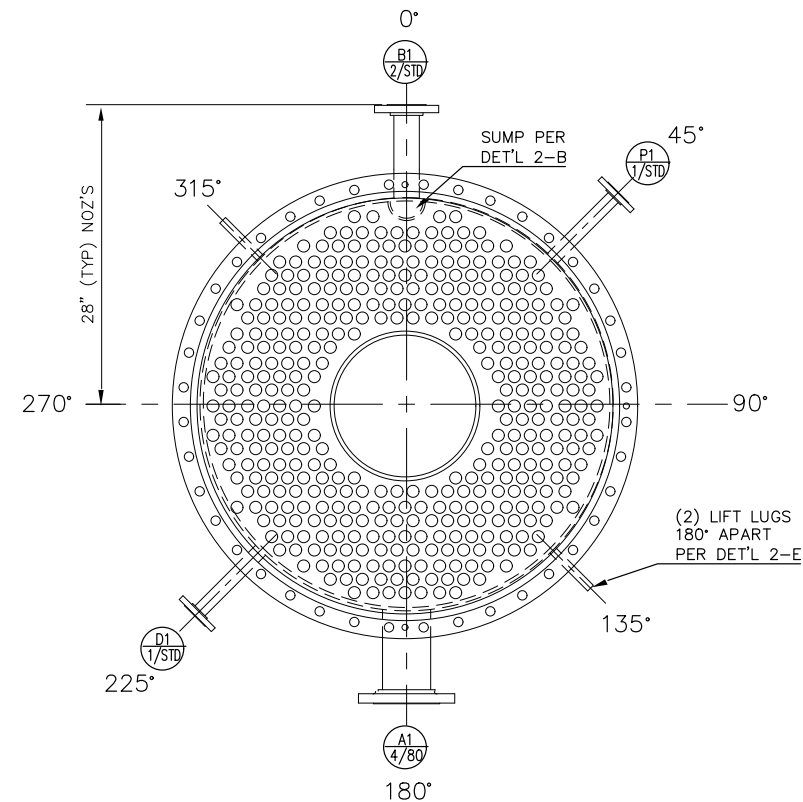


ELEVATION VIEW



PLAN AT TOP

NOTES

1. ALL BOLT HOLES SHALL STRADDLE VESSEL MAJOR C/L. UNLESS SPECIFIED OTHERWISE.
2. ALL S/S. WELDS PER AHE-800 & 807.
3. ALL DIMENSIONS ARE FROM GASKET FACES. UNLESS SPECIFIED OTHERWISE.
4. TUBE TO TUBESHEET JOINT TO BE STRENGTH WELDED & EXPANDED. TUBE PROJECTION FLUSH ON TOP AND 21 ON BOTTOM.
5. ORIENTATION PER PLAN/END VIEW (RESP.) UNLESS SPECIFIED OTHERWISE.
6. PROTECTIVE COVERS TO BE PROVIDED FOR ALL NOZZLE FLANGES PRIOR TO SHIPPING.
7. CUSTOMER INSPECTION REQUIRED ON INTERNALS BEFORE CLOSING.

MATERIAL SPECIFICATIONS ASME

		SHELL SIDE		TUBE SIDE		DESCRIPTION		SHELL		TUBE	
SHELL		SA240-304L R & W				DESIGN CODE/ASME SEC. VIII, DIV. 1 2004 ED. 2004 AD.					
HEADS						DESIGN PRESSURE		INTERNAL - PSIG		150 50	
SUPPORTS						EXTERNAL - PSIG		15 15			
FLANGES		SA182F-304L				INTERNAL *F		410 410			
PIPE		SA312-304L WLD				EXTERNAL *F		410 410			
TUBES				SA213-316L		DESIGN TEMPERATURE		410/410F		150/FV 50/FV	
TUBE SHEETS				SA240-316L		MAWP		0		0	
BOLTS/NUTS						CORR. ALLOW.		195		65	
P1		1" STD .1335/16"		150 SO RF		HYDRO. PRESS. PSIG.					
D1		1" STD .1335/16"		150 SO RF		WELD PROCEDURE		SEE NOTE 2			
B1		2" STD .1545/16"		150 SO RF		RADIOGRAPHY PER CODE		SEE DET'L 2-C			
A1		4" 80 .3375/16"		150 SO RF		VESSEL WEIGHT - DRY: 3,000 lbs.; FULL OF WATER: 5,300 lbs					
MARK		SIZE SCH THK		A B C PRES TYPE FACE		WIDE Thk.		DETAIL		SERVICE	
		NOZZLE		WELD HT. FLANGE		REPAD					

NOZZLE SCHEDULE

DESIGN DATA

		SHELL		TUBE	
DESIGN CODE/ASME SEC. VIII, DIV. 1 2004 ED. 2004 AD.					
DESIGN PRESSURE		INTERNAL - PSIG		150 50	
EXTERNAL - PSIG		15 15			
INTERNAL *F		410 410			
EXTERNAL *F		410 410			
MAWP		410/410F		150/FV 50/FV	
CORR. ALLOW.		0		0	
HYDRO. PRESS. PSIG.		195		65	
WELD PROCEDURE		SEE NOTE 2			
RADIOGRAPHY PER CODE		SEE DET'L 2-C			
VESSEL WEIGHT - DRY: 3,000 lbs.; FULL OF WATER: 5,300 lbs					
HEAT TREATMENT		NOT REQUIRED			



ASME

RT3-S

L-T

W

621

CERTIFIED BY

ALABAMA HEAT EXCHANGERS, INC.

SHELL 150 PSIG @ 410°F

MAWP TUBES 50 PSIG @ 410°F

SHELL 15 PSIG @ 410°F

MAEWP TUBES 15 PSIG @ 410°F

SHELL -20°F @ 150 PSIG

MDMT TUBES -20°F @ 50 PSIG

MFG. SERIAL NO. AHE-969

YEAR BUILT SHELL

ITEM NO. 3041

PROJ. NO. C0150.10002

CAUTION: The Code required pressures and temperatures marked on the heat exchanger relate to the basic design conditions. The heat exchanger design has been evaluated for specific operating conditions and shall be re-evaluated before it is operated at different operating conditions.

REVISIONS

0. INITIAL ISSUE

1. REV & RESUBMIT PER CUST DWG DT 3/24/06

2. REL FOR FAB PER CUST DWG DT 4/18/06

3. REV & REL FOR FAB PER CUST MEETING DT 4/20/06

4. AS-BUILT JCL 7/19/06

REF: AHE JOB NO. 6449-B

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ALABAMA HEAT EXCHANGERS, INC.
MOBILE, ALABAMA

DEGUSSA CORPORATION
REBOILER NO. 3041
PROJ. NO. C0150.10002

CUST. ORDER NO. 4500154839 JOB NO. 6493-B DRAWING NO. E-4-9 3E061

DRAWN BY J.C. LIGHTCAP DATE 1-16-06 SHT 1 OF 2

APP'D BY DATE SCALE 1"=1'-0"