

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

1. Manufactured by Engineers and Fabricators, Co. Houston, Texas
(Name and address of manufacturer)
Manufactured for Placid Oil Company Dallas, Texas
(Name and address of purchaser)
3. Location of installation Placid Oil Company Black Lake Gas Plant
(Name and address) Goldonna, Louisiana
4. Type Horiz Ht Exch Vessel No. S-20018 CD-20018 1837 Year Built 1981
(Horiz., or vert. tank) (Mfg'r's Serial No.) (CRN) (Drawing) (Nat'l Brd No.)
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 1980 and Addenda to S'80 and Code Case no. -
(Date) (Year)
Special service per UG-120(d) _____
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: _____
(Name of part, item number, mfg'r's name and identifying stamp)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers

6. Shell: Material SA-240-T304 Nom. Thickness 5/16 in. Corrosion Allowance 0 in. Diam. 5 ft. 2-5/8 in. Length 23 ft. 3-1/8 in.
Cone: SA-240-T304 5/16 in. ID x 62 in. ID x 48-1/2 in. (girth)
7. Seams: Db1 Longitudinal Butt R.T. Spot Efficiency 85 % H.T. Temp. - F Time - Girth Butt R.T. Spot No. of Courses 3-Shell
(Db1., Sngl.) (Spot or Full) (Db1., Sngl.) (Spot, Partial, or Full) 1-Cone
8. Heads: (a) Material SA-240-T304 (b) Material _____
(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)	End	5/16" nom	0			2:1				Concave
(b)										

If removable, bolts used (describe other fastenings) Head welded to shell cyl

(Material, Spec. No., Gr., Size, No.)

9. Type of Jacket _____ Proof Test _____
10. Jacket Closure _____ If bar, give dimensions _____ If bolted, describe or sketch.
(Describe as ogee & weld, bar, etc.)
11. Constructed for max. allowable working pressure 100 psi at max. temp. 400 F Min. temp. (when less than -20 F) _____ F.
Hydrostatic, ~~XXXXXXXXXXXX~~ test pressure 150 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: Stationary Material SA-240-T304 Diam. 39 in. Nominal Thick. 2-3/8 in. Corrosion Allow. 1/8 in. Attachment Bolted
(Spec. No., Gr.) (Subject to pressure) (Welded, Bolted)
Floating Material _____ Diam. _____ in. Nominal Thick. _____ in. Corrosion Allow. _____ in. Attachment _____
(Spec. No., Gr.)
13. Tubes: Material SA-249-T316 O.D. 3/4 in. Nominal Thickness #16 BWG AW In. of gauge Number 380 Type U
(Spec. No., Gr.) (Straight or "U")

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: Material SA-516-70 Nominal Thickness 1/2 in. Corrosion Allowance 1/8 in. Diam. 2 ft. 11 in. Length 2 ft. 3-1/8 in.
(Spec. No., Gr.)
15. Seams: Db1 Longitudinal Butt R.T. Spot Efficiency 85 % H.T. Temp. - F Time - Girth Butt R.T. Spot No. of courses 1
(Db1., Sngl.) (Spot or Full) (Db1., Sngl.) (Spot, Partial or Full)
16. Heads: (a) Material SA-516-70 (b) Material _____
(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)	End	1/2" nom	1/8"			2:1				Concave
(b)										

If removable, bolts used (describe other fastenings) Head welded to chan cyl

(Material, Spec. No., Gr., Size, No.)

17. Max. allowable working pressure 70 psi at max temp. 500 F. Min. temp. (when less than -20F) _____ F.
Hydro. ~~XXXXXXXXXX~~ test pressure 105 psi.

Items below to be completed for all vessels where applicable

18. Safety Valve Outlets: Number - Size - Location In Line

106459

19. Nozzles:

Purpose (Inlet, Outlet, Drain)	Number	Diam. Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached
Vent, Drain	2	3/4"-6000#	CPL	SA-105			Welded
Inlet, Outlet	2	8"-150#	WN	SA-106-B	.322"	-	Welded
Inlet	1	4"-150#	LJ	SA-403-T304 & SA-312-T304	.337"	-	Welded
Outlet	1	3"-150#	LJ	SA-403-T304 & SA-312-T304	.300"	-	Welded
Outlet	1	10"-150#	LJ	SA-403-T304	.594"	-	Welded
Level Gage	2	3"-150#	LJ	SA-403-T304 & SA-312-T304	.300"	-	Welded

20. Inspection Openings:

Manholes No. _____ Size _____ Location _____
Handholes No. _____ Size _____ Location _____
Threaded No. 11 Size 3/4"-1"-half 6000# Nozzle Necks

21. Supports: Skirt No Lugs - Legs - Other 2 Saddles Attached Welded to Shell
(Yes or no) (No.) (No.) (Describe) (Where and how)

22. Remarks: Item 972-A CARBONALE STRIPPING STEAM VAPORIZER
Shell Side: Water and Disolved CO2
Tube Side: Naptha

CERTIFICATE OF 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.

Date 8-17-81 Signed ENGINEERS AND FABRICATORS, CO. by A. M. Infante
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 11,516 expires 5-3-, 19 84

CERTIFICATE OF SHOP INSPECTION

Vessel made by Engineers and Fabricators, Co at Houston, Texas

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Texas and employed by Employers Casualty Company

of Dallas, Texas have inspected the pressure vessel described in this Manufacturers' Data Report on 5-13, 1981, 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 the Manufacturers' 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 8-17-81
Signed R. A. Randall Commissions National Board No. 6066
(Inspector) (Nat'l Board, State, Province and No.)

CERTIFICATE OF COMPLIANCE FOR FIELD WORK

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.

Date _____ Signed _____ by _____
(Manufacturer) (Representative)

"U" Certificate of Authorization No. _____ expires _____, 19 _____

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of _____ and employed by _____

of _____ have compared the statements in this Manufacturers' Data Report with the described pressure vessel and state that parts referred to as data items _____, not included in the certificate of shop inspection, have been inspected by me and that, to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1.

The described vessel was inspected and subjected to a hydrostatic test of _____ psi.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturers' 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 _____
Signed _____ Commissions _____
(Authorized Inspector) (Nat'l Board, State, Province and No.)

\$ 106 459

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DESIGN CERTIFICATION

I, Pete D. Valle, certify that to the best of my knowledge and belief the statements in this report are correct and that the Design Change described in this report conforms to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. R-2869 expires on 10/20, 2008

Date 6/23, 2006 RAMA FABRICATION, INC. Signed Pete D. Valle
(name of design organization) (authorized representative)

CERTIFICATE OF DESIGN CHANGE REVIEW

I, DAVID ROSS, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of TX and employed by HSBCT of Hartford, CT have

reviewed the design change as described in this report and state that to the best of my knowledge and belief such change complies with the applicable requirements of the National Board Inspection Code.

By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

Date 6/23, 2006 Signed David Ross Commissions N.B. 12,612 A Texas 1723
(inspector) (National Board and jurisdiction no.)

CONSTRUCTION CERTIFICATION

I, Pete D. Valle, certify that to the best of my knowledge and belief the statements in this report are correct and that all material, construction, and workmanship on this Alteration conforms to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. R-2869 expires on 10/20, 2008

Date 6/23, 2006 RAMA FABRICATION, INC. Signed Pete D. Valle
(name of construction organization) (authorized representative)

CERTIFICATE OF INSPECTION

I, DAVID ROSS, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of TX and employed by HSBCT of Hartford, CT have

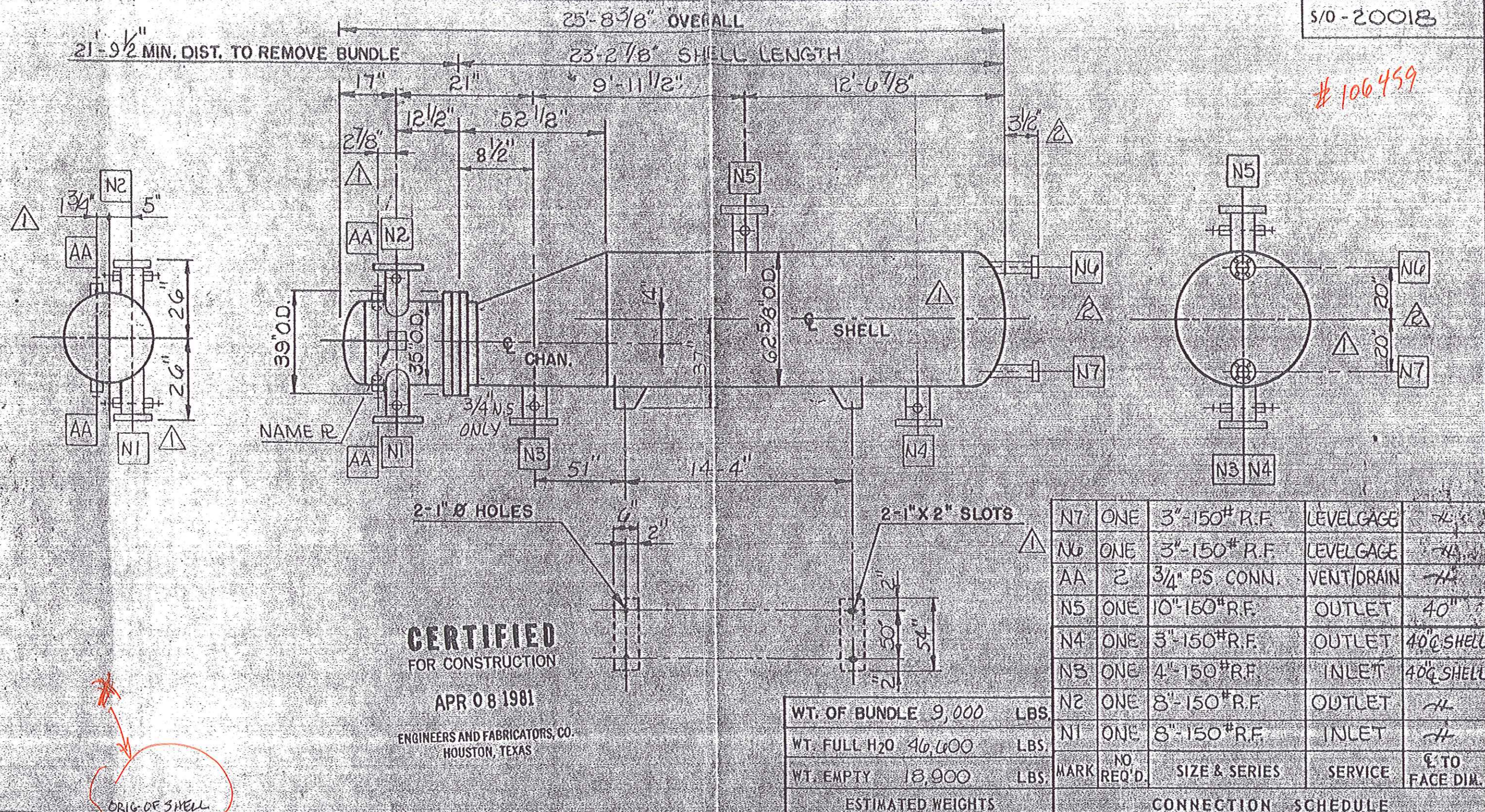
inspected the work described in this report on 3/21, 2006 and state that to the best of my knowledge and belief this work complies with the applicable requirements of the National Board Inspection Code.

By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.













Date 6/23, 2006 Signed David Ross Commissions N.B. 12,612 A Texas 1723
(inspector) (National Board and jurisdiction no.)

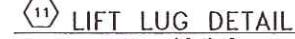
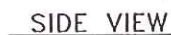
S/O-20018

#106459




GENERAL NOTES	DETAIL DRAWINGS	DESIGN CONDITIONS	REVISIONS	ENGINEERS & FABRICATORS, INC.
EFCO SERIAL NO. S-20018 PROTECT ALL OPENINGS FOR SHIPMENT. NOZ'S. TO HAVE ONE 3/4" P.S. CONN. (N.S.) & ONE 1" P.S. CONN. (F.S.). AINT. - EFCO STD. SEE SPECIFICATIONS HYDRO TEST CHARTS REQ'D. YES SEE SPECIFICATIONS	GN-20018 G-20018 SRD-20018 NP-20018 F-20018 BKU-20018 BKU-B-20018 W-100 (REV "J") SSD-20018	CODE: ASME VIII DIV. 1 STAMP YES TEMA CL "R" SHELL SIDE TUBE SIDE DESIGN PRESS. 100 70 P.S.I.G. TEST PRESS. 150 105 P.S.I.G. DESIGN TEMP. 400 500 F NO. OF PASSES ONE 4 CORR. ALLOW. 0 1/8 IN. ONE REQ'D. AS SHOWN	3-30-81 4-7-81	ENGINEERS & FABRICATORS, INC. HOUSTON, TEXAS CUST. PLACID OIL COMPANY NAME CARBONATE STRIPPING STEAM VAPORIZER SIZE #34-20-3090 TYPE BKU ITEM NO. 972-A CUST. P.O. NO. 1068 JOB NO. 13467 DATE 2-26-81 DWG. NO. CD-20018

<p>I</p> 	<p>II</p> 
<p>III</p> 	<p>IV</p> 
<p>V</p> 	<p>VI</p> 
<p>VII</p> 	<p>VIII</p> 
<p>IX</p> 	<p>X</p> 
<p>XI</p> 	<p>XII</p> 



SCALE: 1 1/2"=1'-0"

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

BILL OF MATERIAL				SPECIFICATIONS			
PK	DESCRIPTION	MATL	QTY	YEAR BUILT	1981	TAG/MODEL NUMBER	E-602
				SERIAL NO.	S-22018	NATIONAL B.D. NO.	1837
1	PIPE 14.00" x 0.375" WALL x 7.9375' LG. SMLS.	SA106-B	1	DESIGN PRESSURE INTERNAL	100	PSIG @ TEMP.	400 °F MIN/MA
2	PIPE 3.00" x 0.300" WALL x 6.8125' LG. SMLS.	SA106-B	1	DESIGN PRESSURE EXTERNAL		PSIG @ TEMP.	°F MIN/MA
3	PIPE 6.00" x 0.280" WALL x 6.1875' LG. SMLS.	SA106-B	2	HYDRO PRESSURE INTERNAL	130	J.E. LONG SEAMS	85% 85%
4	PL. 0.312" x 18.000" x 195.7562' LG. - ROLLED CYL.	SA516-70	1	CORROSION ALLOWANCE	0	J.E. LONG SEAMS	85%
5	PL. 0.375" x 62.00" x 35.500" - PL. 30/REC	SA36	1	RADIOGRAPHY	RT-3	STRESS RELIEVE	NO
6	RFWN 14.00" - 0150# RF WELD NECK FLANGE x 0.375" WALL	SA105	1	FLANGE RATING	150	CORROSION RATING	6000
7	RFWN 3.00" - 0150# RF WELD NECK FLANGE x 0.300" WALL	SA105	1	SHELL MATL. SPEC.	NOTE 7	HEAD MATL. SPEC.	NOTE 7
8	RFWN 6.00" - 0150# RF WELD NECK FLANGE x 0.280" WALL	SA105	2	FLANGE MATL. SPEC.	SA182-F304	CPHG. MATL. SPEC.	SA182-F304
9	BAR FLAT - 2.50" x 0.250" x 229.00' LG. ROLL TO 62.625' ID(HV)	SA36	1	PIPE MATL. SPEC.	SA312-1P304	BW FIT. MATL. SPEC.	SA312-1P304
10	PL. 0.375" x 14.00" x 6.000" - RE-PAD	SA516-70	2	REPAD MATL. SPEC.	SA240-304	STRUC. MATL. SPEC.	SA403-304
11	PL. 1.000" x 10.00" x 8.000" - LIFT LUG	SA516-70	2	RF GSK. MATL. SPEC.	304 SS	FLG. STUD SPEC.	SA193-B8
				RJ GSK. MATL. SPEC.	304 SS	FLG. NUT SPEC.	SA194-B8
				EMPTY WEIGHT	19,300 LBS.	FULL LIQUID WEIGHT	46,600 LBS
				RF GSK. DESC.	1/8" SPIRAL WOUND METAL/COMP.		
				RJ GSK. DESC.			
				WELD PROCEDURE			
				INSULATION DESC.	3" HOT		
				INSPECTION BY	HSB CT & RAMA		
				CONSTRUCTION CODE	ASME SEC. VIII DIV. 1		
				EXT. SURFACE TREATMENT	PER CUSTOMER SPEC'S		
				INT. SURFACE TREATMENT	-		
REVISIONS							
NO.	DESCRIPTION	DATE	BY	CHK	APV		
0	ISSUED FOR CONSTRUCTION	04/11/05	JDV				
1	RE-RATE TUBE SIDE TO 200 PSIG @ 400° F	06/20/05	PDV				
 <p>FABRICATION, INC.</p>							
DESCRIPTION: SWS REBOILER (E602)							
62" I.D. x 21'-8 1/2" S/E							
CUSTOMER: GIANT							
YORKTOWN REFINERY							
SCALE: 1/2" = 1'-0"							
CUST. PO# _____ W.O. # 5990							
QUOTE # _____							
DRAWN JDV 03/21/06 DWG. NO. _____							
CHECK PDV 04/13/06 0-5860-V018 REV. 1							

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