



- NOZZLE NOTES**
- FURNISH BODY FLGS. WITH THE FOLLOWING:  
(32) STUDS 1-1/8" BNC X 6-1/2" LG. W/(2) HEAVY HEX NUTS EACH.  
(6) GASKETS 18" 150 LB. 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED SHIP (3) LOOSE
  - FURNISH NOZZLE 'F6, F9' EACH WITH VORTEX BREAKER PER DETAIL ON 3493A-2
  - FURNISH NOZZLE 'F2' WITH PIPING PER DETAIL ON 3493A-3
  - FURNISH NOZZLE 'F2, F5, F7, F8, L3, L4, P1, F2, F3, F4, F5, S2, S3, T1, T2, T3, T4 EACH WITH THE FOLLOWING:  
(3) GUGSET PER DETAIL ON 3493A-3
  - FURNISH NOZZLE 'S1' WITH THE FOLLOWING:  
(1) 4" 150 LB. RF BLIND  
(8) STUDS 5/8" - 11NC X 3-1/2" LG. W/(2) HEAVY HEX NUTS EACH.  
(2) GASKETS 4" 150 LB. 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED SHIP (1) LOOSE
  - FURNISH NOZZLE 'S2, S3' EACH WITH THE FOLLOWING:  
(1) 2" 150 LB. RF BLIND  
(4) STUDS 5/8" - 11NC X 3" LG. W/(2) HEAVY HEX NUTS EACH.  
(2) GASKETS 2" 150 LB. 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED SHIP (1) LOOSE
  - FURNISH NOZZLE 'L1, L3, F4, F5' EACH WITH INTERNAL SHIELD PER DETAIL ON 3493A-3
  - FURNISH NOZZLE 'F10' WITH THE FOLLOWING:  
(1) 8" 150 LB. RF BLIND  
(8) STUDS 3/4" - 10NC X 4-1/2" LG. W/(2) HEAVY HEX NUTS EACH.  
(2) GASKETS 8" 150 LB. 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED SHIP (1) LOOSE
  - FURNISH MANWAY 'M1' WITH THE FOLLOWING:  
(1) 1-1/2" 150 LB. RF BLIND  
(16) STUDS 1-1/8" - 8NC X 6" LG. W/(2) HEAVY HEX NUTS EACH.  
(2) GASKETS 18" 150 LB. 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED SHIP (1) LOOSE  
(1) DAVIT ASSEMBLY PER DETAIL ON DRAWING 3493A-5
  - FURNISH NOZZLE 'F3' WITH THE FOLLOWING:  
(1) 1-1/2" 150 LB. RF BLIND  
(4) STUDS 1/2" - 13NC X 2-3/4" LG. W/(2) HEAVY HEX NUTS EACH.  
(2) GASKETS 1-1/2" 150 LB. 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED SHIP (1) LOOSE

- DESIGN NOTES**
- DESIGN PER LATEST A.S.M.E. CODE SECTION VIII DIV. 1 1995/A36
  - RADIOGRAPHY: \* RT-3 (EACH LONG & CIRC. BEAM)
  - JOINT EFFICIENCY: HEADS: 85% SHELL LONGT. 85%
  - CORROSION ALLOWANCE: HEADS: 0 SHELL 0 NOZZLES 0
  - MAX. ALLOW. STRESS: HEADS 16,200 SHELL 16,200 AT 400 °F
  - DESIGN PRESSURE: 50 P.S.I. AT 400 °F
  - EXTERNAL DESIGN PRESS: 15 P.S.I. AT 400 °F
  - OPERATING PRESS: 1 P.S.I. AT 175 °F EXT. N/A P.S.I.
  - MAX. PRESS. NEW 201 P.S.I. AT 100 °F LIMITED BY NOZZ. F6
  - MAX. PRESS. CORR. 166 P.S.I. AT 400 °F LIMITED BY FLG. F6
  - MIN. METAL TEMP. -20 °F AT 201 P.S.I. (A)
  - CHART RECORD HYDROSTATIC TEST PRESSURE 312 P.S.I. (HORIZ.-SHOP)
  - A.S.M.E. CODE STAMP FOR VESSEL: 19 REQUIRED.
  - POST WELD HEAT TREAT: N/A REQUIRED.
  - JACKET DESIGN PRESSURE: N/A P.S.I. AT N/A °F
  - JACKET MIN. METAL TEMP. N/A °F AT N/A P.S.I.
  - JACKET CORROSION ALLOWANCE: HEADS N/A SHELL N/A NOZZLES N/A
  - JACKET MAX. ALLOW. STRESS: N/A AT N/A °F
  - JACKET TEST PRESSURE: N/A P.S.I.
  - A.S.M.E. CODE STAMP FOR JACKET: N/A REQUIRED.
  - JACKET BUTTON SPACING: N/A CENTERS.
  - FLANGE BOLT HOLES TO STRADDLE NORMAL VESSEL CENTERLINES UNLESS OTHERWISE NOTED.

- MATERIAL NOTES**
- HEADS: SA-240-304/304L \*\*
  - SHELL: SA-240-304/304L \*\*
  - REINFORCING: SA-240-304/304L \*\*
  - SUPPORTS: SA-240-304/SA-516-70
  - STRUCTURAL: SA-479-304/304L \*\*
  - BODY FLG.: A. FLANGES: SA-182F-304/304L \*\*  
B. NECKS: SA-312TP-304/304L \*\*  
C. COVERS: N/A
  - NOZZLES: A. FLANGES: SA-182F-304/304L \*\*  
B. NECKS: SA-312TP-304/304L \*\*  
C. COVERS: SA-182F-304/304L \*\*
  - FITTINGS: N/A
  - PRESSURE BOLTING: A. STUDS: SA-193-B7  
B. NUTS: SA-184-2H
  - GASKETS: A. SERVICE: 316L SS SPIRAL WOUND CG-L5 GRAFOIL FILLED  
H. TEST: GARLOCK 3000
  - INTERNAL: 304/304L
  - INTERNAL BOLTING: N/A

MARK	QTY	SIZE	SERIES	FACING	TYPE	SERVICE	NECK	THK.	WITH.	I.S.	O.S.	NECK TO SHELL OR PAD	PAD TO SHELL	ATTACH. FIG. NO.	SEE NOTE
MW	1	18"	150 LB	RF	80	BODY FLANGE	18"	1/4"							
T4	1	1-1/2"	150 LB	RF	80	MANWAY W/DAVIT	18"	3/16"				FLUSH	9-5/8"	3/8"	1 4 7 9
T3	1	1-1/2"	150 LB	RF	80	TEMP. INDICATOR	190"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 4
T2	1	1-1/2"	150 LB	RF	80	TEMP. INDICATOR	190"	1/45"				FLUSH	7-3/4"	3/16"	1 4 6 4
T1	1	1-1/2"	150 LB	RF	80	TEMP. INDICATOR	190"	1/45"				FLUSH	7-3/4"	3/16"	1 4 7 4
S3	1	2"	150 LB	RF	80	SPARE W/BLIND	238"	1/45"				FLUSH	7-5/8"	1/4"	1 4 7 4, 6
S2	1	2"	150 LB	RF	80	SPARE W/BLIND	238"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 4, 6
S1	1	4"	150 LB	RF	80	SPARE W/BLIND	450"	237"				FLUSH	7-3/4"	1/4"	1 4 7 5
P5	1	1-1/2"	150 LB	RF	80	BASE PRESS. INDICATOR	190"	1/45"				FLUSH	SEE ELEV	3/16"	1 4 7 4
F4	1	1-1/2"	150 LB	RF	80	BASE PRESS. TRANSMITTER	190"	1/45"				FLUSH	SEE ELEV	3/16"	1 4 7 4
F3	1	1-1/2"	150 LB	RF	80	SPARE W/BLIND	190"	1/45"				FLUSH	7-3/4"	3/16"	1 4 7 4, 10
F2	1	1-1/2"	150 LB	RF	80	TOP PRESS. GAUGE	190"	1/45"				FLUSH	SEE ELEV	3/16"	1 4 7 4
P1	1	1-1/2"	150 LB	RF	80	TOP PRESS. TRAN.	190"	1/45"				FLUSH	SEE ELEV	3/16"	1 4 7 4
L4	1	1-1/2"	150 LB	RF	80	BASE MAGNETIC LEVEL GAUGE	190"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 4, 7
L3	1	1-1/2"	150 LB	RF	80	BASE MAGNETIC LEVEL GAUGE	190"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 4, 7
L2	1	3"	150 LB	RF	80	BASE LEVEL TRAN.	350"	216"				FLUSH	7-5/8"	1/4"	1 4 7 4
L1	1	3"	150 LB	RF	80	BASE LEVEL TRAN.	350"	216"				FLUSH	7-5/8"	1/4"	1 4 7 4
F10	1	8"	150 LB	RF	80	PACKING DUMP W/BLIND	863"	322"				FLUSH	9-3/4"	1/4"	1 4 7 8
F9	1	3"	150 LB	RF	80	PUMP SUCTION	350"	216"				FLUSH	SEE ELEV	1/4"	1 4 7 2
F8	1	1-1/2"	150 LB	RF	80	BY-PASS FROM TF-210	190"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 4
F7	1	2"	150 LB	RF	80	MINIMUM FLOW BY-PASS	238"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 4
F6	1	6"	150 LB	RF	80	BTM RETURN W/VORTEX BRKR	663"	280"				FLUSH	SEE ELEV	5/16"	1 4 7 2
F5	1	2"	150 LB	RF	80	LIQUID FEED FROM D-250	238"	1/45"				FLUSH	7-5/8"	3/16"	1 4 7 1
F4	1	8"	150 LB	RF	80	REBOILER RETURN	863"	322"				SEE DTL	9-5/8"	3/8"	1 4 10
F3	1	4"	150 LB	RF	80	FEED FROM R-220	450"	237"				SEE DTL	7-5/8"	1/4"	1 4 10
F2	1	2"	150 LB	RF	80	REFLUX	238"	1/45"				SEE DTL	7-3/4"	3/16"	1 4 7 1
F1	1	6"	150 LB	RF	80	OVERHEAD VAPOR	663"	280"				FLUSH	SEE ELEV	1/4"	1 4 7 1

# 87 895 ✓

S & B Engineers & Constructors, Ltd.  
ACCEPTED DATA By: MDP Date: 10/4/99

TEX PV Serial No: 00-123-00-1666  
Item No: 123D-230  
SAP No: 70423285  
Job No: B2741

ITEM NO. 123D-230 SERIAL NO. 3493A-4 NATIONAL BOARD NO. 867

ESTIMATED WEIGHT EMPTY 5000 LBS.

P.O. NO. E4446M0014  
PROJECT NO. 9K-123D-230 REV. 0  
JOB NO. E4446  
ATTACH. FIG. NO. B2741  
DATE 00-123-00-1666

**CERTIFIED AS BUILT**  
BY: TH DATE: 9-22-99

**ENTEX FABRICATION, INC.**  
1010 Texawood Street  
Iowa Park, Texas  
DATE: 7-8-98  
DRAWN BY: TH  
CUSTOMER: EASTMAN CHEMICAL COMPANY  
LONGVIEW, TEXAS  
TITLE: 18" O.D. W/36" I.D. SUMP X 26'-0" TAN/TAN HIGH BOILER COLUMN  
DRAWING NUMBER: 3493A-1 REV. NO: 4

NO.	DATE	BY	REVISIONS
4	11/1/98	TH	CERTIFIED AS BUILT
3	7/13/98	TH	REV. PER CUST. CHG. DATED 7/13/98
2	6/24/98	TH	REV. PER CUST. CHG. DATED 6/24/98
1	5/21/98	TH	RELEASE FOR FAB
0	B/T	TH	FOR APPROVAL