

NOZZLE SCHEDULE

MARK	QTY.	SIZE	RATING	TYPE	SERVICE
A	1	4"	150#	RFSO	SHELLSIDE INLET
B	1	4"	150#	RFSO	SHELLSIDE OUTLET
C	1	6"	150#	RFSO	TUBESIDE INLET
D	1	2"	150#	RFSO	T.S. LIQUID OUT
E	1	2"	150#	RFSO	T.S. VAPOR OUT
F1,F2	2	1"	150#	RFSO	T.S. THERMOWELLS

NOTES:

- BOLT HOLES TO STRADDLE CENTERLINES
- ALL C.S. WELDS PER WPS ST-1
- PAINT ALL EXPOSED C.S. SURFACES WITH ONE COAT INORGANIC ZINC PRIMER
- DYE PENETRANT TEST ALL TA WELDS
- PROVIDE PLATINUM SPOTS ON PROCESS SIDE OF TANTALUM 1:1000 AREA RATIO
- NOZZLE WELDS PER DWG. 104-001
- HEAT EXCHANGER IS INCLINED 10 DEGREES WITH ALL NOZZLES AND SUPPORTS ON TRUE HORIZONTAL & VERTICAL PLANES (EXCEPT NOZZLES "F1" & "F2")

DESIGN CONDITIONS

DESIGN AND FABRICATE PER ASME SECT. VIII, DIV. 1 1992 AND 1993 ADDENDA TEMA "B" NAT. BD. # SEE TABLE

	SHELLSIDE	TUBESIDE
DESIGN PRESSURE	150 PSIG/FV	150 PSIG/FV
MAWP	150 PSIG	150 PSIG
DESIGN TEMPERATURE	400° F	400° F
MDMT	-20° F	-20° F
CORROSION ALLOW.	1/16"	0
RADIOGRAPHY	NONE	NONE
EFFICIENCY	1.0	0.7
HYDRO TEST PRESS.	225 PSIG	225 PSIG

IMPACT TESTING NOT REQ'D PER UG-20(f), UCS-66(c)

WT. EMPTY = 1200 # FULL H2O = 1600 #

MATERIALS OF CONSTRUCTION

	SHELLSIDE	TUBESIDE
SHELL	SA-106-B	SA-106-B
TUBESHEETS / LINERS	SA-516-70	TANTALUM
BODY FLANGES		SA-105
NOZZLE NECKS	SA-106-B	SA-106-B
NOZZLE FLANGES	SA-105	SA-105
HEADS		SA-516-70
SUPPORTS	SA-36	
GASKETS		TEFLON (PTFE)

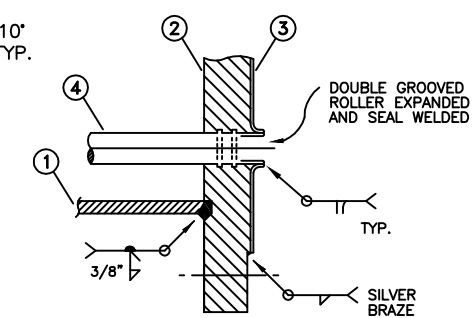
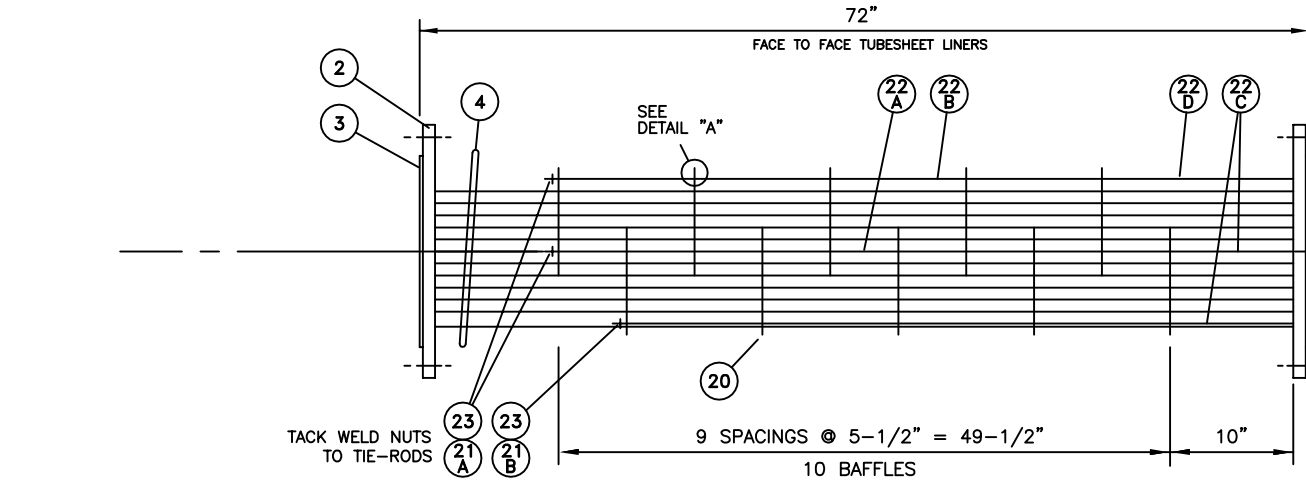
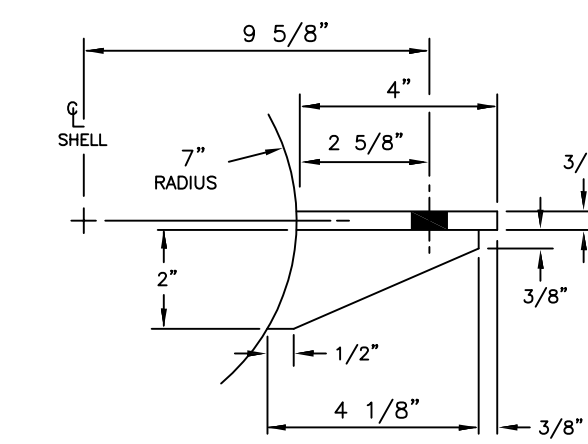
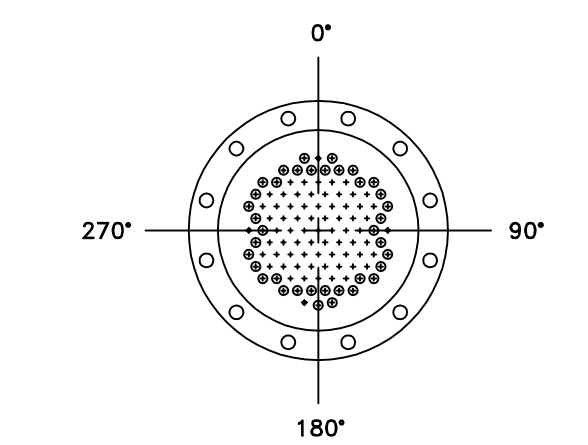
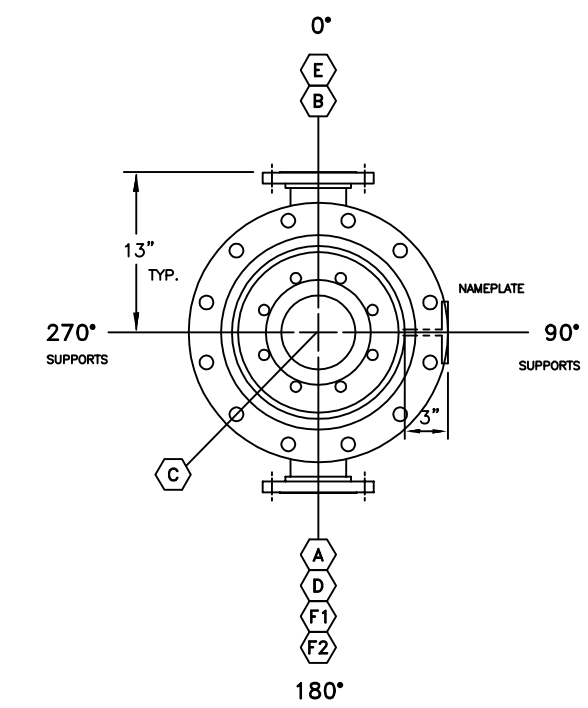
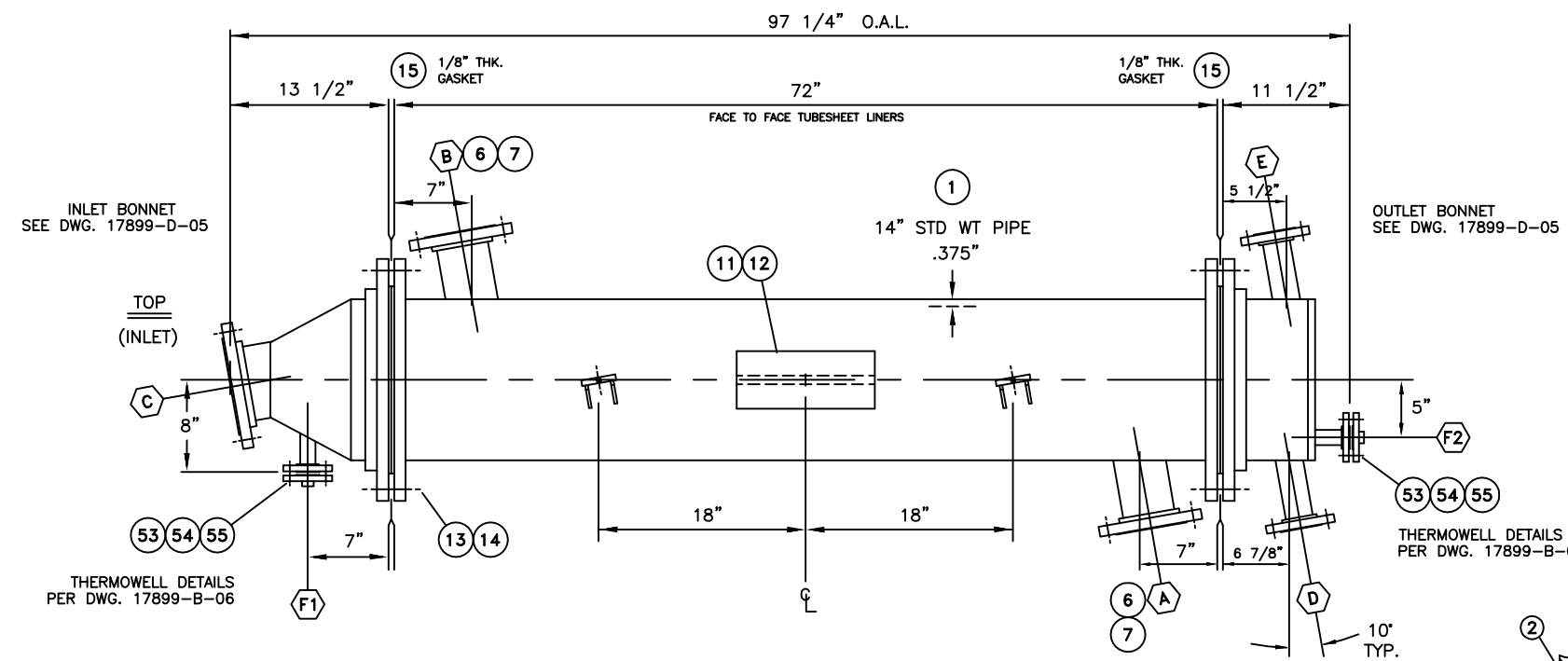
HEAT EXCHANGER DESCRIPTION

123 SQ. FT. BEM 14-1-72 HORIZ. HT. EXCH. (105) 3/4" x .015" WALL TUBES (TANT. 2.5%W) ON 1-1/8" TRIANGLE PITCH

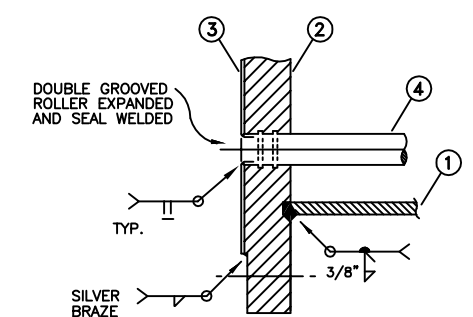
CUSTOMER: MERCK & CO. INC.
 LOCATION: LINDEN, NJ
 P.O. # Y746055D
 ITEM: CONDENSER
 EQUIP. # SEE TABLE
 COSMOS S.O.# 17899

COSMOS MINERALS CORP.
 CAMARILLO, CALIFORNIA 805-482-9825

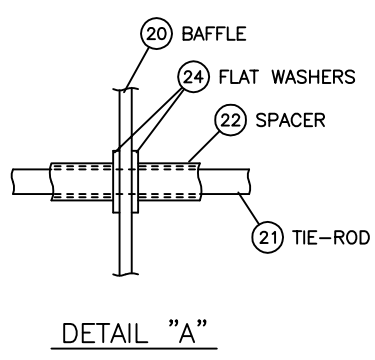
DWN DATE	SB 10/14/94	CHK'D DATE	BEM 14-1-72 HORIZONTAL HEAT EXCHANGER
APP'D DATE			
SCALE	NONE	DRAWING NO.	17899-D-01
		REV.	0



BOTTOM TUBESHEET DETAIL
FLARED FACE



TOP TUBESHEET DETAIL
FLUSH FACE



DETAIL "A"

SERIAL NUMBER	NAT. BD. NUMBER	EQUIP. NUMBER
17899-1		
17899-2		

NO.	BY	DATE	DESCRIPTION
4			
3			
2			
1			

DRAWING REVISIONS