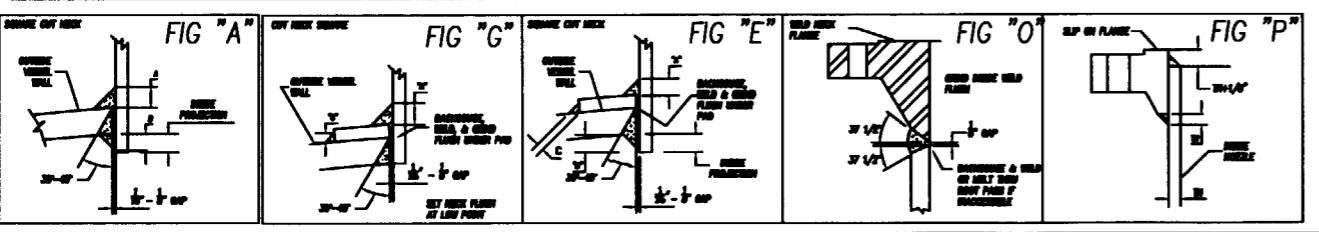


MARK	REQ	SIZE	CL	PROJ	TYPE	DESCRIPTION	RATING	SCH	NECK	INT	THK	PROJ	THK	WIDTH	REPAD	TYPE	A	B	C	SERVICE	FLG	NECK	STUB	PAD	BLIND	BOLTING	GSKT	ALL THIRD STUB W/ 2 - HVY HEX NUTS	GASKET	REMARKS
M-1	1	24.0	3	18	0	P	RF	SEF	150	--	0.3750	0.5000	0.3750	0.1875	E	0.3125	0.4375	0.3125	HANDLE W/ RF, S.A.G. & DAVIT	32	41	28	33	43	42	EP-1-1/4" X 7" LG ATS	24"1500 RG			
P	1	1.0	3	0	0	RF	LVN		150	--	0.5000	0.5000			A	0.4375	0.3750		WATER INLET	31										W/ GUSSETS
TV	1	1.0"	3	1	0	--	SPECIAL		360	--	0"				A	0.3125	0.4375		CELANESE TV-13PA	30										FURNISHED BY CLIENT
R	1	2"	3	0	0	--	RF	LVN	150	--	0.5300	0.5000			A	0.4375	0.3750		CIRCULATION INLET	48										
K	1	3/4"	3	0	0	--	RF	LVN	150	--	0.4200	0.5000			A	0.3125	0.3125		SAMPLE	20										W/ GUSSETS
3	1	3	3	0	0	--	RF	VNF	150	148	0.4000	0.5000	0.5000	2.000	A	0.3750	0.3750		PROCESS OUTLET	46	51									
L	1	3	3	0	0	--	RF	VNF	150	80	0.300	0.5000			J	0.3750	0.2500		REBUNDANT LEVEL PROBE	47	50									
I	1	3/4"	3	0	0	--	RF	LVN	150	180	0.4200	0.5000			A	0.3125	0.4000		VENT	28	57									W/ GUSSETS
HE	1	3/4"	3	0	0	--	RF	LVN	150	--	0.4200	0.5000			A	0.3125	0.3125		MLG	24										W/ GUSSETS
HE	1	3/4"	3	0	0	--	RF	LVN	150	--	0.4200	0.5000			A	0.3125	0.3125		MLG	23										W/ GUSSETS
G	1	3/4"	3	0	0	--	RF	VNF	150	XKS	0.3000	0.5000			A	0.3125	0.4375		PRESSURE TRANS	22	38									W/ GUSSETS
3	1	3	3	0	0	--	RF	VNF	150	76	0.325	0.5000	0.5000	2.000	A	0.3125	0.4375	0.3750	PRESSURE SAFETY VALVE	32	54		26							W/ GUSSETS
E	1	3.0	3	0	0	--	RF	VNF	150	80	0.300	0.5000			J	0.3750	0.2500		LEVEL PROBE	20	38									
3	1	3/4"	3	0	0	--	RF	LVN	150	--	0.4200	0.5000			A	0.3125	0.3125		SPARGE GAS MIX	19										W/ GUSSETS
C	1	1.0	3	0	0	--	RF	VNF	150	XKS	0.2500	0.5000			A	0.3125	0.4375		SPARGE GAS INLET	18	35									W/ GUSSETS
B	1	3.0	3	0	0	--	RF	LVN	150	--	0.6250	FLUSH			G	0.4375			CIRCULATION OUTLET	17										
A	1	4.0	3	0	0	--	RF	VNF	150	120	0.4300	0.5000	0.5000	2.000	E	0.3750	0.3750	0.3750	FILL NOZZLE	16	34		44							

SCHEDULE OF OPENINGS

SCALE: NONE



DWG. NO.	DESCRIPTION	DATE	BY	CHK	APP	DATE
VT-35659	V-1662 PLATFORM MISC. DETAILS					
VT-35648	V-1662 PLATFORM MISC. DETAILS					
VT-35647	V-1662 PLATFORM LADDER HOOPS					
VT-35646	V-1662 PLATFORM LADDER	126579	3	REVISD NOZZLES MR. 2" & 1" TO SCH 80	CASEY	JUN 05/20/01
VT-35645	V-1662 PLATFORM HANDRAILS	125941	2	REVISD PSV NOZZLE TO SCH 40 W GUSSETS	PAYNE	JUN 03/20/00
VT-35644	V-1662 PLATFORM DETAILS		1	REVISD PER COMMENT ISSUED AFC	BILL	JF BILL 02/16/2000
VT-35633	V-1662 MANWAY & DAVIT DETAILS	125941	0	ISSUED FOR APPROVAL	BILL	JF BILL 02/03/2000
VT-35632	V-1662 DETAILS, NOTES, DATA		0			

NOTE: This drawing has been created with AUTOCAD 3D NOT MANUALLY DRAFT ON THIS COPY

#96004

NO.	REVISIONS	BY	CHK	APP	DATE
2	ISSUED CERTIFIED AS BUILT	BL	JF	BL	03/16/2000
1	REVISD PER CLIENT COMMENTS ISSUED APPROVED FOR CONSTRUCTION	BL	JF	ENLL	02/16/2000
0	ISSUED FOR APPROVAL	BL	JF	ENLL	02/03/2000

JEP INDUSTRIES, INC.
DRAWING NO. S/O 2536 SHEET 1 OF 4

CONFIDENTIAL

Celanese
Chemicals Division Pampa Plant

AREA XV MFM UNIT
VESSEL
V-1662, HQ INHIBITOR PDT
ELEV, ORIEN, NOZZLE SCHEDULE

DATE: 02/03/2000
SCALE: NONE
DRAWING NO. WT-35631-3
DATE: 02/03/2000
DATE: 2/13/00
DATE: 3/30/00

06/15/2001

WT-35632

DESIGN:
 VESSEL TO BE FABRICATED IN ACCORDANCE WITH 1998 EDITION A99 ADDENDA
 VESSEL IS DESIGNED FOR NON LETHAL SERVICE
 CODE STAMP IS REQUIRED
 NATIONAL BOARD IS REQUIRED
 DESIGN PRESSURE 150.0 PSI
 DESIGN TEMPERATURE 500 DegF
 DESIGN EXTERNAL PRESSURE 15.0 PSI
 DESIGN TEMP FOR EXTERNAL PRESSURE 300 DegF
 OPERATING PRESSURE 60 PSIG
 OPERATING TEMPERATURE 70 DEG. F
 RADIOGRAPH RT-2
 JOINT EFFICIENCY SHELL: 85% HEAD: 100%
 DESIGN LIQUID LEVEL 6.0000' ABOVE REF. WORK LINE
 DESIGN SP. GRAVITY 1.000
 STRESS RELIEVE NOT REQUIRED BY CODE
 OTHER NDE SEE NDE REQUIREMENTS IN NOTES
 CORROSION ALLOWANCE 0.1250"
 MAX. ALLOW. PRESS. (NEW & COLD) 237 PSIG
 MAX ALLOW WORKING PRESSURE (HOT AND CORRODED) 166 PSIG
 SHOP HYDRO. TEST PRESS. 309 PSIG 40 DEG. MIN.
 FIELD HYDROSTATIC TEST PRESS. 217 PSIG
 ESTIMATED WEIGHTS:
 FABRICATED WT. 5672 lb
 OPERATING WEIGHT 22103 lb
 FULL OF WATER 25301 lb
 SHIPPING WT. 5672 lb

MATERIAL

SHELL	SA-516-70
HEADS	SA-516-70
FLANGES	SA-105
BLIND FLANGES	SA-105
BLIND LINER	N/A
NOZZLE NECKS (PIPE)	SA-106-B
NOZZLE NECKS (PLATE)	SA-516-70
COUPLINGS	N/A
NOZZLE REINFORCEMENT	SA-516-70
INTERNALS	N/A
THERMOWELLS	SA-479-316
VACUUM STIFFENERS	N/A
EXTERNALS (STRUCTURAL)	SA-36
LIFT LUGS	SA-516-70
LIFT EARS	N/A
SADDLES	
WEAR/ SUPPORT PADS	N/A
SKIRT ALLOY RING	N/A
SKIRT	
BASE PL/AB CHAIR	
VESSEL SUPPORT LUGS	
BOLTS	SA-193-B7
COATING	NONE
NUTS	SA-194-2H
COATING	NONE
GASKETS 1/16" THK NOVETECH	925
FLANGE FACING:	250-500 RMS

GENERAL NOTES:

- ASME CERTIFICATE OF AUTHORIZATION 13,357
THIRD PARTY INSPECTION BY HARTFORD STEAM BOILER
- ALL TAIL DIMENSIONS READ FROM REFERENCE LINE.
- NOZZLE PROJECTIONS ARE MEASURED FROM CENTER LINE OF VESSEL, CENTER LINE OF NOZZLE, OR REFERENCE LINE TO FACE OF FLANGE UNLESS OTHERWISE SPECIFIED.
- BOLT HOLES TO STRADDLE NORMAL CENTER LINES UNLESS OTHERWISE NOTED.
- WELD PROCEDURES:

MAIN SHELL SEAMS	1P1, 2P1
NOZZLES AND ATTACHMENTS	2P1
THERMOWELL	1P8-P1
- REINFORCEMENT PADS REQUIRE (2) DRILLED AND TAPPED 1/4" NPT HOLES, 180 DEGREES APART. 1~ AT LOWEST VERTICAL POINT. PADS ARE TO BE TESTED AT 25 PSIG USING AIR AND SOAP SUDS. PLUG HOLES WITH SELF VULCANIZING (RTV) SILICONE SEALANT AFTER VESSEL HYDROTEST.
- LOW TEMPERATURE TESTING NOT REQUIRED PER ASME PARA. UG 20 AND UHA-51.
- MOP DRY ALL WATER POCKETS AFTER DRAINING VESSEL OF HYDROTEST WATER
- CAPACITY OF VESSEL IS 1710 GALLONS

NDE REQUIREMENTS

- LONG SEAM OF MANWAY NECK REQUIRES 100% RT EXAMINATION
- (1) SPOT RADIOGRAPH SHALL BE TAKEN ON EACH HEAD TO SHELL SEAM IN ADDITION TO REQUIREMENTS OF SPOT RT (1 SHOT PER 50'-0" OF WELD)
- ROOT PASSES FOR ALL BUTT WELDS INCLUDING FLANGE TO PIPE WELDS AND ALL NOZZLE ATTACHMENT WELDS SHALL BE MAG PARTICLE OR DPT INSPECTED

CLEANING REQUIREMENTS

- VESSEL SHALL BE THOROUGHLY CLEANED INSIDE AND OUT AND BE FREE OF ANY WELD SPLATTER, LOOSE SCALE, RUST, OR ANY OTHER FOREIGN MATTER.

PAINTING REQUIREMENTS

- EXTERIOR SURFACE OF VESSEL SHALL BE SANDBLASTED PER SSPC-SP-10 AND PRIME COATED WITH 2-3 MILS DFT PLASITE 7102

SHIPPING INSTRUCTIONS

- PROTECT ALL MACHINED SURFACES WITH HEAVY GREASE.
- PROTECT ALL FLANGE FACES FOR SHIPMENT WITH 1/4" THICK WOODEN COVERS SECURED WITH FOUR BOLTS IF NOT FURNISHED WITH PERMANENT BLIND FLANGES.
- FURNISH (1) GASKET FOR EACH NOZZLE FURNISHED WITH PERMANENT BLIND. VESSEL SHALL BE SHIPPED WITH TEST GASKETS IN PLACE.
- PAINT IN SOME CONSPICUOUS PLACE ON VESSEL THE FOLLOWING:
 - P.O. NO.: 2330538
 - ITEM NO.: V-1662
 - NORTH AT 0°

NAME PLATE BRACKET SA-36

U
RT-2

CERTIFIED BY
JEP INDUSTRIES, INC.
HOUSTON, TEXAS

MAX. ALLOWABLE STRESS: 166 PSIG • 500 F
 MIN. DESIGN MET. TEMP: -20 F • 166 PSI
 MFG. SERIAL NO.: S/D 2556 YEAR BUILT: 2000

MAX ALLOW EXTL PRES 15.0 PSI @ 300 DegF

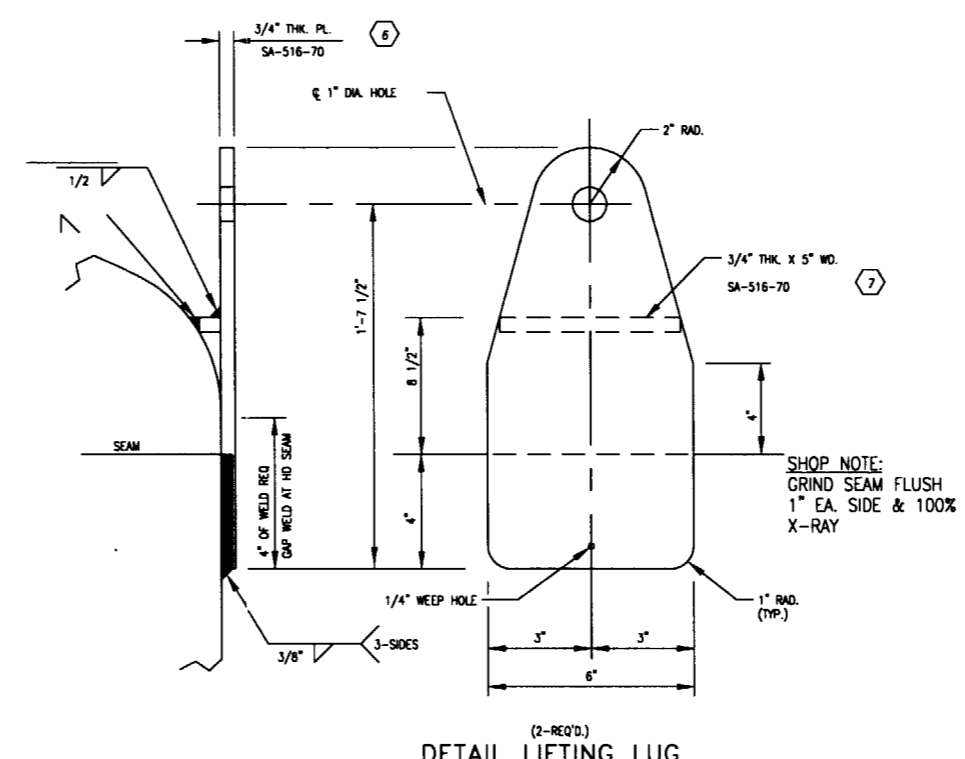
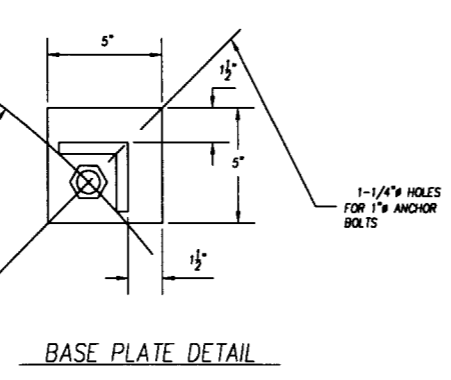
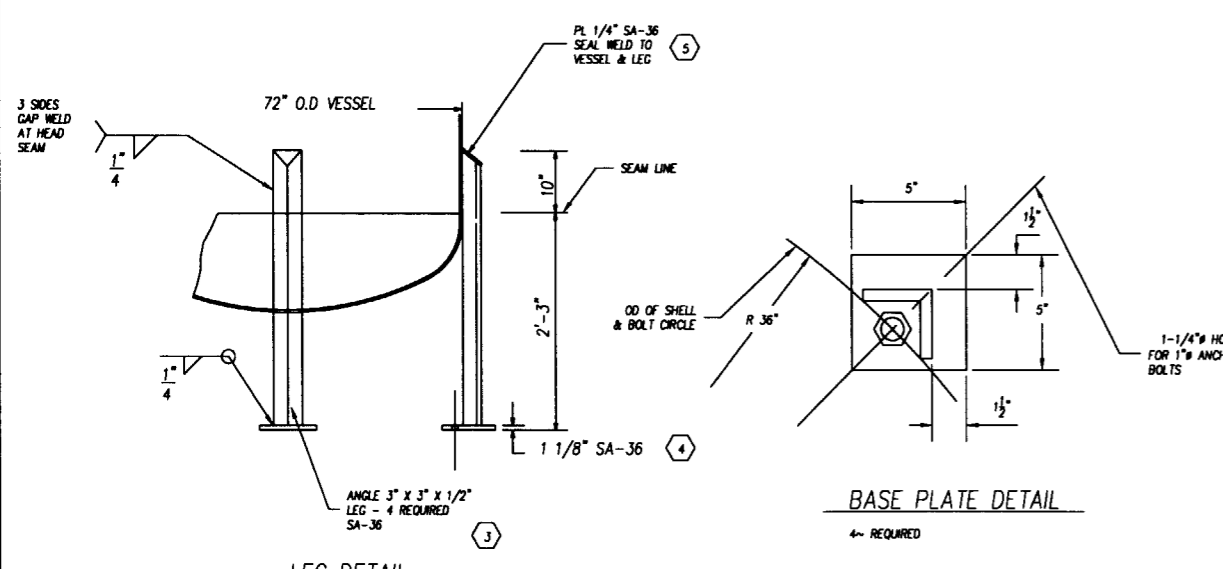
MANUFACTURED FOR
CLIENT: CELANESE - PAMPA

P.O. NO. PD NO 2330538 ITEM V-1662

DESIGN: 150 PSIG • 500 F
 MFG. TEST: 217 PSIG FIELD

EST. FAB. WT. 5672 Lb

V-1662
INHIBITOR DUMP PLOT



3	ADDED NATIONAL BOARD NO ISSUED CERTIFIED AS BUILT	BL	JF	BL	03/16/2000
2	REVISED PER CLIENT COMMENT ISSUED APPROVED FOR CONSTRUCTION	BL	JF	BL	02/16/2000
1	ISSUED FOR APPROVAL	BL	JF	BL	2/03/2000
NO.	REVISIONS	BY	CK	APP	DATE

JEP INDUSTRIES, INC.

DRAWING NO. S/D 2556 SHEET 2 OF 4 REV. 2

#96004

WT-35659	V-1662 PLATFORM MISC. DETAILS								
WT-35648	V-1662 PLATFORM MISC. DETAILS								
WT-35647	V-1662 PLATFORM LADDER HOODS								
WT-35646	V-1662 PLATFORM LADDER								
WT-35645	V-1662 PLATFORM HANDRAILS	2	ISSUED CERTIFIED AS BUILT	BILL	JF	BILL	03/16/2000		
WT-35644	V-1662 PLATFORM DETAILS	1	REV PER COMMENTS ISSUED AFC	BILL	JF	BILL	02/16/2000		
WT-35633	V-1662 MANWAY & DAVIT DETAILS								
WT-35631	V-1662 ELEV. OREN, NOZZLE SCHEDULE	125941	0	ISSUED FOR APPROVAL	BILL	JF	BILL	02/03/2000	
DWG. NO.	REFERENCE DRAWINGS								

NOTE: This drawing has been created with AUTOCAD DO NOT MANUALLY DRAFT ON THIS COPY !!

CONFIDENTIAL

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Celanese
Chemicals Division Pampa Plant

AREA XV MFM UNIT

VESSEL
V-1662, HQ INHIBITOR PLOT
DESIGN, NOTES, NAME PLATE

DR. BY: BILL DATE: 02/03/2000
 CLBY: JF DATE: 02/03/2000
 APP. BY: JJM DATE: 2/15/00
 APP. BY: JJM DATE: 3/30/00

SCALE: NONE
DRAWING NO. WT-35632-2

04/27/00

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
 (Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
 As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

S/O 2556
 SHEET 1 OF 2

1. Manufactured and certified by JEP INDUSTRIES, INC. 902 RILEY ROAD HOUSTON, TEXAS 77047
(Name and address of manufacturer)

2. Manufactured for CELANESE LTD. PAMPA, TEXAS
(Name and address of purchaser)

3. Location of installation CELANESE LTD. PAMPA, TEXAS
(Name and address)

4. Type VERTICAL 2556 N/A 2556 SHT 2 REV 3 302 2000
(Horiz. or vert., tank) (Mfg.'s serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. 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 1998
Year

to A99 N/A N/A
Alloy (Date) Code Case No. Special Service per UG-120(d)

6. Shell: SA-516-70 1/2" 1/8" 71" 6'-0" SM/SM
Matl. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams: TYPE 1 SPOT .85 N/A N/A TYPE 1 SPOT 1
Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F) Time (hr) Girth (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot, Partial, or Full) No. of Courses

8. Heads: (a) Matl. SA-516-70 (b) Matl. N/A
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	ENDS	7/16"	1/8"	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE
(b)	-	-	-	-	-	-	-	-	-	-

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

9. MAWP 166 psi at max. temp. 500 °F
 Min. design metal temp. -20 °F at 166 psi. Hydro. 309 psi. ~~Pressure~~ test pressure 309 psi.

10. Nozzles, inspection and safety valve openings: SEE UG 125

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
FILL	1	4"	150 WN	SA-106B	.438	SA-516-70	"S"	TOP HEAD
OUTLET	1	3"	150LWN	SA-105	.625	N/A	"O"	BTM HEAD
INLET	1	1"	150 WN	SA-106B	.358	N/A	"T"	TOP HEAD
MIX	1	3/4"	150LWN	SA-105	.435	N/A	"T"	BTM HEAD

11. Supports: Skirt NO Lugs NONE Legs FOUR Other NONE Attached WELDED TO SHELL
(Yes or no) (No.) (No.) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A
(Name of part, item number, Mfg.'s name and identifying stamp)

PROCESS UNKNOWN
MAXIMUM ALLOWABLE EXTERNAL PRESSURE 15 PSI @ 300 DEG. F.
LOW TEMPERATURE TESTING NOT REQUIRED PER UG 20 & UHA-51

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 13,357 expires 08-25, 2000.
 Date 3/16/2000 Co. name JEP INDUSTRIES, INC. Signed Sheela Young
(Manufacturer) (Inspector)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by JEP INDUSTRIES, INC. at 902 RILEY ROAD
 I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of TEXAS and employed by HARTFORD STEAM BOILER INSURANCE & INSPECTION
 have inspected the component described in this Manufacturer's Data Report on 3-16 2000, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
 Date 3-16-00 Signed Allyn J. Michael Commissions UB8430A
(Inspector) (Nat'l. Board (incl. endorsements), State, Prov. and No.)

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by JEP INDUSTRIES, INC. 902 RILEY ROAD HOUSTON, TEXAS 77047
(Name and address of Manufacturer)

2. Manufactured for CELANESE LTD. PAMPA, TEXAS
(Name and address of Purchaser)

3. Location of installation CELANESE LTD. PAMPA, TEXAS
(Name and address)

4. Type: VERTICAL INHIBITOR POT 2556
(Horiz., vert., or sphere) (Tank, separator, heat exch., etc.) (Mfg's. serial No.)

N/A 2556 SHEET 2 REV. 3 302 2000
(CRN) (Drawing No.) (Net'l. Bd. No.) (Year built)

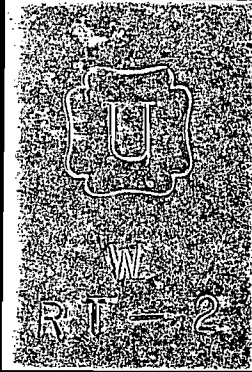
Data Report Item Number									Remarks
10	E	PROBE (1)	3"	150 WN	SA-106 B	.438	N/A	"I"	TOP HEAD
	F	SAFETY (1)	2"	150 WN	SA-106 B	.343	SA-516-70	"S"	TOP HEAD
	G	TRANSFER (1)	3/4"	150 WN	SA-106 B	.308	N/A	"I"	TOP HEAD
	H	1/2 MLG (2)	3/4"	150LWN	SA-105	.435	N/A	"I"	SHELL
	J	VENT (1)	3/4"	150 WN	SA-106 B	.435	N/A	"I"	TOP HEAD
	L	PROBE (1)	3"	150 WN	SA-106 B	.438	N/A	"I"	TOP HEAD
	S	OUTLET (1)	3"	150 WN	SA-106 B	.438	N/A	"I"	TOP HEAD
	K	SAMPLE (1)	3/4"	150LWN	SA-105	.435	N/A	"I"	SHELL
	R	INLET (1)	2"	150LWN	SA-105	.530	N/A	"I"	SHELL
	TW	THERMOWELL (1)	1"	SPCL	SA-240-304	N/A	N/A	"I"	SHELL
	P	INLET (1)	1"	150LWN	SA-105	.500	N/A	"I"	SHELL
	M-1	MANWAY (1)	24"	150 SO	SA-516-70	.375	SA-516-70	"S"	SHELL

96004

Certificate of Authorization: Type "II" No. 13,357 Expires 08-25 ~~XX~~ 2000

Date 3/16/2000 Name JEP INDUSTRIES, INC. Signed Theola Young
(Manufacturer) (Representative)

Date 3-16-00 Name Stephen J. Michael Commission WB 8730A
(Authorized Inspector) (Net'l Board incl. endorsement, State, Province and No.)



NATIONAL BOARD SERIAL NO.

302

CERTIFIED BY
JEP INDUSTRIES, INC.
HOUSTON, TEXAS

MAX. ALLOWABLE W.P. 166 PSIG @ 500 °F

MIN. DESIGN METAL TEMP. -20 °F @ 166 PSIG

MFG. SERIAL NO. S/0.2556 YEAR BUILT 2000

MAX. ALLOW EXTL. PRES. 150 PSI AT 300 °F

MANUFACTURED FOR

CLIENT: CEILANESE - PAMPA

P.O. NO. 2330538 ITEM V-1662

DESIGN 150 PSIG @ 500 °F

HYD. TEST 217 PSIG FIELD

EST. FAB. WT. 56.72 LB

V-1662
INHIBITOR DUMP POT