

FINAL ASSEMBLY

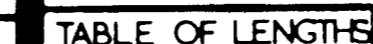
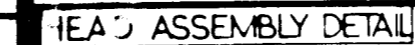


Diagram of a shell and tube heat exchanger showing a U-tube configuration. The shell is horizontal and divided into two sections by a vertical partition. The tubes are arranged in a U-shape, with the top half of the tubes in the left section and the bottom half in the right section. The shell is labeled "SHELLSIDE IN" at the top left and "SHELLSIDE OUT" at the top right. The tubes are labeled "TUBESIDE IN" at the bottom left and "TUBESIDE OUT" at the bottom right. A "VENT" is indicated at the top center, and a "DRAIN" is indicated at the bottom center.

WEIGHT TABLE			
UNIT TYPE	WEIGHT IN POUNDS	WEIGHT IN KILOGRAMS	TOTAL WEIGHT
WH3605MR	285 lb	305 lb	
	130 KG	138 KG	
WH3610MR	405 lb	440 lb	
	184 KG	200 KG	
WH3615MR	535 lb	590 lb	
	242 KG	267 KG	
WH3620MR	665 lb	740 lb	
	301 KG	335 KG	
WH3625MR	795 lb	885 lb	1580 lb
	360 KG	401 KG	.720 KG

CERTIFIED FINAL STAMP

CODE SPECIFICATION CLASS ETC		1 BFG LTD		MFG STD		2 ASME SECTION VIII		3 TEMA'91			
SERVICE CONDITIONS		SHELL		HEAVY GAS OIL		TUBE		C.T.W.			
INSPECTION AUTHORITY AND REQUIREMENTS		1 LLOYDS (FULL)						MATERIALS		BACK - UP	
		2 PRITCHARD - RHODES (FULL)						FINAL DWL		HYDROSTATIC	
		3 GKN BIRWELCO LTD.						MATERIALS		BACK - UP	
RADIOGRAPHY		GAMMA - RAY						FINAL DWL		HYDROSTATIC	
YES		ASME SECTION VIII		SHELL		ASME		100%		YES SHELL & TUBE	
WELDING PROCEDURE		1 BFG LTD		MFG STD		2 ASME		IX			
FOR CARBON STEEL - STANDARD WELDING PROCEDURES - MMA, SMAW, GAS - APPLY		FOR OTHER MATERIALS - STANDARD PROCEDURE AS DIRECTED BY THE WELDING ENG.						228 TPF - TUBE WELDS		230 TAPF - SHELL WELDS.	
WELDERS QUALIFICATION		ASME IX		MATERIAL REDD		YES					
SPECIAL TESTS		MECHANICAL		NO		CHARPY IMPACT		NO			
HYDROSTATIC TESTING		1 SHELL ENDS LOW OIL		NO		2 WATER		YES			
FINISH		EXCHANGERS TO BE THOROUGHLY DRAINED AND DRIED OUT BEFORE DESPATCH									
		AS REFERENCE		A		BELOW					
A. HOME (1) ONE COAT OF RED OXIDE PRIMER SHELL EXTERNAL ONLY		B. EXPORT (1) ONE COAT OF RED LEAD PRIMER SHELL EXTERNAL ONLY		C. (1) ONE COAT OF ZINC CHROMATE PRIMER SHELL EXTERNAL ONLY		D. DO NOT PAINT		E. OTHER FINISH (SPECIFY)			
PRE - HEAT		YES		150°C		SHELL & TUBE WELDS					
STRESS RELIEF		YES		METHOD		FURNACE		TEMP (MAX) AT TIME OF LOADING		300°C	
SHELL - ALL WELDS LOCAL		SHELL - COMPLETE		INTERNALS - BUTT WELDS - LOCAL		INTERNALS - COMPLETE					
STRESS RELIEF TEMPERATURE		690°C		HEATING RATE		200°C PER HOUR MAX					
HOLDING TIME		1 HOUR		COOLING RATE		250°C PER HOUR ABOVE 300°C IN FURNACE		BELOW 300°C PERMISSIBLE TO COOL IN STILL AIR			
REMARKS		FOR UK PORT									
		R6-22443									
		SHELL ASSY & TUBE ASSY, 5% Cr 1/2% Mo									
SERVICE		CLARIFIED OIL COOLER		CORROSION ALLOW.		SHELL		1/8"		TUBE	
								1/8" EXCLUDING 1/8" TUBE & FIN			

STANDARD NAMEPLATE

MAY PRESS: _____ MAY TEMP: _____ MAY TEST: _____
 SIZE: _____ IN. _____
 TUBE: _____ IN. _____
 _____ IN. _____ IN.
 MAY PRESS: _____ SURFACE: _____
 FINISH: _____
 SEWA: _____ YEAR: _____
 BUILD: _____
 CODE SYMBOLS: _____
 PURCHASE ORDER: _____
 ORDER: _____

METRIC NAMEPLATE

MAX PRESS		MAX TEMP		HYD TEST	
SHELL	10.3	BAC 1/2	339 °C		17.5
TUBE	6.9		121 °C		10.4
YES		SP	YES		SW
MAKERS CODE & NR.		B72249/01		SURFACE	
SERIAL		51-E220-825-24		YEAR BUILT	
CODE		ASME VIII		ITEM	
PURCHASE ORDER		7-2233-2		04-E-12	

LETTER	REVISION	BY	DATE
A	WELD PREPS SHELL & TUBE ASSEMBLIES MODIFIED	WJG	7-8-72
B	BUTT WELDS WERE LAP JOINTS	WJG	7-8-72
B	EARTHING BOSS ADDED.	WJG	11-8-72
C	DRG CHANGED TO SUIT CUSTOMER'S REQUIREMENTS ITEM 10 AMENDED	DEM	21-9-72
D	COOL PLATE JOINT now T&G 1/4 LETH WAS 26-3/4"	WJG	22-10-72
E	SNELL HYD TEST PRESS WAS 15.5 BARS	WJG	23-10-72

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LETTER	REVISION	DATE
F	ADD A TUBIST NOTE MODIFIED	1982-11-27

DRAWN BY	AAH:reaves	DATE	3.8.72
CHECKED BY	Am Weinley	DATE	4-8-72
APPROVED BY		DATE	

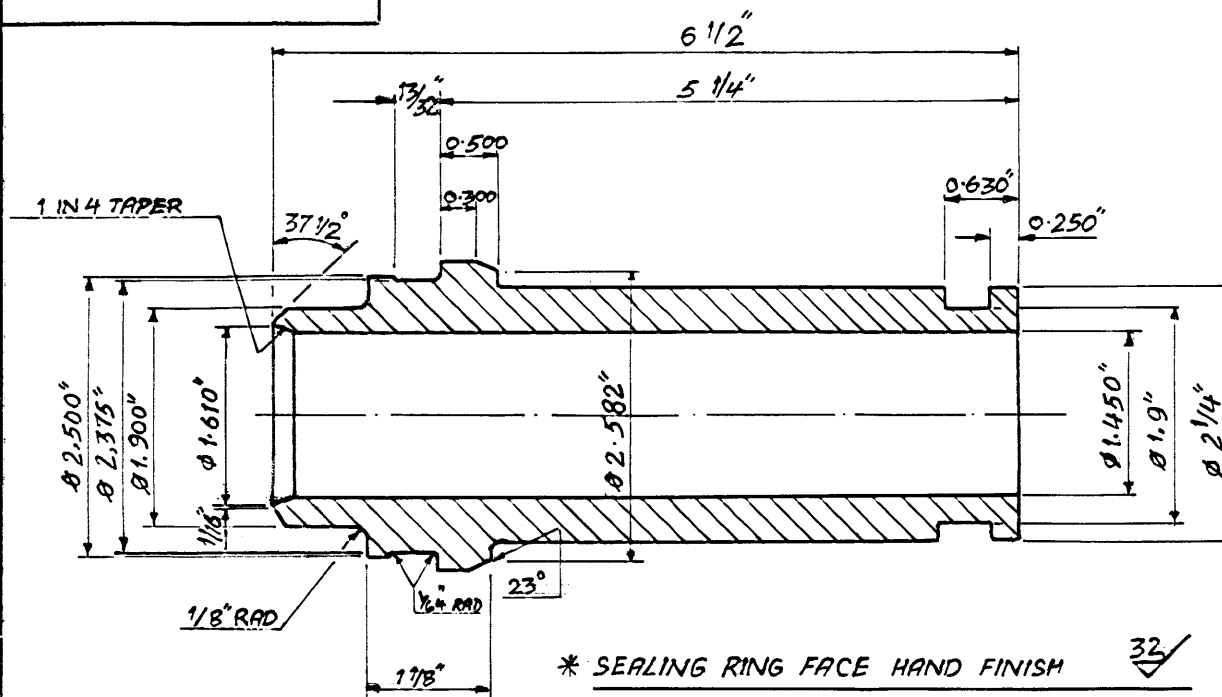
NEW DESIGNATION	51-1E220-825-24	NO OF LINES
ENGINEERING REF	17H3625RR-24	TWO

CUSTOMER:	PRITCHARD - RHODES LTD.
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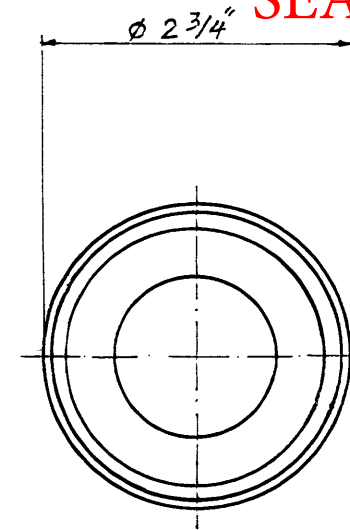
DRAWING NUMBER	SHEET /	REV.
B72249/01-1	OF	3

DRG. NO. R.1-

ITEM # 3 - 04-E-12
SEALING BODY



MATERIAL :- ASTM A335 GR P5 OR ASTM A182 GR. F5



NOTES

- 1- SMOOTH MACHINE FINISH ¹²⁵ ALL OVER EXCEPT AS STATED
- 2- REMOVE ALL SHARP EDGES

REV.	DESCRIPTION	CH.BY	DATE	BY	DATE
APPROVED FOR CONSTRUCTION	BY	DATE	REVISIONS	APPR.	
NO CONSTRUCTION PERMITTED UNLESS THIS DRAWING IS APPROVED					

JORDAN PETROLEUM REFINERY CO. LTD.
ZARKA

F.C.C. UNIT :-
CLARIFIED OIL COOLER (04-E-12)
FINTUBE FITTING-SEALING ENDS.

DRN. BY: KH. JAWARNEH CHD.: Rafiq Ellayam DATE: 1.11.1982

ENG.: APPD.: DATE:

ENG. REF. No.: 759/1/4 ACCOUNT No.:

SCALE: N.T.S DRG. No. R.1-52764 REV.