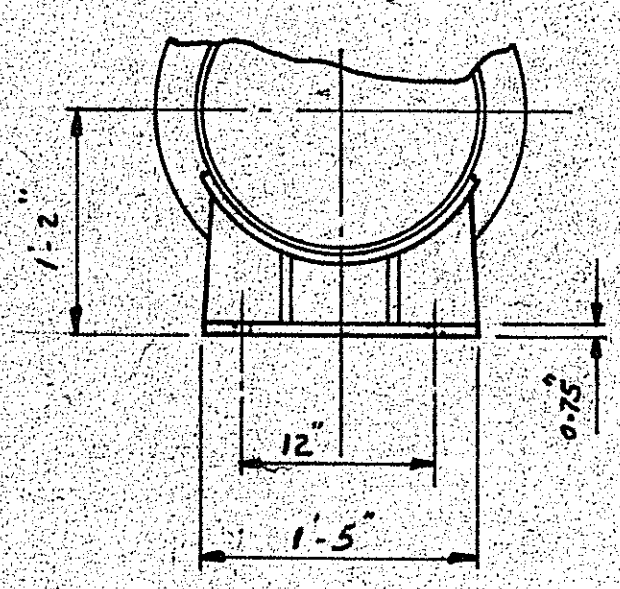
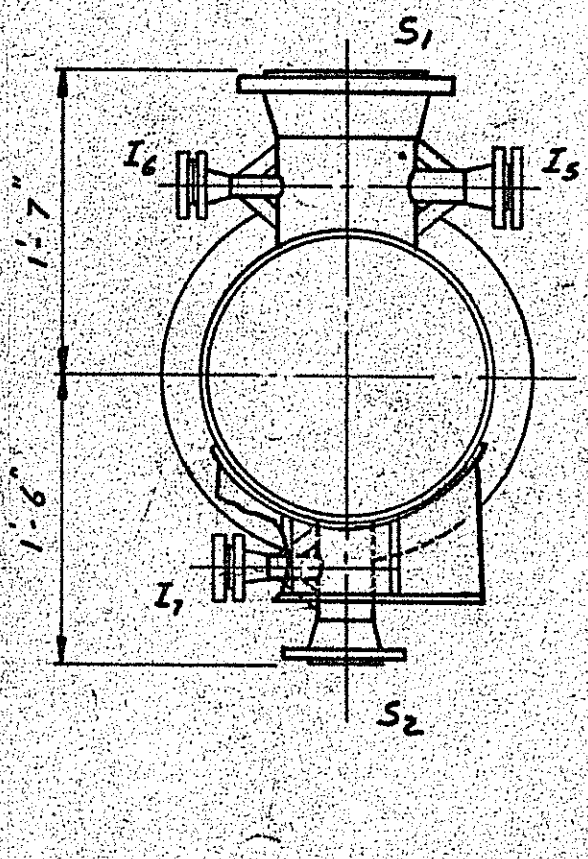
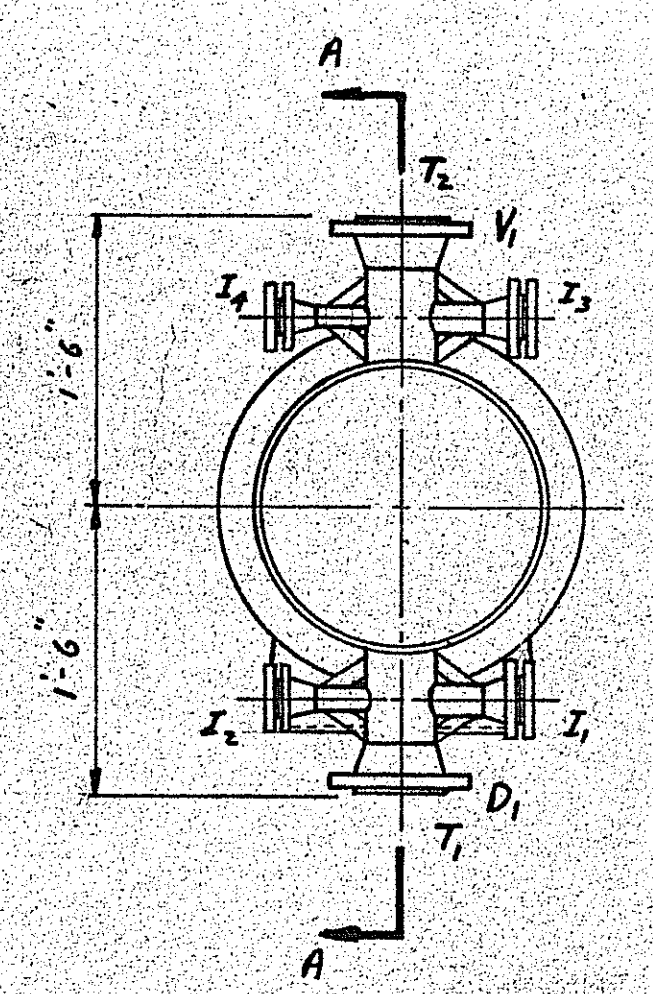
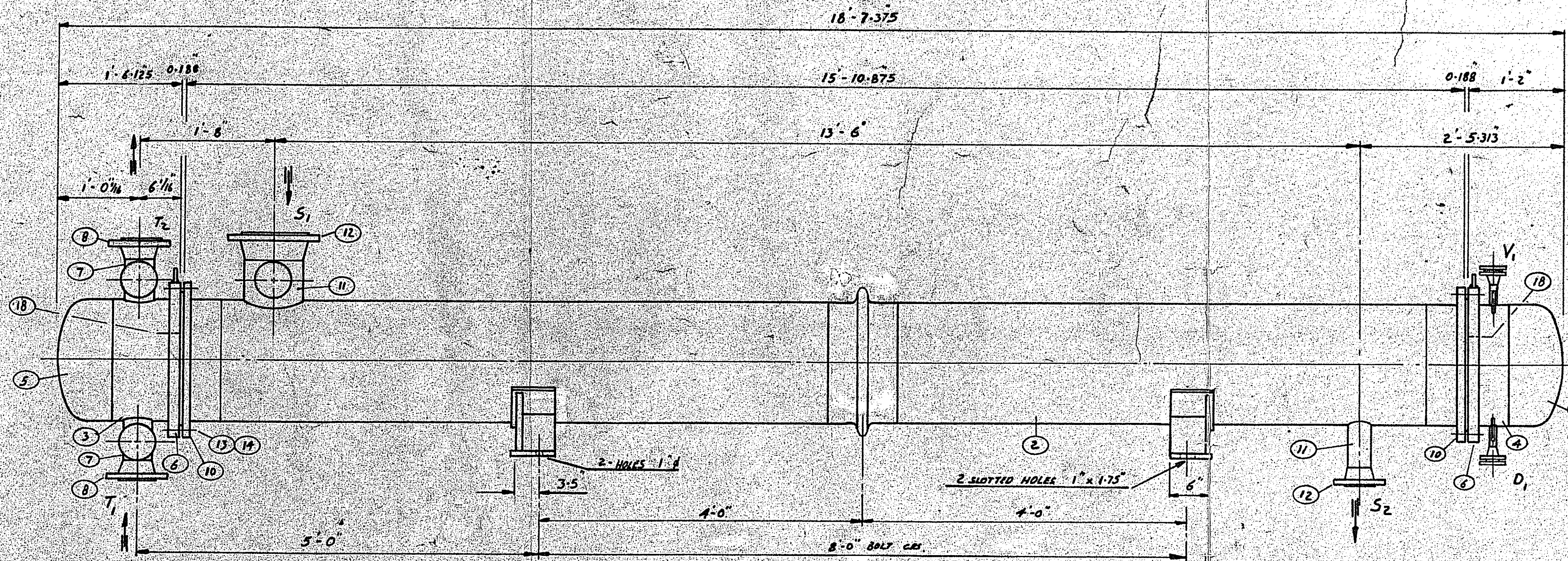


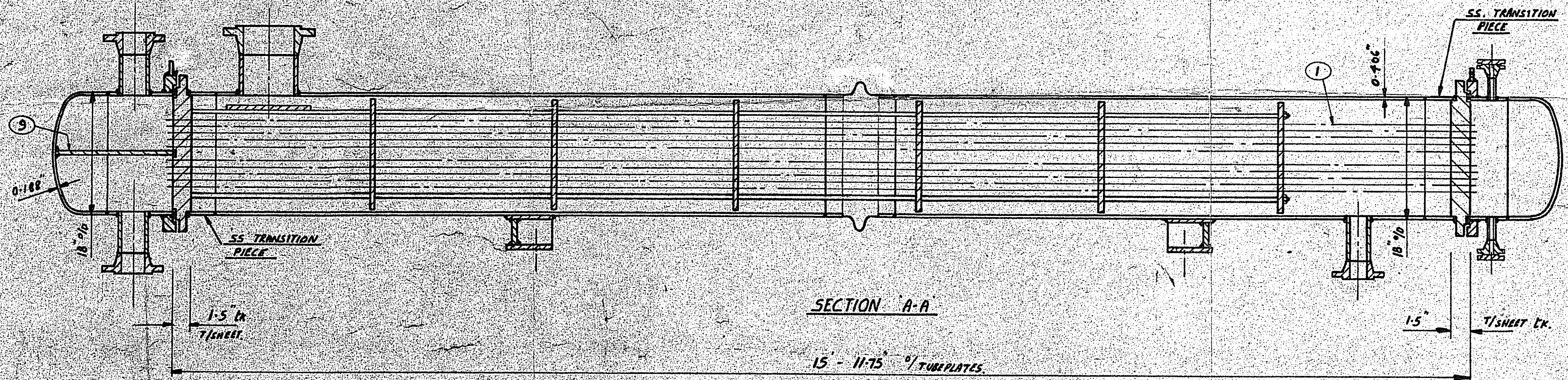
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CHANNEL NOZZLE ORIENTATION

SHELL NOZZLE ORIENTATION

SUPPORT DETAILS



SECTION A-A

- NOTE :-
- CARE TO BE TAKEN DURING ASSEMBLY TO ENSURE THAT THE IMPINGMENT RATE IS IN LINE WITH THE INLET NOZZLE
 - CLEANING
 - PRIOR TO WELDING
 - ENDS OF TUBES TO BE CLEANED INSIDE AND OUT FOR AT LEAST A LENGTH OF 2'-6" USING A DEGREASING SOLVENT.
 - TUBE PLATE TO BE DEBURKED AND CLEANED ALL OVER USING A DEGREASING SOLVENT.
 - OUTSIDE SURFACE OF TUBE TO BE CLEANED BACK TO BRIGHT METAL USING GLASS PAPER FOR 1/4" EACH END.
 - FINAL CLEANING
 - ALL SURFACES TO BE STEAM CLEANED.
 - TUBES TO BE LIGHTLY EXPANDED TO TUBESHEET PRIOR TO WELDING.
 - TUBE WELDS TO BE CONCENTRIC WITH TUBE HOLE AND HAVE A UNIFORM CONTOUR.
 - EACH TUBE WELD TO BE LEAK DETECTED BEFORE HYDRAULIC TEST AND BEFORE FINAL EXPANSION. THE TEST TO BE PERFORMED USING HALIDE GAS AT 50PSIG.
 - TUBES TO BE FULLY EXPANDED AFTER LEAK TEST.
 - SHELL TO TUBESHEET WELD - DYE PENETRANT CHECK ROOT RUNS.
 - MAX. PERMISSIBLE CARBON CONTENT FOR 304L S.S. IS 0.030%.
 - FOR ALL WELDS IN TP304L S.S. USE WELDING CONSUMABLES WITH 0.025% MAX. CARBON.

CONNECTION NO.	SIZE	RATING	TYPE	FACING	SCHEDULE	SERVICE
T1	4" NB	150° ASB	WN	RF	80	TUBESIDE INLET
T2	4" NB	150° ASB	"	"	80	" OUTLET
S1	8" NB	150° ASB	"	"	80	SHELLSIDE INLET
S2	3" NB	"	"	"	80	" OUTLET
V1	0.75" NB	"	"	"	160	CHANNEL VENT
D1	0.75" NB	"	"	"	"	CHANNEL DRAIN
I1	1.5" NB	"	"	"	"	INSTRUMENT CONNECTION
I2	1" NB	"	"	"	"	"
I3	1.5" NB	"	"	"	"	"
I4	1" NB	"	"	"	"	"
I5	1.5" NB	"	"	"	"	"
I6	1" NB	"	"	"	"	"
I7	1" NB	"	"	"	"	"

NO.	REFERENCE DRAWING	DRG. NO.
1:10	TUBE BUNDLE	18.10.0002 21
10	FIRST TUBESHEET	18.12.0005 21
10	SECOND TUBESHEET	18.12.0006 21
17	BAFFLE PLATE	18.19.0008 21
2:16	SHELL DETAILS	18.52.0002 21
3:5:6	FIRST CHANNEL DETAILS	18.59.0007 21
4:5:6	SECOND CHANNEL DETAILS	18.59.0008 21
6	CHANNEL FLANGE	18.59.0009 21
	WELD DETAILS	18.59.000

CERTIFIED FINAL

1 - OFF AS DRAWN.

FOSTER WHEELER CONTRACT NO	1-15-1440/1459
REQUISITION NO	1442-12.11-C.NV.5
ORDER NO	3003/1440
ITEM NO	E.1514
VENDORS SHOP ORDER NO	
CLIENTS NAME	ICI FIBRES LTD.
PROJECT LOCATION	WILTON TRESSIDE.

MATERIALS OF PRESSURE PARTS.		
1.	SEAMLESS TUBE	A213 304L WITH MATERIAL TEST CERT.
2.	MAIN SHELL	A106 B
3. 4.	CHANNEL SHELL	A312 304L
5.	CHANNEL DISHED END	A403 304L
6.	CHANNEL RING FLANGE	A182 304L
7.	CHANNEL NOZZLES	A312 304L
8.	CHANNEL NOZZLE FLANGES	A182 304L
9.	PARTITION PLATE	A240 304L
10.	TUBE PLATE	A240 304L
11.	SHELL NOZZLES	A106 A
12.	SHELL NOZZLE FLANGES	A181 - 1
13.	STUDBOLT	A193 - B7
14.	NUT	A194 - 2H
15.	GASKET	SMALL WOUND TP316 + FLOON
16.	BELLOWS	INCOLOY 825
17.	SS. TRANSITION PIECE	A240 304L

WELDING	
WELDING METHOD	
WELDING FACTOR	0.85
WELDING ELECTRODE	
WELD PREPARATION	ASME VIII
NON-DESTRUCTIVE TEST	SPOT-RADIOGRAPH, DYE PENETRANT CHECK AS SHOWN
PREHEATING	NONE
POST HEATING	NONE

OPERATING DATA.		
	SHELL SIDE	TUBE SIDE
DESIGN TEMPERATURE	309°F 154°C	250°F 121°C
DESIGN PRESSURE	75 PSI 5.17 BAR G	150 PSI 10.34 BAR G
TEST PRESSURE	113 PSI 7.70 BAR G	220 PSI 15.17 BAR G
ASSEMBLED WEIGHT	4250 LB.	
ASSEMBLED WEIGHT FLOODED	5950 LB.	
CORROSION ALLOWANCE	0.125"	0.063"

INSPECTION.	
DRAWING EXAMINATION BY	FOSTER WHEELER LTD.
CONSTRUCTION CONTROL BY	"
PRESSURE TEST BY	"
INSPECTION ACC. TO	ASME VIII & TEMA 'R' (1968 EDITION)
DESIGN ACC. TO	"

INTERNAL FOR NON-MEASURE PARTS.		
BAFFLE PLATE 18.9 G. STAINLESS STEEL		
TIE ROD 18.9 G.	D	STIFFENERS ADDED TO NOZZLES ALSO LIFTING LUGS & NOTES 8 & 9.
SPACER 18.9 G.	C	LOCKING BARS REMOVED FROM BELLOWS.
IMPERIMENT PLATE 18.8 G.	B	LOCKING BARS ADDED TO BELLOWS.
SUPPORTS A283 C	A	DRG. ALTERED TO COMPLY WITH F.W. REQUISITION REV. 4.
NOZZLE STIFFENERS BS 4360		
LIFTING LUGS BS 4360		

MOD REVISION

SIG DATE

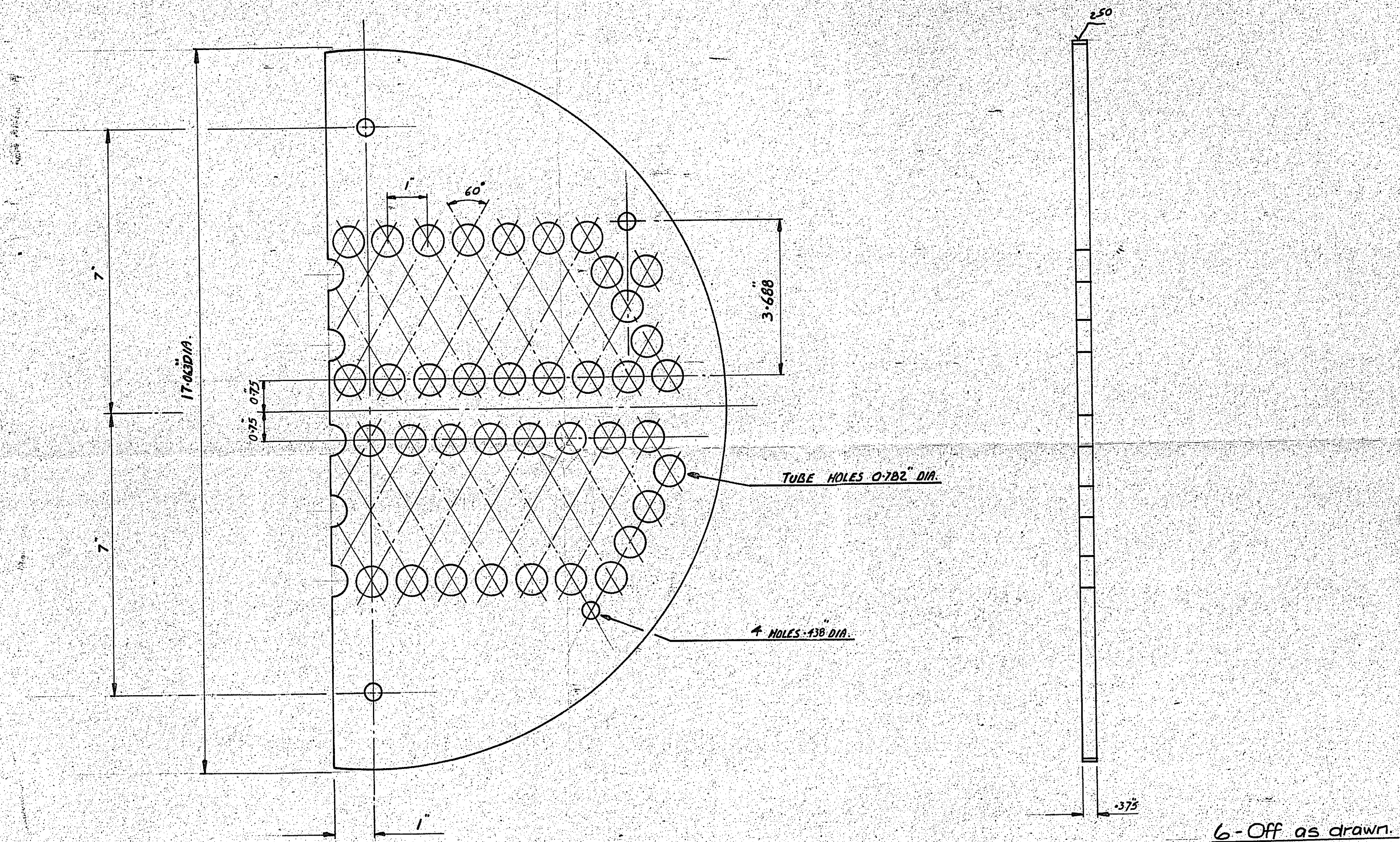
DRAWN	G. GREENFIELD.
CH'K'D	
APP	
DATE	21. 6. 71.
SCALE	1"=1'

GEA AIREXCHANGERS (NI) LTD	
TITLE	
G. A SHELL & TUBE	
TYPE	
DEM.	

C. NO.	280 / 99549
DRG. NO.	18 50 0003 21
ICI NO.	FX/B 417750
ISSUE	A B C D

E.1514

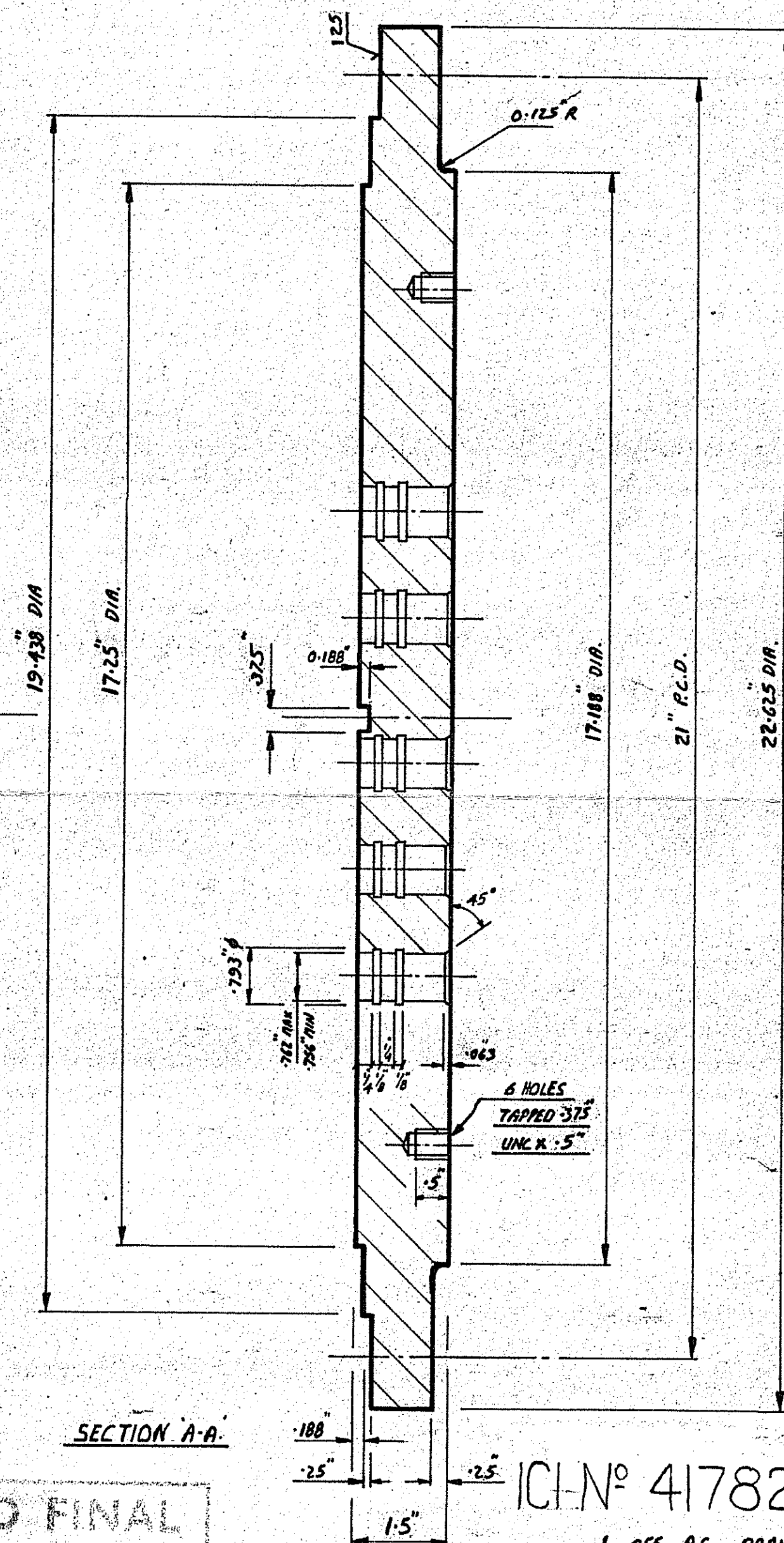
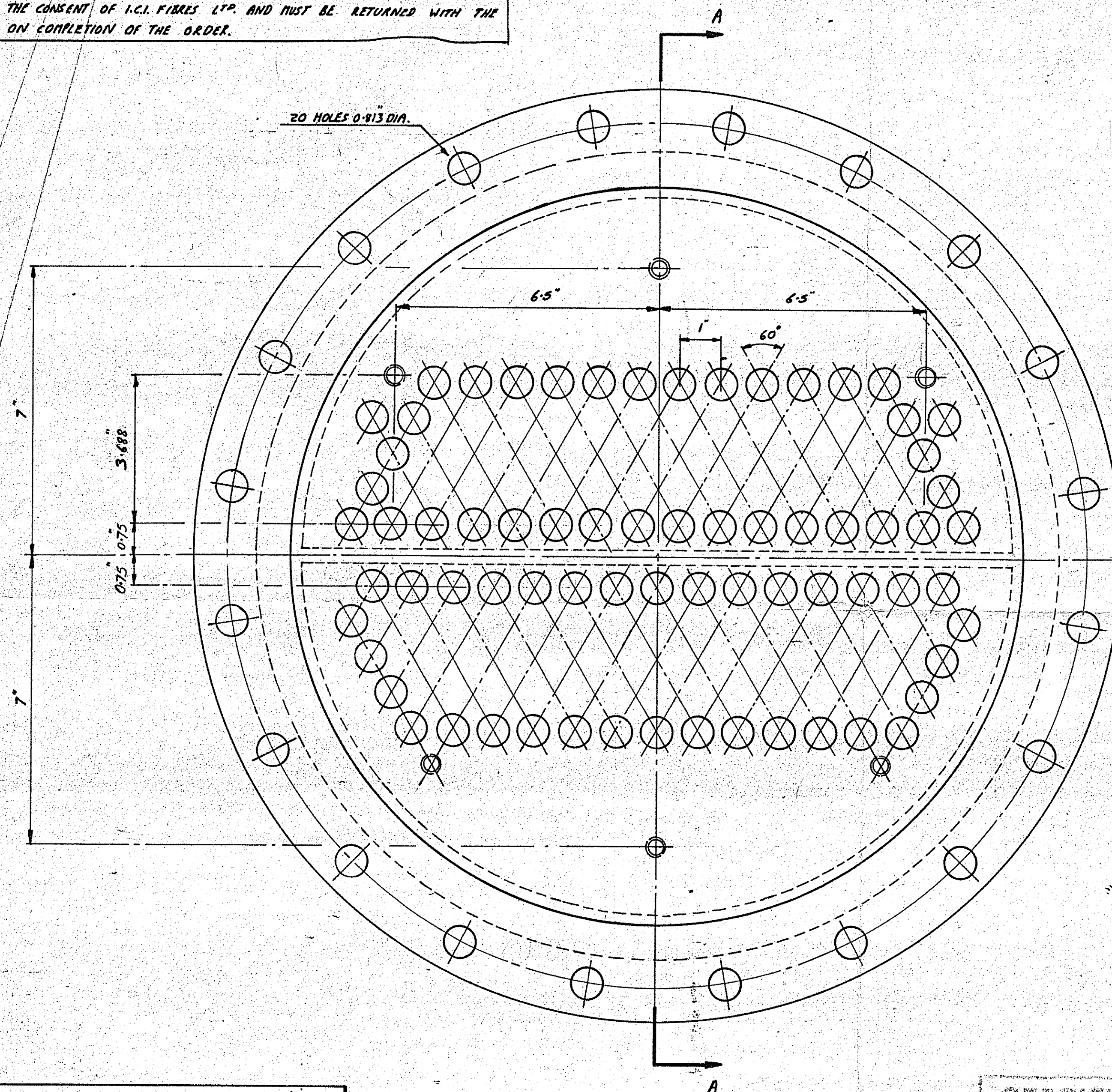
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FOSTER WHEELER CONTRACT N°	1-15-1440 / 1459
" REQUISITION N°	1442-1211-C REV 5
" ORDER N°	3009 / 1440
ITEM N°	E 1514
VENDORS SHOP ORDER N°	
CLIENTS NAME	ICI FIBRES LTD.
PROJECT LOCATION	WILTON TEESIDE

				DRAWN	G. GAINFIELD	GEA AIREXCHANGERS (NI) LTD.	C NO.	280 / 99549
				CHK'D			DRG NO.	18 19 0008 21 - GEA
				APP.			ISSUE	
				DATE	2. 7. 71	BAFFLE PLATE		
MOD	REVISION	SIG	DATE	SCALE	1/2 ARL SIZE			

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SECTION A-A

CERTIFIED FINAL

FOSTER WHEELER CONTRACT N°	1-15-1440 / 1459
REQUISITION N°	1442-1211-C REV 5
ORDER N°	3009 / 1440
ITEM N°	E 1514
VENDORS SHOP ORDER N°	
CLIENTS NAME	ICI FIBRES LTD.
PROJECT LOCATION	WILTON TEESIDE

MOD.	REVISION	SIG.	DATE

DRAWN	G. GREENFIELD.
CH'K'D	
APP.	SES
DATE	2. 7. 71
SCALE	1/2 FULL SIZE

GEA AIREXCHANGERS (NI) LTD.

FIRST TUBESHEET

C NO. 280 / 99549

DRG NO. 18.12.0005 21 GEA

ISSUE

1 - OFF AS DRAWN.

ICI-N° 417821 F/X

E1514