

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

68089

Manufactured and certified by F.LLI DELFINO S.p.A -VIA T. EDISON , 209 - 20019 SETTIMO MILANESE - MILANO - ITALY
(Name and address of manufacturer)

Manufactured for HIMONT USA INC. 12001 BAY AREA BLVD . PASADENA TEXAS 77507
(Name and address of purchaser)

Location of installation HIMONT USA INC. 12001 BAY AREA BLVD . PASADENA TEXAS 77507 -
(Name and address)

Type VERT. A 3694 N.A. 2/510 rev.1 136 1989
(Name of vessel) (Mfg's serial No.) (CRN) (Drawing) (Natl. Bd. No.) (Year built)

The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1986
Year

1987 / /
Addenda (date) Code Case No. Special service per UG-120(d)

5-11 incl. to be completed for single-wall vessels, jackets of jacketed vessels, or shells of heat exchangers.
Shell: SA 515-60 0,314 0,12 5' 4 11/64" 20' 6 7/64"
Matl. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft & in.) Length (Overall) (ft & in.)

Seams: DBL UW 12 Tp1 SPOT 0,85 /
Long. (Dbl. Sngl.) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F)

/ DBL UW 12 Tp.1 SPOT 3
Time Grain (Dbl. Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

Heads: (a) Matl. SA 515 -60 (b) Matl. SA 240 - 304
(Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness in.	Corrosion Allowance in.	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter O.D. in.	Side to Pressure (Convex or Concave)
TOP	0,314	0,12	/	/	2 : 1	/	/	/	CONCAVE
BOTTOM	0,551	0,12	/	/	/	/	/	64"	/

If removable, bolts used (describe other fastenings) /
(Matl., Spec. No., Gr., Size, No.)

Type of Jacket TYPE 2' Proof Test /
Jacket Closure FIG.9,5 F.2 - G 3 If bar, give dimensions / If bolted, describe or sketch.
(Describe as ogee & weld, bar, etc.)

MAWP 14,5 psi at max. temp. 175 °F. Min. design metal temp. 23 °F at 14,5 psi.
Hydro., pneu., or comb. test press. 21,76 psi.

12 and 13 to be completed for tube sections

Tubesheets: / / / / /
Stationary Matl. (Spec. No., Gr.) Diam. (in.) (Subject to pressure) Nom. Thk. (in.) Corr. Allow. (in.) Attach. (Welded, Bolted)

/ / / / /
Floating Matl. (Spec. No., Gr.) Diam. (in.) Nom. Thk. (in.) Corr. Allow. (in.) Attach.

Tubes: / / / / /
Matl. (Spec. No., Gr.) O.D. (in.) Nom. Thk. (in. or Gauge) Number Type (Straight or "U")

14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.
Shell: SA 240 -S31803 0,314 0 4' 11 1/16" 26' 5 57/64"
Matl. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft & in.) Length (Overall) (ft & in.)

Seams: SA 240 -S 31803 SPOT 0,85 /
Long. (Dbl. Sngl.) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F)

/ DBL UW 12 Tp.1 SPOT 3
Time Grain (Dbl. Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

Heads: (a) Matl. SA 240 - S 31803 (b) Matl. SA 240- S 31803
(Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness in.	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
TOP	0,275	0	/	/	2:1	/	/	/	CONCAVE
BOTTOM	0,275	0	/	/	2:1	/	/	/	CONCAVE

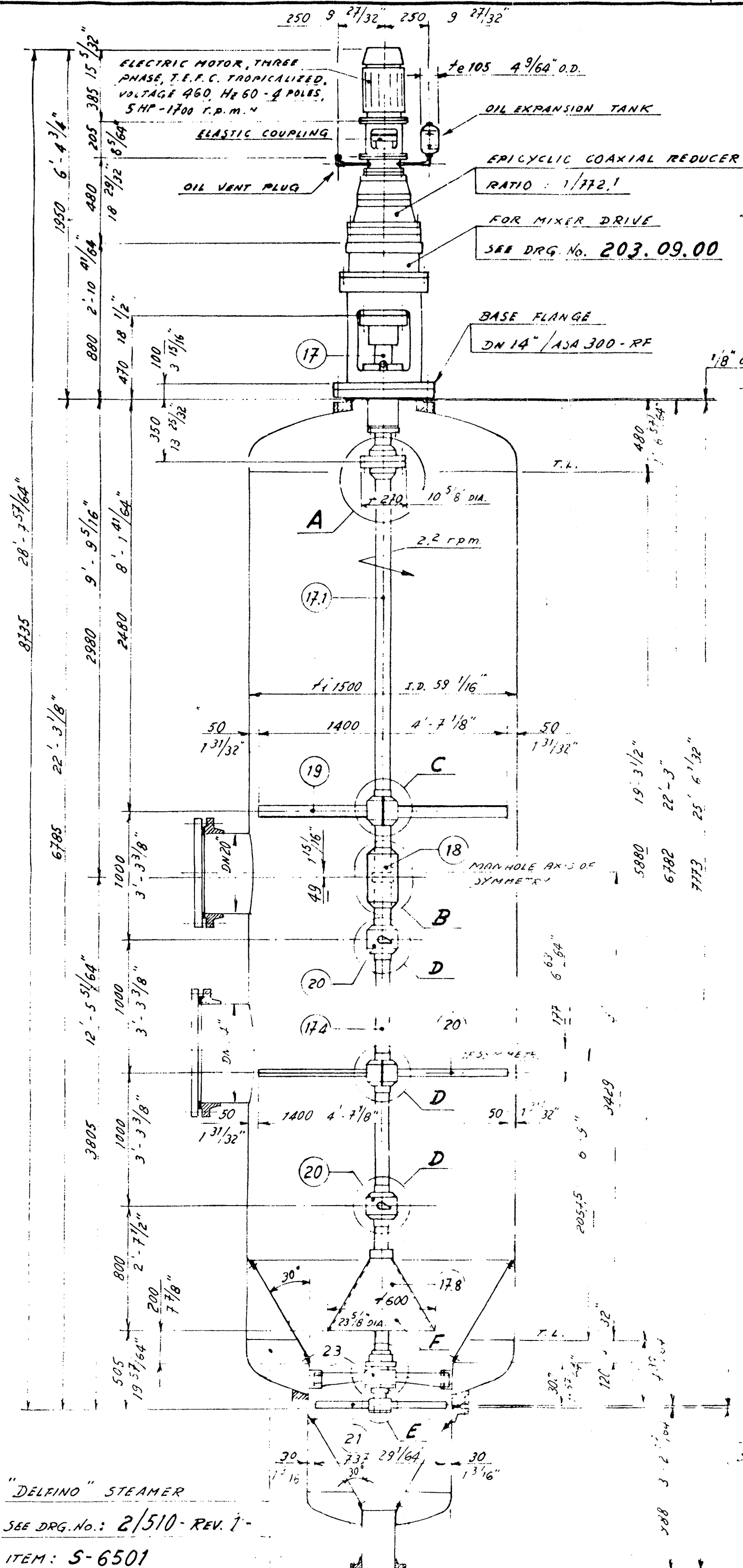
If removable, bolts used (describe other fastenings) /
(Matl., Spec. No., Gr., Size, No.)

MAWP 50,8 psi at max. temp. 175 °F. Min. design metal temp. 23 °F at 50,8 psi.
Hydro., pneu., or comb. test press. 80,37 psi.

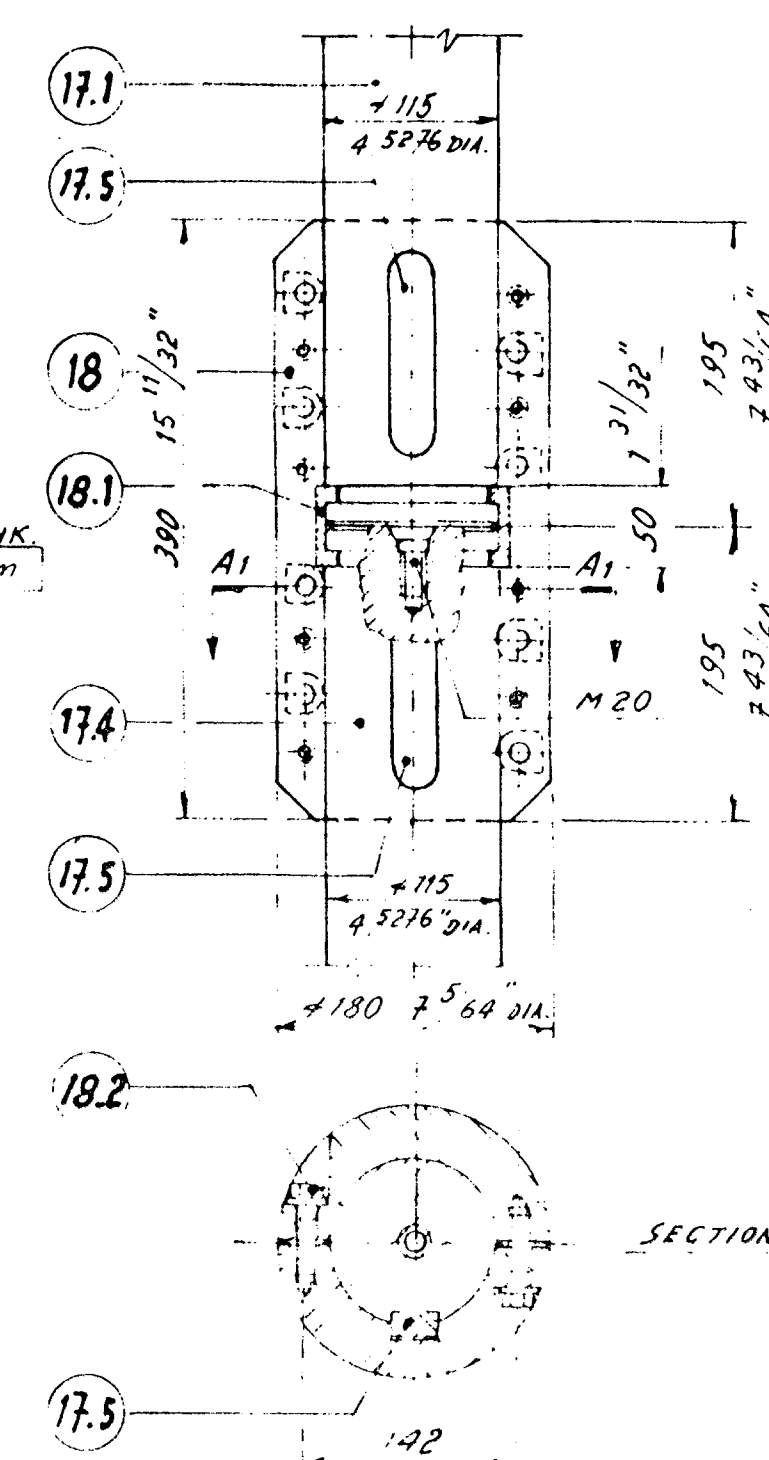
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UCS 66 AND UHA 51 APPLIED

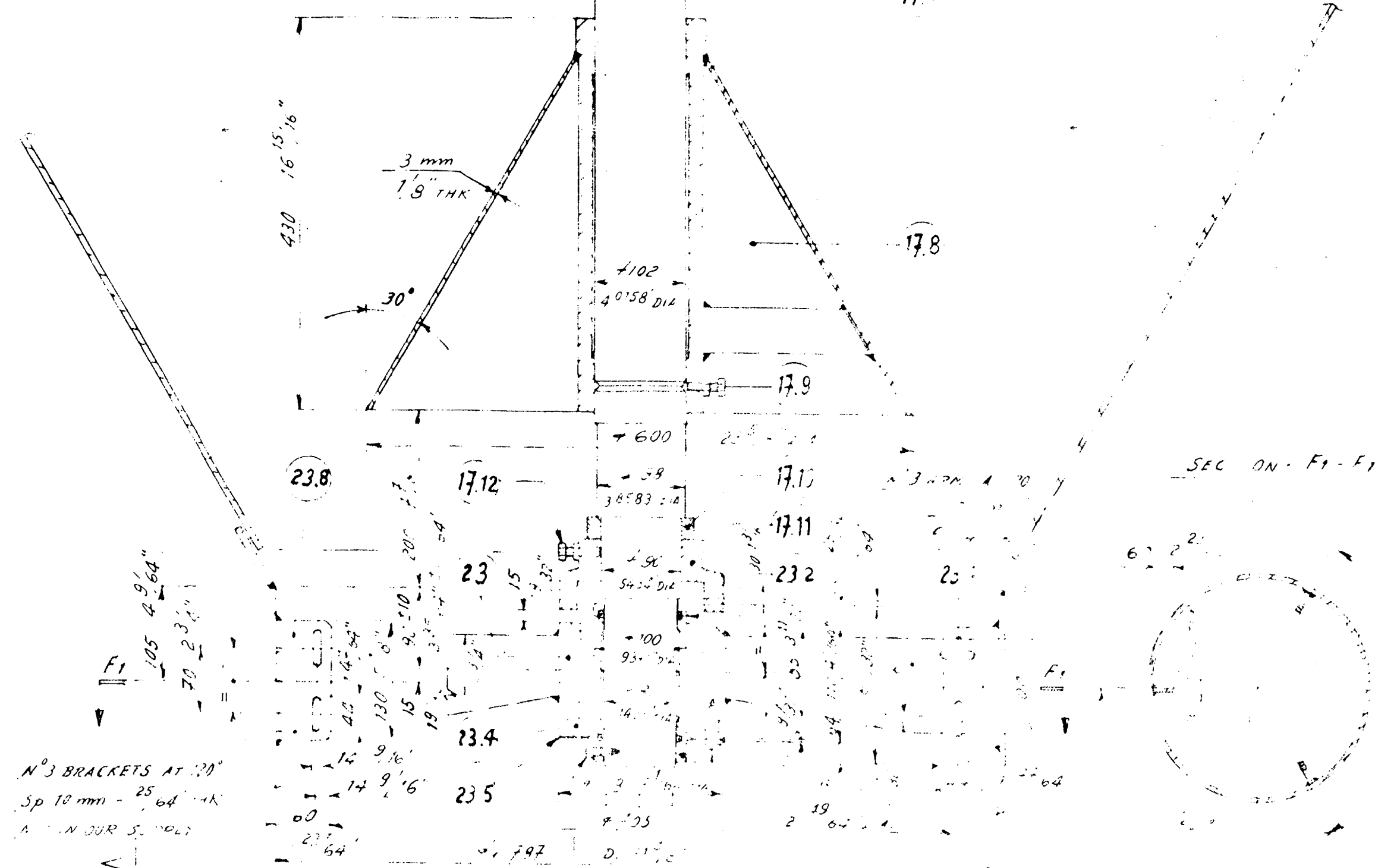
Signed _____ Commissions _____
(Authorizing Signature) (Name of Board (incl. endorsements), State, Prov., and No.)



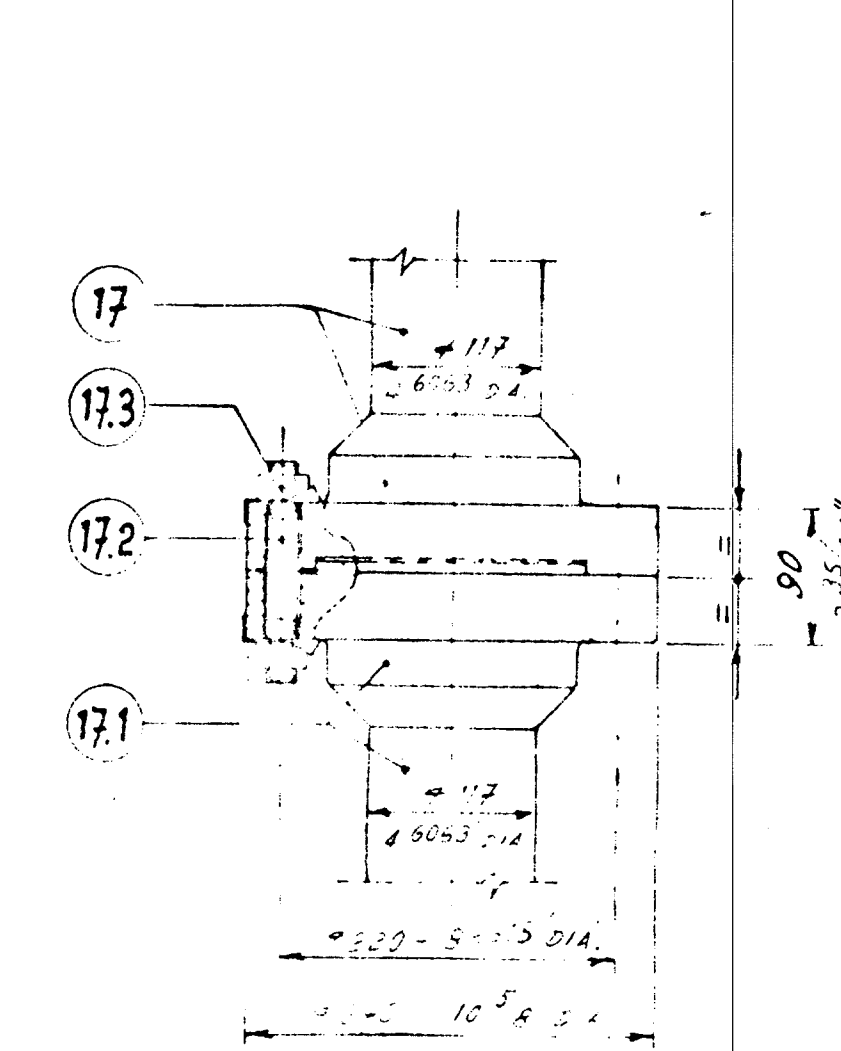
DETAIL "B"



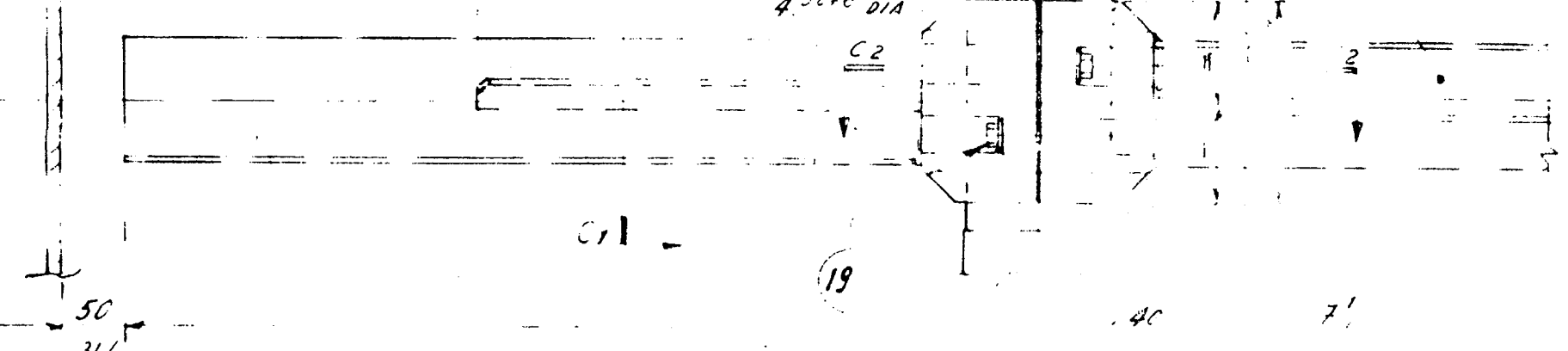
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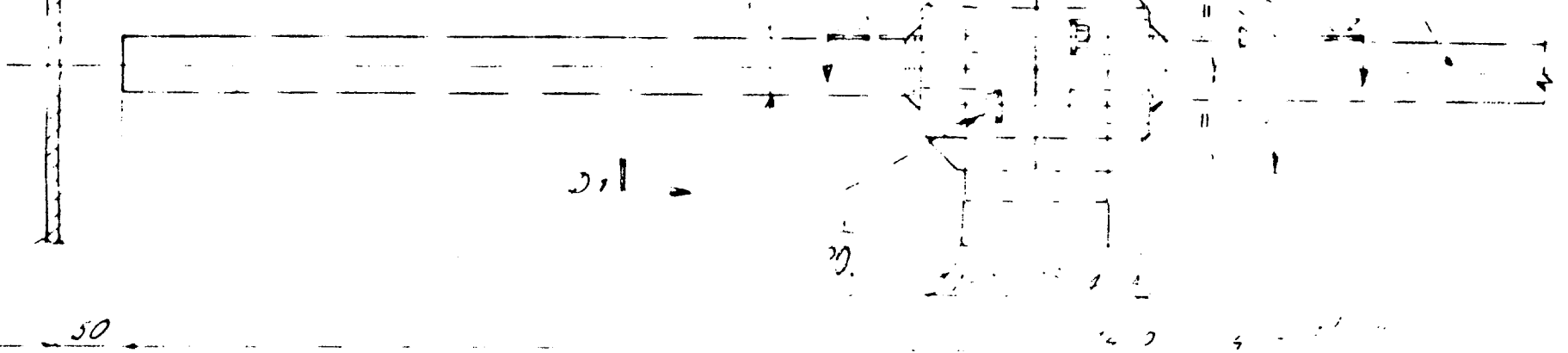
DETAIL "A"



DETAIL "C"



DETAIL "D"



*** RECOMMENDED SPARE PARTS**

17.1	SHAFT	1	254 D.X
17.2	WASHER	1	A-1374
17.3	WASHER	1	SAE 2125
17.4	WASHER	1	SAE 2125
17.5	WASHER	1	SAE 2125
17.6	WASHER	1	SAE 2125
17.7	WASHER	1	SAE 2125
17.8	WASHER	1	SAE 2125
17.9	WASHER	1	SAE 2125
17.10	WASHER	1	SAE 2125
17.11	WASHER	1	SAE 2125
17.12	WASHER	1	SAE 2125
17.13	WASHER	1	SAE 2125
17.14	WASHER	1	SAE 2125
17.15	WASHER	1	SAE 2125
17.16	WASHER	1	SAE 2125
17.17	WASHER	1	SAE 2125
17.18	WASHER	1	SAE 2125
17.19	WASHER	1	SAE 2125
17.20	WASHER	1	SAE 2125
17.21	WASHER	1	SAE 2125
17.22	WASHER	1	SAE 2125
17.23	WASHER	1	SAE 2125
17.24	WASHER	1	SAE 2125
17.25	WASHER	1	SAE 2125
17.26	WASHER	1	SAE 2125
17.27	WASHER	1	SAE 2125
17.28	WASHER	1	SAE 2125
17.29	WASHER	1	SAE 2125
17.30	WASHER	1	SAE 2125
17.31	WASHER	1	SAE 2125
17.32	WASHER	1	SAE 2125
17.33	WASHER	1	SAE 2125
17.34	WASHER	1	SAE 2125
17.35	WASHER	1	SAE 2125
17.36	WASHER	1	SAE 2125
17.37	WASHER	1	SAE 2125
17.38	WASHER	1	SAE 2125
17.39	WASHER	1	SAE 2125
17.40	WASHER	1	SAE 2125
17.41	WASHER	1	SAE 2125
17.42	WASHER	1	SAE 2125
17.43	WASHER	1	SAE 2125
17.44	WASHER	1	SAE 2125
17.45	WASHER	1	SAE 2125
17.46	WASHER	1	SAE 2125
17.47	WASHER	1	SAE 2125
17.48	WASHER	1	SAE 2125
17.49	WASHER	1	SAE 2125
17.50	WASHER	1	SAE 2125
17.51	WASHER	1	SAE 2125
17.52	WASHER	1	SAE 2125
17.53	WASHER	1	SAE 2125
17.54	WASHER	1	SAE 2125
17.55	WASHER	1	SAE 2125
17.56	WASHER	1	SAE 2125
17.57	WASHER	1	SAE 2125
17.58	WASHER	1	SAE 2125
17.59	WASHER	1	SAE 2125
17.60	WASHER	1	SAE 2125
17.61	WASHER	1	SAE 2125
17.62	WASHER	1	SAE 2125
17.63	WASHER	1	SAE 2125
17.64	WASHER	1	SAE 2125
17.65	WASHER	1	SAE 2125
17.66	WASHER	1	SAE 2125
17.67	WASHER	1	SAE 2125
17.68	WASHER	1	SAE 2125
17.69	WASHER	1	SAE 2125
17.70	WASHER	1	SAE 2125
17.71	WASHER	1	SAE 2125
17.72	WASHER	1	SAE 2125
17.73	WASHER	1	SAE 2125
17.74	WASHER	1	SAE 2125
17.75	WASHER	1	SAE 2125
17.76	WASHER	1	SAE 2125
17.77	WASHER	1	SAE 2125
17.78	WASHER	1	SAE 2125
17.79	WASHER	1	SAE 2125
17.80	WASHER	1	SAE 2125
17.81	WASHER	1	SAE 2125
17.82	WASHER	1	SAE 2125
17.83	WASHER	1	SAE 2125
17.84	WASHER	1	SAE 2125
17.85	WASHER	1	SAE 2125
17.86	WASHER	1	SAE 2125
17.87	WASHER	1	SAE 2125
17.88	WASHER	1	SAE 2125
17.89	WASHER	1	SAE 2125
17.90	WASHER	1	SAE 2125
17.91	WASHER	1	SAE 2125
17.92	WASHER	1	SAE 2125
17.93	WASHER	1	SAE 2125
17.94	WASHER	1	SAE 2125
17.95	WASHER	1	SAE 2125
17.96	WASHER	1	SAE 2125
17.97	WASHER	1	SAE 2125
17.98	WASHER	1	SAE 2125
17.99	WASHER	1	SAE 2125
18.00	WASHER	1	SAE 2125

JACOBS ENGR. GROUP - CENTRAL REGION DIV.

APPROVALS:

DESIGNED BY: *[Signature]* DATE: *[Date]*

CHECKED BY: *[Signature]* DATE: *[Date]*

APPROVED BY: *[Signature]* DATE: *[Date]*

DESCRIPTION:

ITEM NO.: 203.09.00/A

QUANTITY: 1

UNIT: EACH

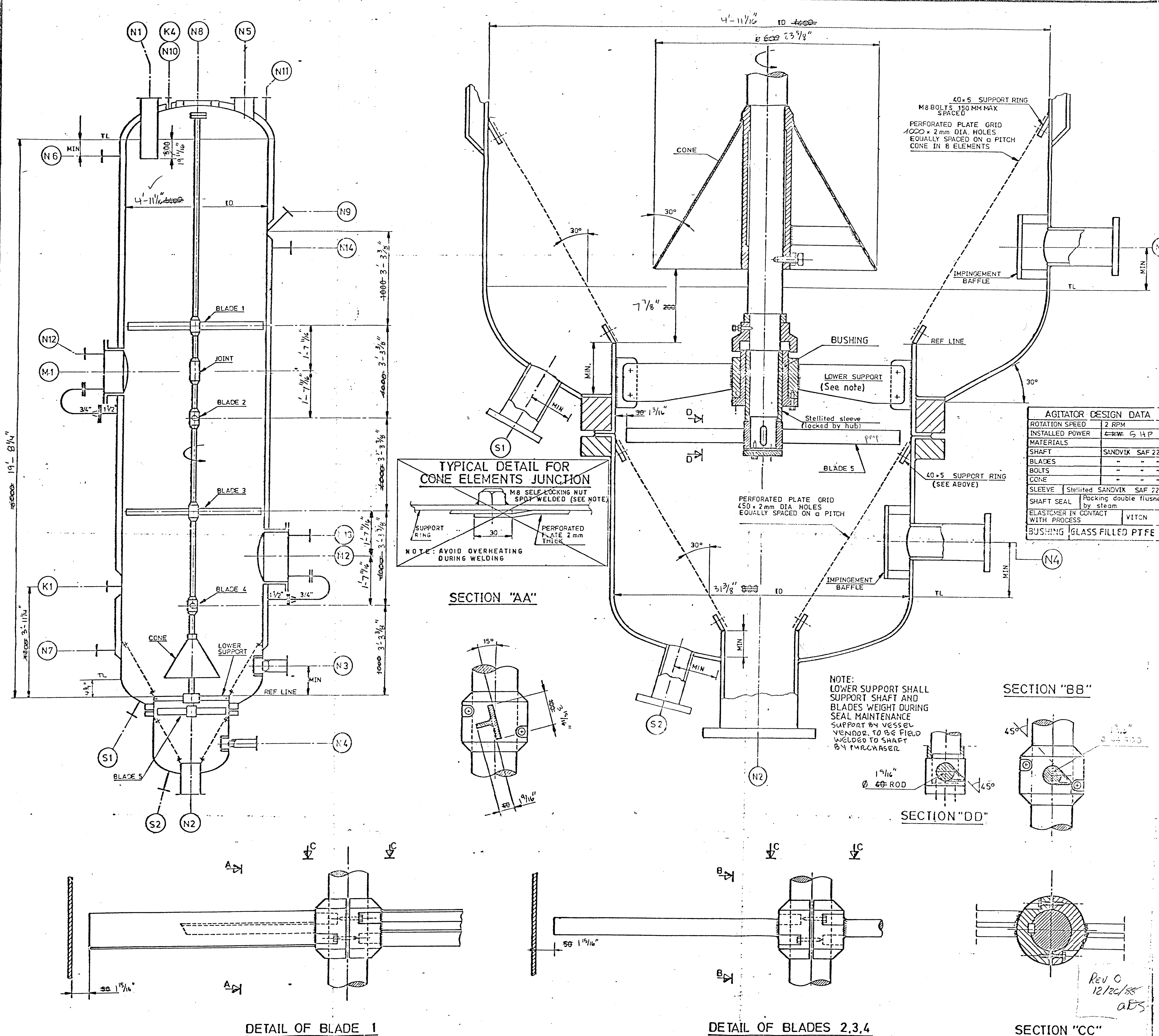
DATE: 10/24/89

BY: JOB 743/89

REVISION: 1

REVISION DESCRIPTION: "FGE4XGP 500/4"

68089



VESSEL DATA									
ORDER NR.:				CAPACITY: 10 m ³					
FLUID: Polymer				SP. GRAVITY: 0.5 Bulk					
EXT. PRESSURE:				bar g AT			°C		
HYDROTEST PRESSURE:				bar g					
TITLE			UNIT	SHELL			JACKET		
OPERATING/DESIGN TEMP			°F	221/347			230/347		
OPERATING/DESIGN PRESS.			PSIG	2.9/-2.9 +50.0			7.3/5V ±14.5		
STRESS RELIEVING									
RADIOGRAPHY									
WELDING EFFICIENCY									
CORROSION ALLOWANCE			mm	None			3		
INSULATION		TYPE		Yes			Yes		
THICK.		mm							
MASS (kg)		EMPTY		CODES:					
		OPERAT.		MOMENT AT BASE:			kgm		
		HYDROTEST.		SADDLE MOMENT:			mm		
CLASSIFICATION:				SHEAR:			kg		
MATERIALS									
TITLE			SHELL			JACKET			
HEADS			AVESTA/SANDVIK			CS.			
SHELL			" " "			CS.			
REINFORCED PLATES			" " "						
COVERS		FORGING	" " "						
NOZZLES		PLATE	" " "						
FLANGES		PIPE	" " "						
BOLTS & NUTS		EXTERIOR	AVESTA 254 SLX & SANDVIK SAF 2205						
		INTERIOR							
EXT. & INT. GASKETS									
INTERNAL			Avesta 254 SLX or Sandvik SAF 2205						
STIFFENING RINGS									
TRAY OR GRID SUPPORTS			Avesta 254 SLX or Sandvik SAF 2205						
VESSEL SUPPORTS									
NOZZLE DATA									
POSITION	SERVICE	SIZE	SERIES ANSI	FLANGE TYPE	REMARKS	NOTE			
N1	Polymer in	8"	150*	WN RF					
N2	Polymer out	8"	150*	WN RF		3			
N3	Steam in	6"	150*	WN RF					
N4	Steam in	2"	150*	WN RF					
N5	Gas out	8"	150*	WN RF					
N6	Steam in	2"	150*	WN RF					
N7	Condensate out	1½"	300*	WN RF					
N8	Agitator	14"	(1)	PAD RF		1			
N9	Polymer recycle	3"	150*	WN RF					
N10	Spare	2"	150*	WN RF					
N11	Condensate in	1½"	300*	WN RF					
N12	Steam in	1"	300*	WN RF					
N13	Steam in	1"	300*	WN RF					
N14	Condensate in	1½"	300*	WN RF					
S1	Drain	2"	150*	WN RF					
S2	Drain	1½"	300*	WN RF					
K1	Temperature	1½"	300*	WN RF					
K4	Pressure	1½"	300*	WN RF					
M1	Manhole	20"	(1)	WN RF		1.2			
M2	Manhole	24"	(1)	WN RF		1.2			
# 68089									
NOTES									
1. Vessel design conditions. 150 LB. DRILLING									
2. With plug (steam heated) flush with inner wall									
3. With internal extension 4. Inner welds flush ground.									
5. Inner roughness max 63 RMS									
6. Design ΔP across perf. plates: upw. 0.1 bar - downw. 0.2 bar									
7. VESSEL SUPPLIED BY OTHERS									
1. REVISED WHERE Δ									
DESCRIPTION			DATE	DRAWN	APPR				
The drawing contains CONFIDENTIAL AND PROPRIETARY information of HIMONT incorporated. This information is not to be used, or disclosed to anyone outside of HIMONT incorporated and its subsidiaries, except pursuant to a written agreement with HIMONT incorporated.			2003 M	2003 M	20				
TITLE			REV	DATE					
PROCESS DATA SHEET				MARCH	88				
ITEM			SA-6501 STEAMER AGITATOR						
PLANT			P.O. No. 049-039-0930127						
CLASSIFICATION			SHT 2 OF 2						
DRAWG. ISSUED BY: HIMONT TECH. MANTOVA-ITALY									
			DRAWN	CHECK	APPR	APPR			