



TUBE LENGTH = 14'-0"

ELEVATION
(VIEW LOOKING)

						X	B	B	REQ 16-009
						Y	O	A	FIELD
						X	U	A	CLIENT
						Y	O	A	INTEROFFICE
						J-J F-Z	N	V	DATE
						Z	I	O	REVISIONS
PURPOSE OF ISSUE									
A - Approval	D - Design	R - Record							
B - Bid/Quote	E - Information	S - Sued Case							
C - Comment	M - M.O.	X - Construction/Fabrication							

GENERAL NOTES (CONTINUED)

8. TRIM BOTTOM OF BAFFLES TO ALLOW MOVEMENT OF ANY SEDIMENT ALONG BOTTOM OF SHELL.

[illegible]

GASKET MATERIAL SPECIFICATION

CAINTINA

[illegible]

GENERAL NOTES:

GENERAL NOTES:

1. NOZZLE PROJECTIONS ARE MEASURED FROM THE EXCHANGER CENTER LINE TO THE FLANGE FACE.
2. MAIN GIRTH AND NOZZLE FLANGE BOLT HOLES SHALL STRADDLE THE EXCHANGER CENTER LINES OR THEIR PARALLELS, UNLESS NOTED OTHERWISE.
3. THE DIMENSIONS MARKED THUS * ARE APPROXIMATE ONLY, FINAL DIMENSIONS MAY BE DETERMINED BY THE MANUFACTURER. ALL OTHER DIMENSIONS MUST BE ADHERED TO. ANY DEVIATION MUST BE REQUESTED AND EXPLAINED IN WRITING BY THE MANUFACTURER.
4. TUBE TO TUBESHEET JOINTS SHALL BE : EXPANDED * EXPANDED AND SEAL WELDED - STRENGTH WELDED * EXPANDED AND STRENGTH WELDED.
5. FOR AUSTENITIC STAINLESS STEEL TUBES THE DIAMETERS AND TOLERANCES FOR THE TUBE HOLES IN THE TUBESHEET SHALL BE IN ACCORDANCE WITH TEMA TABLE B-2.21 COLUMN 6, SPECIAL COUPLER FIT.
6. VENDOR SHALL CHECK EXPANSION JOINT REQUIREMENTS FOR THE FOLLOWING CONDITIONS :
SHELL MEAN METAL TEMPERATURE : 101.0 °F
TUBE WALL TEMPERATURE : 154.0 °F
7. THE CHANNEL SHOULD BE SUCH THAT THE CLEARANCE BETWEEN THE O.D. OF THE OUTER MOST TUBE & THE I.D. OF THE CHANNEL SHALL ALLOW INSPECTION & REPAIR OF THE TUBE TO TUBE SHEET ROLLED JOINT W/ CHANNEL IN PLACE.

ALL VIEWS ARE LOOKING ON ARROW 'A'				
 <u>NONE</u>	 <u>NONE</u>	 <u>NONE</u>	 <u>NONE</u>	 <u>NONE</u>
SHELL PARTITIONS	BAFFLE CUT	TUBE PITCH	EXIT / RETURN CHANNEL PARTITIONS	INLET CHANNEL PARTITIONS

SHELL SIDE CONNECTIONS						TUBE SIDE CONNECTIONS					
S ₆	FLUSH-OUT	WN	2"	150°	R.F.	T ₆					
S ₅	FLUSH-OUT	WN	2"	150°	R.F.	T ₅					
S ₄	FLUSH-OUT(IN)	WN	2"	150°	R.F.	T ₄	LEVEL GAUGE TAPS	WN	1/2"	150°	R.F.
S ₃	FLUSH-OUT(OUT)	WN	2"	150°	R.F.	T ₃	COND. OUTLET	WN	1/2"	150°	R.F.
S ₂	WATER OUTLET	WN	6"	150°	R.F.	T ₂	GAS OUTLET	WN	1"	150°	R.F.
S ₁	WATER INLET	WN	6"	150°	R.F.	T ₁	GAS INLET	WN	1"	150°	R.F.
REF.	SERVICE	FLANGE TYPE	SIZE	RATING	FACING	REF.	SERVICE	FLANGE TYPE	SIZE	RATING	FACING

**PURCHASE
ORDER
NUMBER:**



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LETHAL SERVICE	YES ☐	NO ☒	YES ☐	NO ☒
CORROSION ALLOWANCE	1/8"		1/8"	

TEMA MEDIANUMERICAL STANDARD CLASS	5	NAT. BOARD REG.	YES ☒	NO ☐
INSPECTION AND HYDROSTATIC TEST PRESSURE				

INFORMATION BY	BUVED 52	UNDERPINNER 23	ALIENT 1
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INSPECTION BY: BUYER ☒ UNDERWRITER ☒ CLIENT ☐

MATERIALS

MAINTENANCE	
COMPONENT	MATERIAL SPECIFICATION

STATIONARY HEAD CHANNEL / 1 CYLINDER	SA 055 630
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STATIONARY HEAD, CHANNEL/FLANGE/CYLINDER	SA-105 GR.C.
STATIONARY HEAD BONNET, DISHING	_____
STATIONARY HEAD FLANGE	SA-181 GR.C. OR SA-105
CHANNEL COVER	SA-181 GR.C. OR SA-105
STATIONARY HEAD NOZZLE FLANGE	SA-181 GR.C. OR SA-105
STATIONARY HEAD NOZZLE NECK	SA-336 GR.C. OR SA-286 GR.C.

FLOATING HEAD COVER CYLINDER	_____
FLOATING HEAD COVER DISHING	_____
FLOATING HEAD COVER FLANGE	_____
FLOATING HEAD BACKING DEVICE	_____
SPLIT SHEAR RING	_____
SLIP ON BACKING FLANGE	_____
FLOATING HEAD COVER-EXTERNAL	_____
FLOATING TUBESHEET SKIRT	_____
PACKING BOX FLANGE	_____
PACKING FOLLOWER RING	_____
LANTERN RING	_____
BACKING	_____

STATIONARY TUBESHEET	SA-SIG GR 70
FLOATING TUBESHEET	
TUBES	SA-214
TIE RODS AND NUTS	COMMERCIAL QUALITY C STEEL
SPACER TUBES	COMMERCIAL QUALITY C STEEL
TRANSVERSE RAFFLES OR SUPPORT PLATES	COMMERCIAL QUALITY C STEEL
IMPINGEMENT PLATE	COMMERCIAL QUALITY C STEEL
LONGITUDINAL RAFFLE	

PASS PARTITION PLATE	SA 285 GRC
SUPPORT SADDLE WRAPPER PLATE	COMMERCIAL QUALITY C STEEL
SUPPORT SADDLE	COMMERCIAL QUALITY C STEEL
LIFTING LUGS	SA 191 3P 102 1102 SA 102
SHELL SIDE COUPLINGS	NOTE REQ'D
TUBE SIDE COUPLINGS	SEE NOTE G
EXPANSION JOINT	
WEIR PLATE	


Davy Powergas, Inc.

AREA 01
EXISTING F-W AND CHEMICO REFORMERS
AOG COOLER
EQUIPMENT # 01-1639

DRAWN BY: FOWLER	1-9-79	PROJECT NO.	SCALE
CHECKED BY: BORO	1/12/79		
APPD. DES.:		4282	NOTED
APPD. DES. <i>BB gfb</i>	1/23/79	DRAWING NO.	REV.
APPD. DES.:			
APPD. PROC.:			
APPD. PROJ. ENGR:	<i>Robert / 2/1/79</i>		



BORDEN CHEMICAL
DIVISION OF BORDEN, INC.
GEISMAR, LOUISIANA

BORDEN EQUIPMENT # E-0104

80543

SCALE 3/4"=1'-0"	DRAWING NUMBER 01-10-0016	REVISION 3
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REFERENCE DRAWING	
NUMBER	TITLE

[illegible]