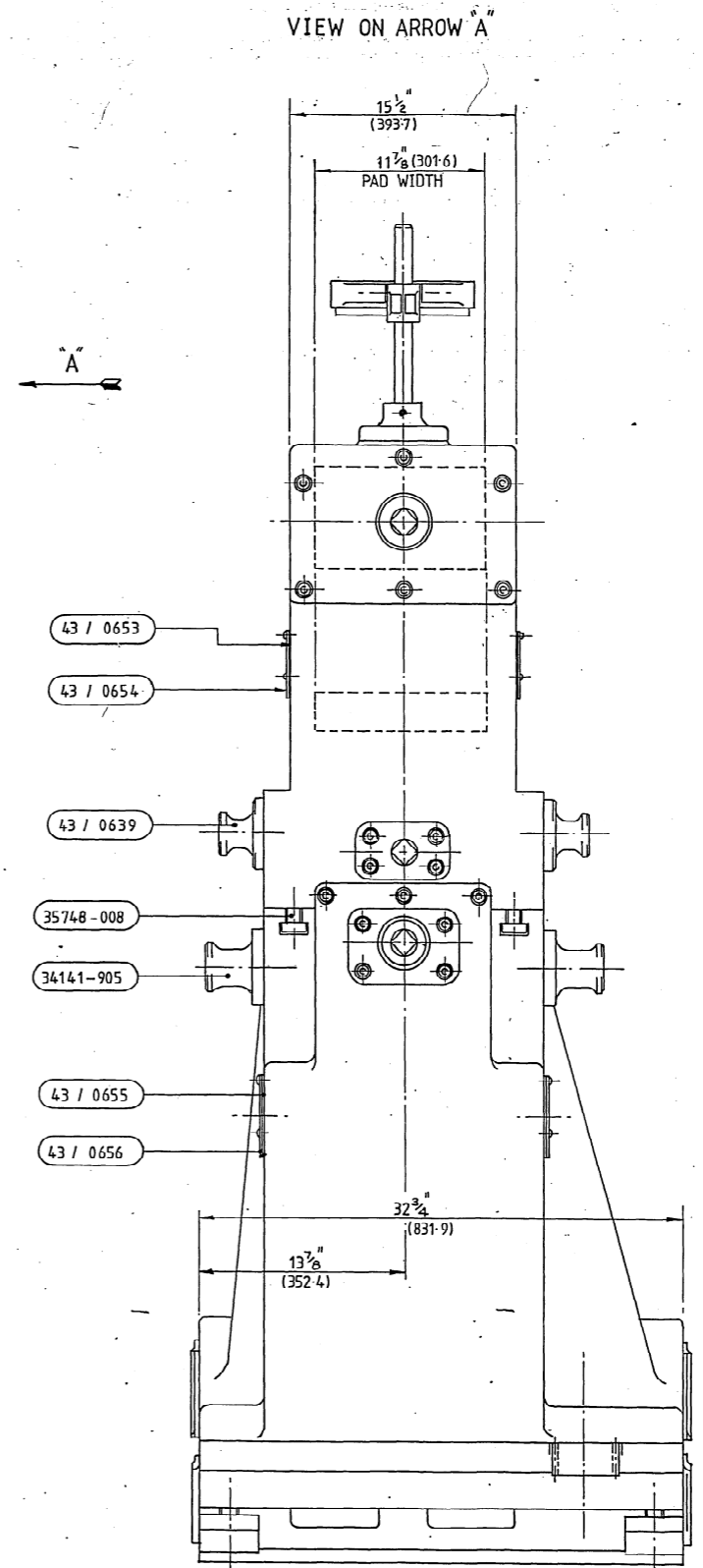
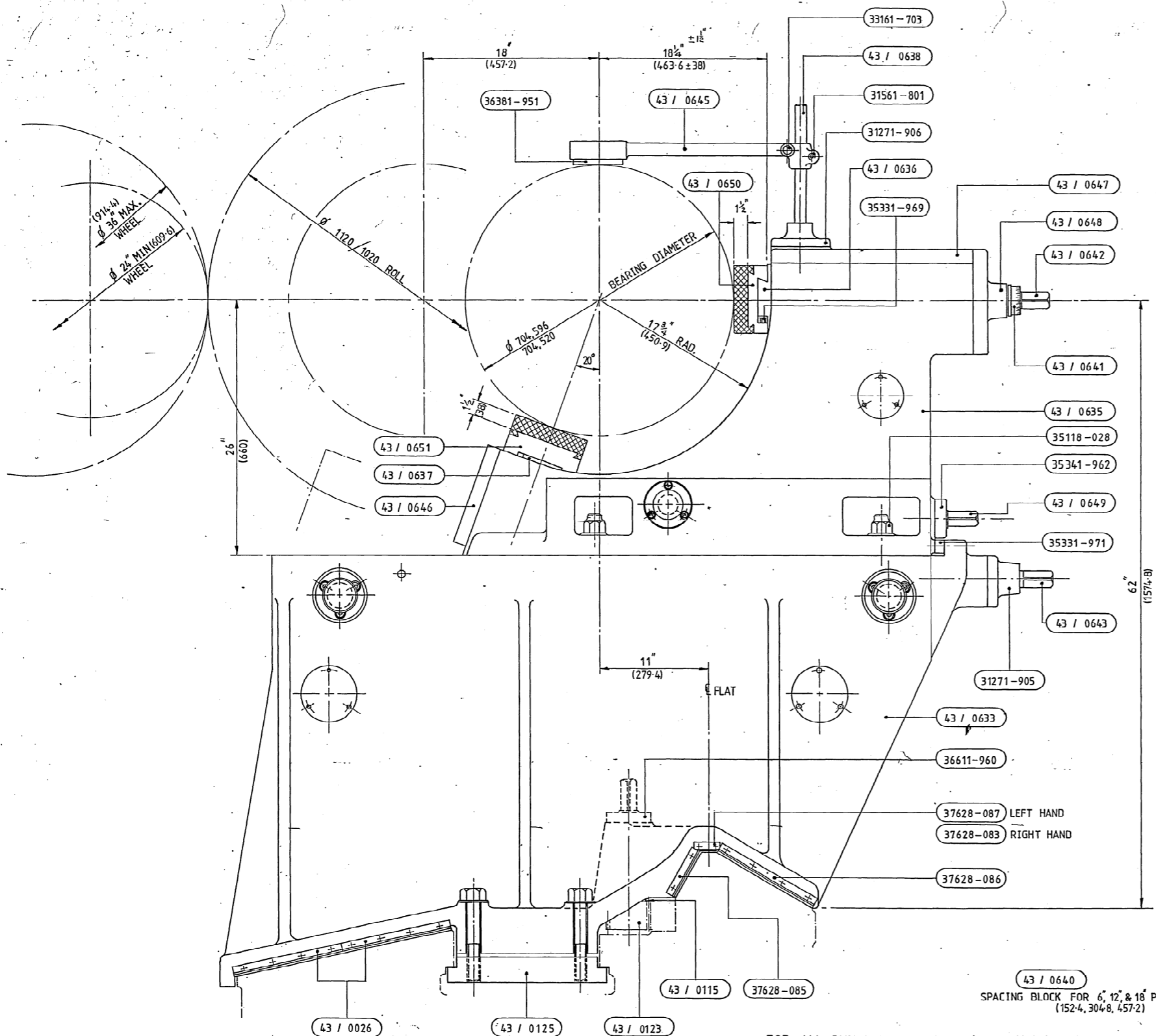
PLANO No	TITULO	PLANO No	TITULO

NO. OF SHEETS	1	MATERIAL		DESCRIPTION		MATERIAL	BASE OF SHEET
DRAWN	J.H.	CHECKED		DATE	7.3.83	PROJECTION	
INTOLERANCES UNLESS OTHERWISE SPECIFIED TO BE IN ACCORDANCE WITH BS 2869 PART 1.				DIMENSIONS UNLESS OTHERWISE SPECIFIED TO BE IN ACCORDANCE WITH BS 2869 PART 1.			
SURFACE FINISH UNLESS OTHERWISE SPECIFIED TO BE IN ACCORDANCE WITH BS 2869 PART 1.				WELD SYMBOLS TO BE IN ACCORDANCE WITH BS 2869 PART 1.			
PROJECT: SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.				TITLE: HYDROSTATIC STEADY			
MODEL: TWR BACK UP ROLL GRINDER				SCALE: 1:30			
DRAWING NO: 2-669-712-MA-TH-006				REV. NO.			



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FOR ALL INTERNAL DETAILS NOT SHOWN SEE DRAWING 2-669-722-MA-TH-002

DKS No CEM-R02-033

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

CONTRACTOR: NEWALL ENGINEERING 56M43-024

DATE: 17-6-83

REVISION	REVISOR	APPROVED	FECHA	REVISION	REVISOR	APPROVED	FECHA

ITEM NO.	DESCRIPTION	DATE	PROCESSED

PROYECTO:	FECHA:	ACOT:	ESC: 1:4
PLANO No:	TITULO:	PLANO No:	TITULO:
PLANOS DE REFERENCIA		PLANOS DE REFERENCIA	

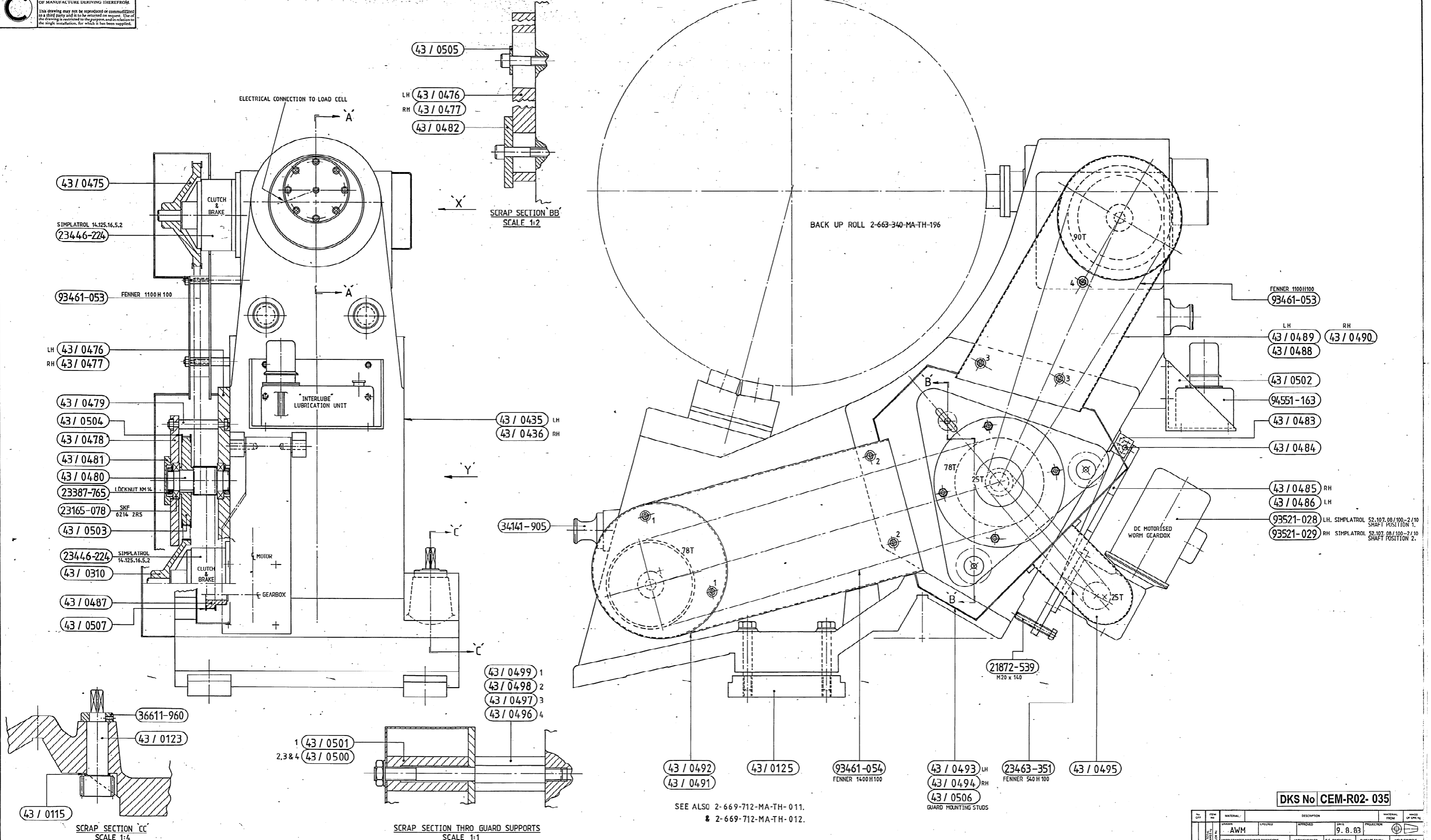
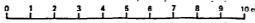
SIDERURGICA LAZARO GARDENAS-LAS TRUCHAS S.A.

ROLL JOURNAL REST

MODEL TWR BACK UP ROLL GRINDER

2-669-712-MA-TH-008

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SEE ALSO 2-669-712-MA-TH-011.  
 & 2-669-712-MA-TH-012.

DKS No CEM-R02-035

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		DRAWING CHECKED BY DATE 9.8.83		REVISION		REVISION	
NEWALL ENGINEERING 56M43-027 SHT 1/3		APPROVED BY		REVISION		REVISION	
AWM		DATE 9.8.83		REVISION		REVISION	

PLANO No	TITULO	PLANO No	TITULO

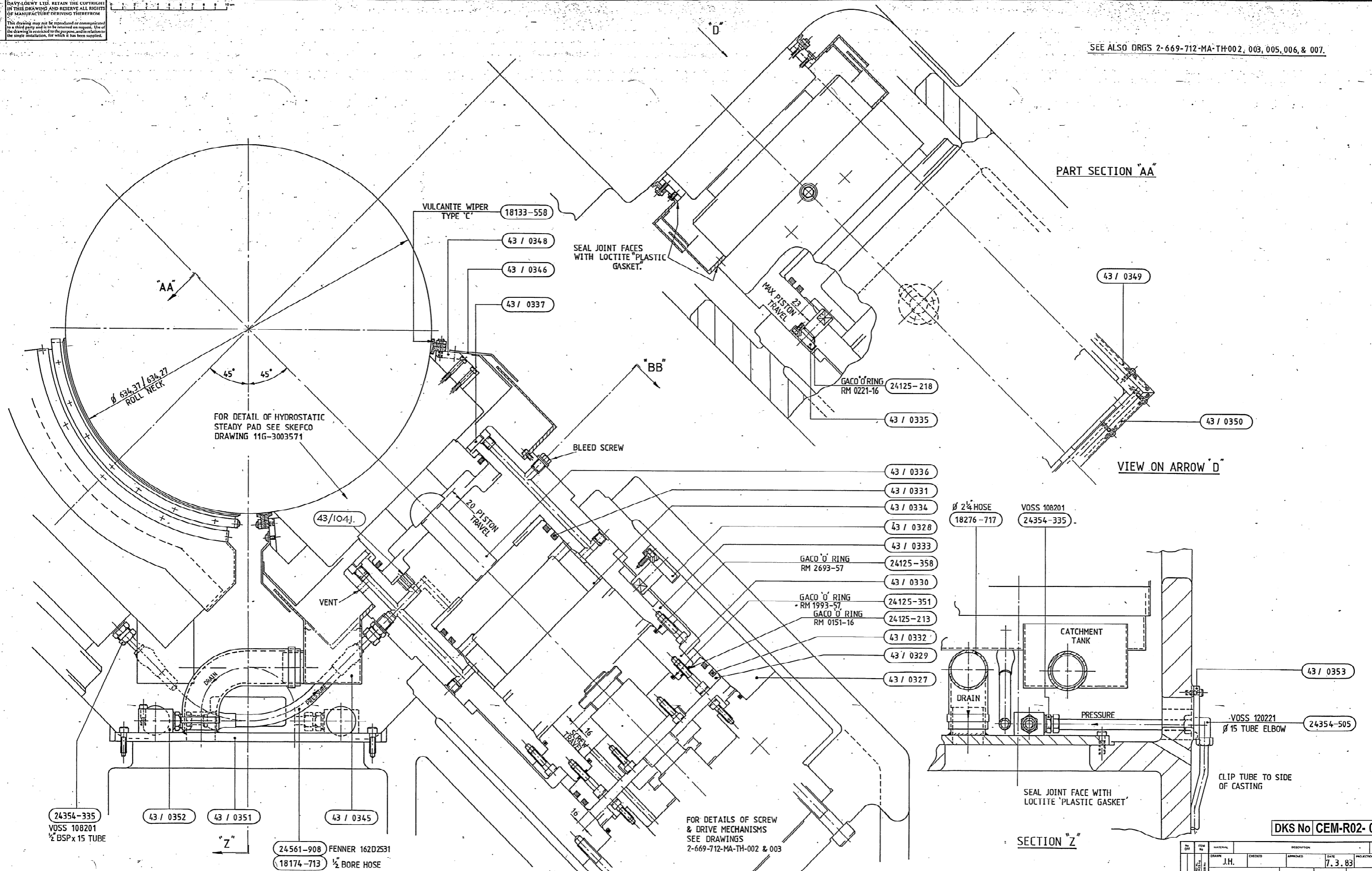
PROYECTO	FECHA	ACOT.	ESC.

MATERIAL	DESCRIPTION	MATERIAL FROM	MADE UP FROM
AWM			

SIDERURGICA LAZARO GARDENAS - LAS TRUCHAS S.A.  
 ROLL JOURNAL REST 'A' TYPE  
 MODEL TWR BACK UP ROLL GRINDER  
 2-669-712-MA-TH-010

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SEE ALSO DRGS 2-669-712-MA-TH002, 003, 005, 006, & 007.



DKS No CEM-R02-029

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.		RESTRICTOR 43/041 ADDED.		P.G.S.	
DATE	BY	DATE	BY	DATE	BY
14-10-83	J.H.	14-10-83	J.H.	14-10-83	J.H.
REVISION	REVISED	APPROVED	REVISION	REVISED	APPROVED

NEWELL ENGINEERING 56M43-023 SHT 4/6  
 DRAWN BY J.H. CHECKED BY DATE 7.3.83

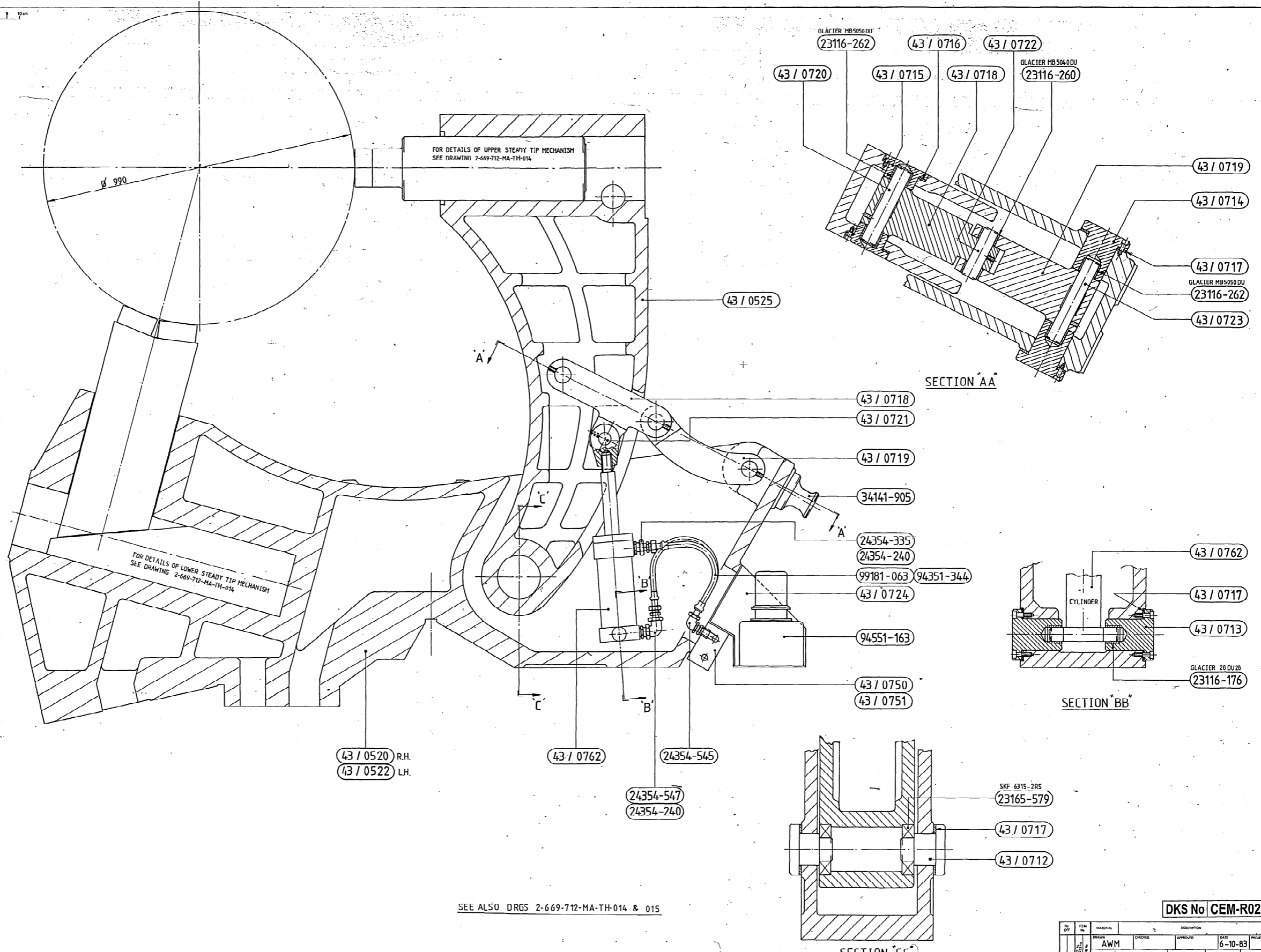
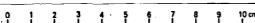
DATE	BY	DATE	BY	DATE	BY
7.3.83	J.H.	7.3.83	J.H.	7.3.83	J.H.
PROJECT	REVISION	APPROVED	REVISION	APPROVED	REVISION
2-669-712-MA-TH-004					

SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.  
 HYDROSTATIC STEADY  
 MODEL TWR BACK UP ROLL GRINDER

Project: 2-669-712-MA-TH-004  
 Scale: 1:2  
 Date: 7.3.83

2-669-712-MA-TH-014

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SEE ALSO DRGS 2-669-712-MA-TH-014 & 015

DKS No CEM-R02-038

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.  
 SUB-CONTRACTOR  
 NEWALL ENGINEERING 56M43-028 SHT 1/3  
 DRAWN BY: AWM  
 CHECKED BY: [ ]  
 APPROVED BY: [ ]  
 DATE: 6-10-83

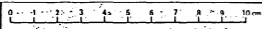
REVISION	REVISED	APPROVED	TECHN.	REVISION	REVISED	APPROVED

PLANO No	TITULO	PLANO No	TITULO

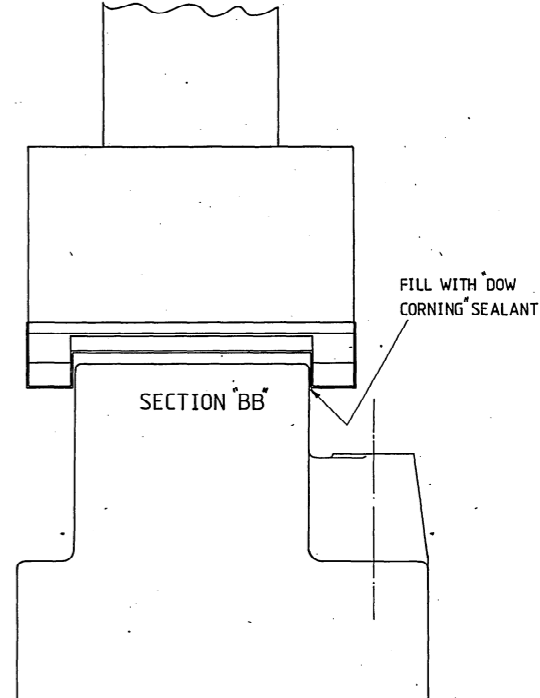
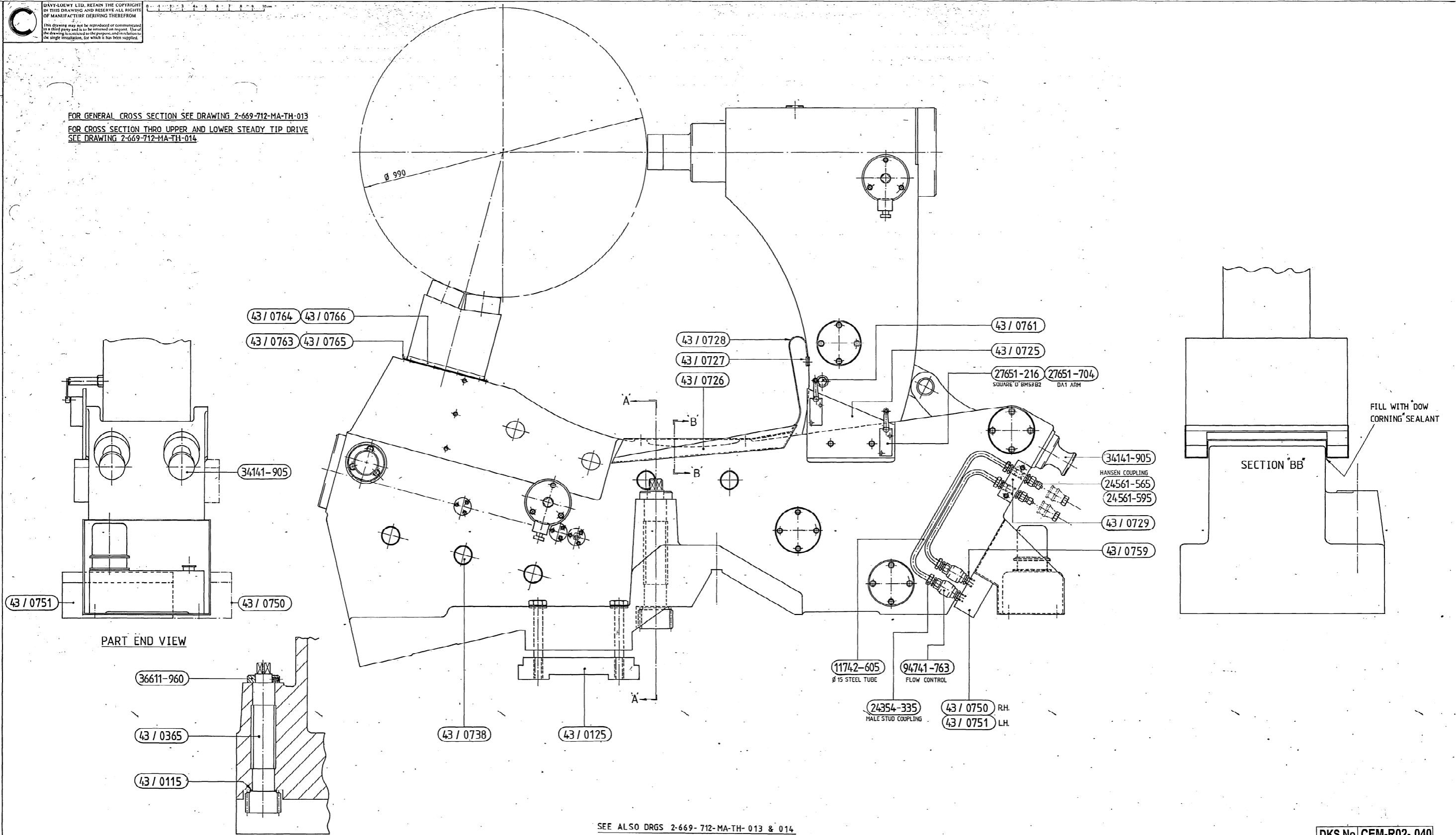
NO. OF	ITEM	MATERIAL	DESCRIPTION	DATE	MATERIAL	MASS

SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.  
 ROLL JOURNAL REST. 'B' TYPE.  
 TWR BACK UP ROLL GRINDER  
 Projected: [ ]  
 Date: 6-10-83  
 2-669-712-MA-TH-013

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FOR GENERAL CROSS SECTION SEE DRAWING 2-669-712-MA-TH-013  
FOR CROSS SECTION THRO UPPER AND LOWER STEADY TIP DRIVE SEE DRAWING 2-669-712-MA-TH-014



SEE ALSO DRGS 2-669-712-MA-TH-013 & 014

DKS No CEM-R02-040

DAVY-LOEWY LTD SHEFFIELD AND DESARROLLO TECNICO S.A.  
NEWALL ENGINEERING 56MG-028 SHT 3/3  
AWM

REVISION	REVISOR	APPROB	FECHA	REVISION	REVISOR	APPROB

PLANO No	TITULO	PLANO No	TITULO

ITEM No	MATERIAL	QUANTIDAD	UNIDAD	FECHA	PROYECT	ACOT.	ESC.	REVISOR
	AWM			6-10-83			1:4	
SIDERURGICA LAZARO CARDENAS - LAS TRUCHAS S.A.								
ROLL JOURNAL REST 'B' TYPE.								
TWR BACK UP ROLL GRINDER								
Dibujó: 2-669-712-MA-TH-015								