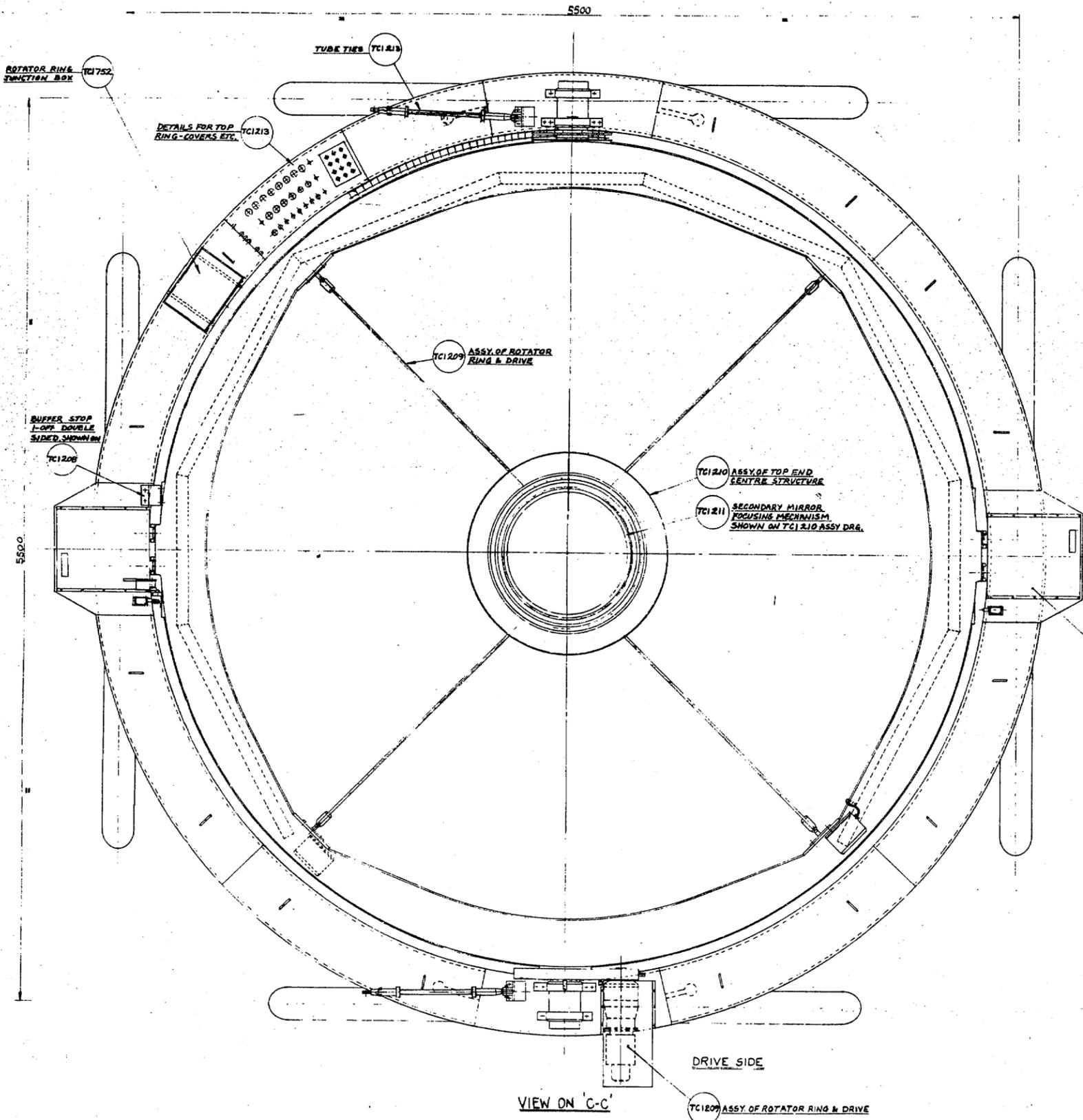


CABLE WRAP SIDE



ASSEMBLY REFERENCES SHOWN ON DRAWING

- TC1030 - PRIMARY MIRROR
- TC1031 - FH SECONDARY MIRROR
- TC1032 - NASMYTH MIRROR
- TC1034 - TURNABLE
- TC1035 - AIR TUBE END CABLEWRAP
- TC1036 - REFLECTOR TRUSS
- TC1037 - LF TIE SECTION
- TC1038 - CENTRE SECTION MOTORISED COUNTERWEIGHTS
- TC1039 - END RING LATCH
- TC1039 - ROTATOR RING & DRIVE
- TC1040 - TOP END CENTRE STRUCTURE
- TC1041 - SECONDARY MIRROR FOCUSING MECHANISM
- TC1042 - FH SECONDARY MIRROR
- TC1043 - TOP END
- TC1044 - ADAPTOR COLLIMATING DRIVE
- TC1045 - PRIMARY MIRROR CELL
- TC1046 - PRIMARY MIRROR LATERAL SUPPORT
- TC1047 - PRIMARY MIRROR AXIAL SUPPORT
- TC1048 - PRIMARY MIRROR RADIAL DEFINING UNIT
- TC1049 - PRIMARY MIRROR LIFTING PLATE
- TC1050 - NASMYTH MIRROR CELL
- TC1051 - NASMYTH TURNABLE
- TC1053 - NASMYTH STRUCTURE
- TC1060 - PRIMARY MIRROR VENTILATION COOL DOWN
- TC1071 - PRIMARY MIRROR CELL EXTENSION
- TC1072 - CALDERSPAN TURNABLE
- TC1074 - CASSEGRAIN CABLEWRAP

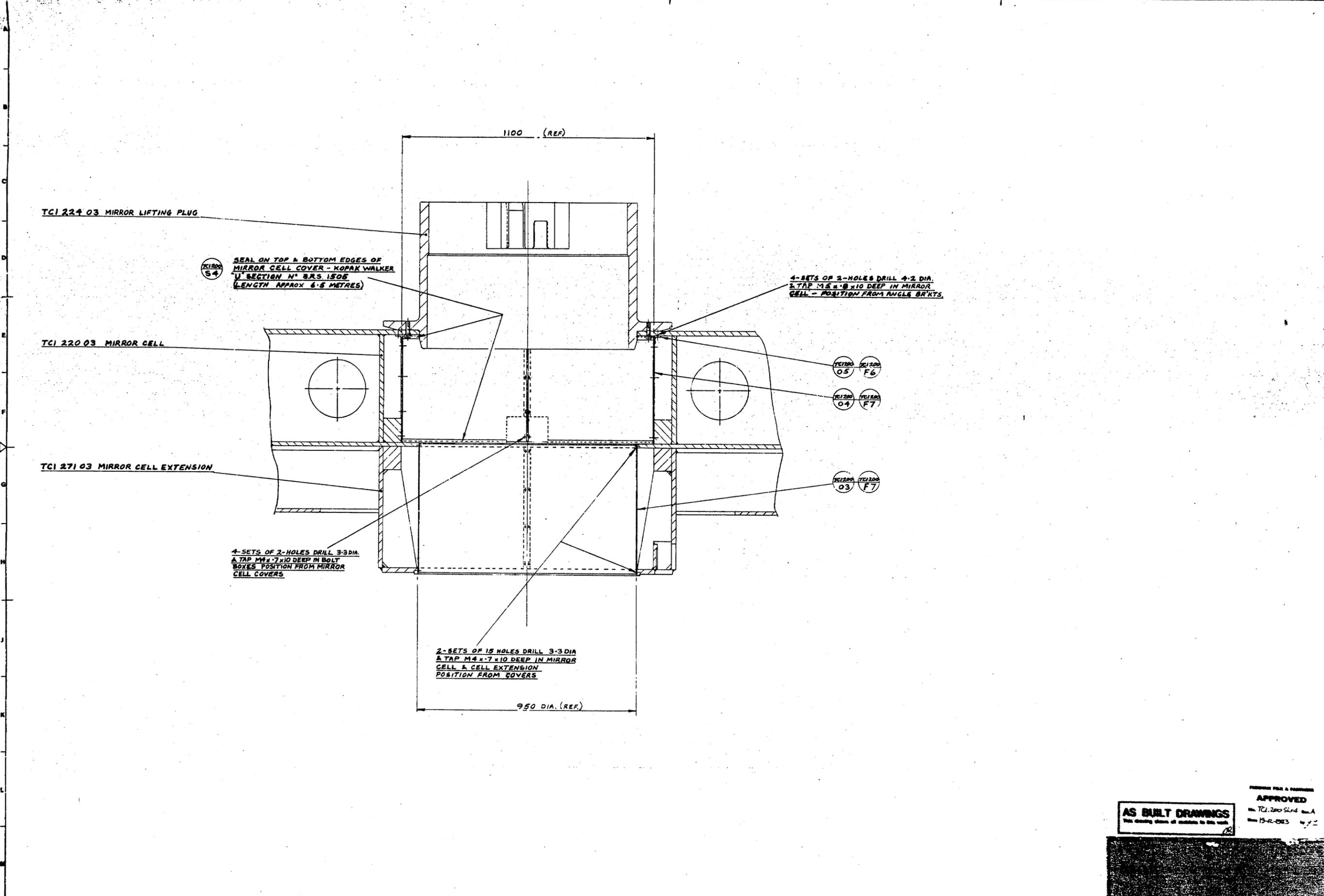
ASSEMBLY REFERENCES NOT SHOWN ON DRAWING

- TC1041 - OPTICAL DIAGRAM
- TC1226 - TUBE TIES
- TC1227 - PRIMARY MIRROR AXIAL SUPPORT
- TC1228 - PRIMARY MIRROR AXIAL SUPPORT
- TC1229 - TEMPERATURE SENSORS
- TC1235 - NASMYTH LATCH
- TC1236 - PRIME FOCUS TURNABLE
- TC1239 - PRIMARY MIRROR FLARE BRACKET

AS BUILT DRAWINGS
This drawing shows the actual work done.

APPROVED
DATE 15-11-68

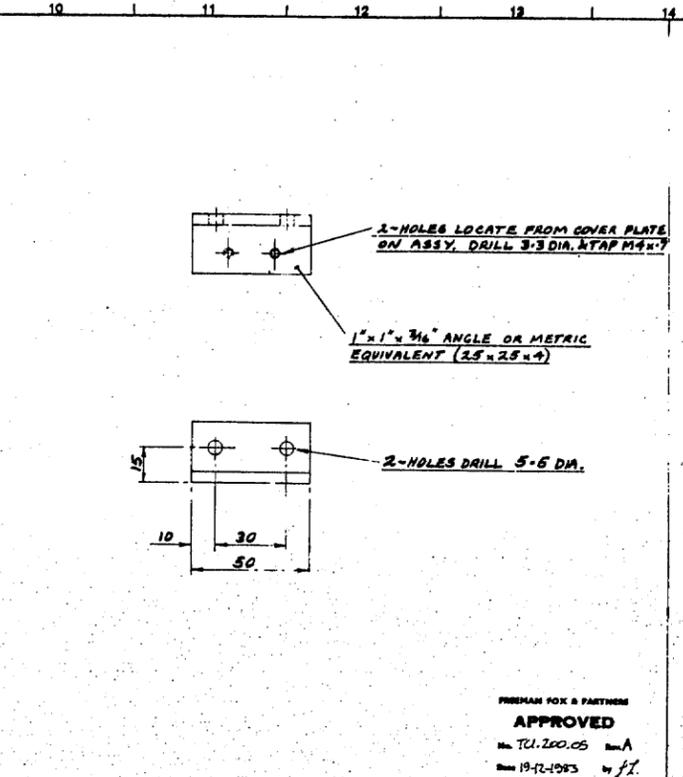
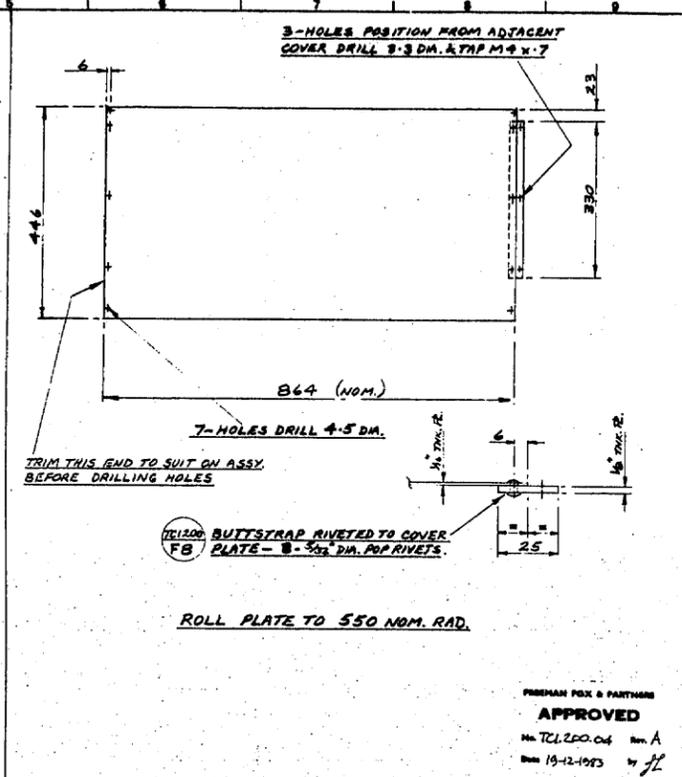
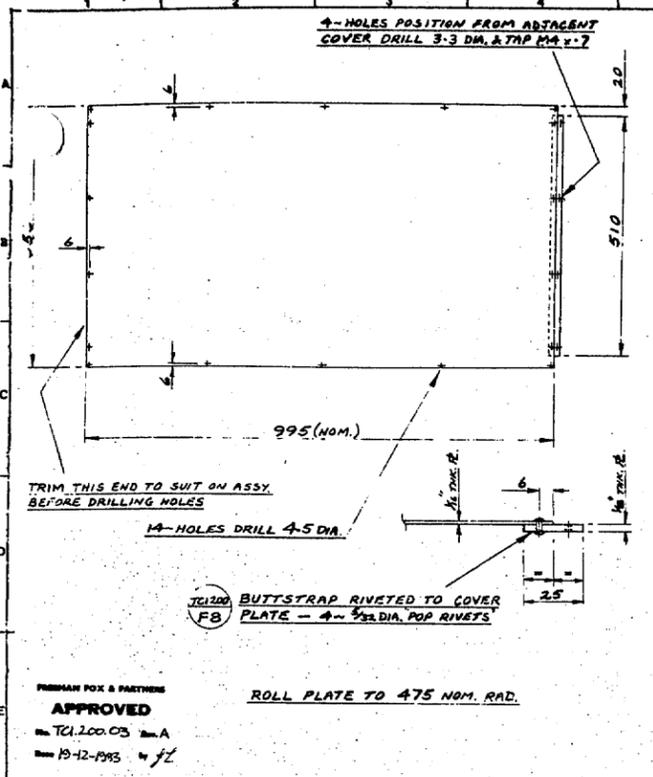
DATE OF MOD	REVISION BY
DATE OF MOD	REVISION BY



AS BUILT DRAWINGS
 The drawing shows as made to the work.

APPROVED
 TCI 200 Sheet A
 13-12-83

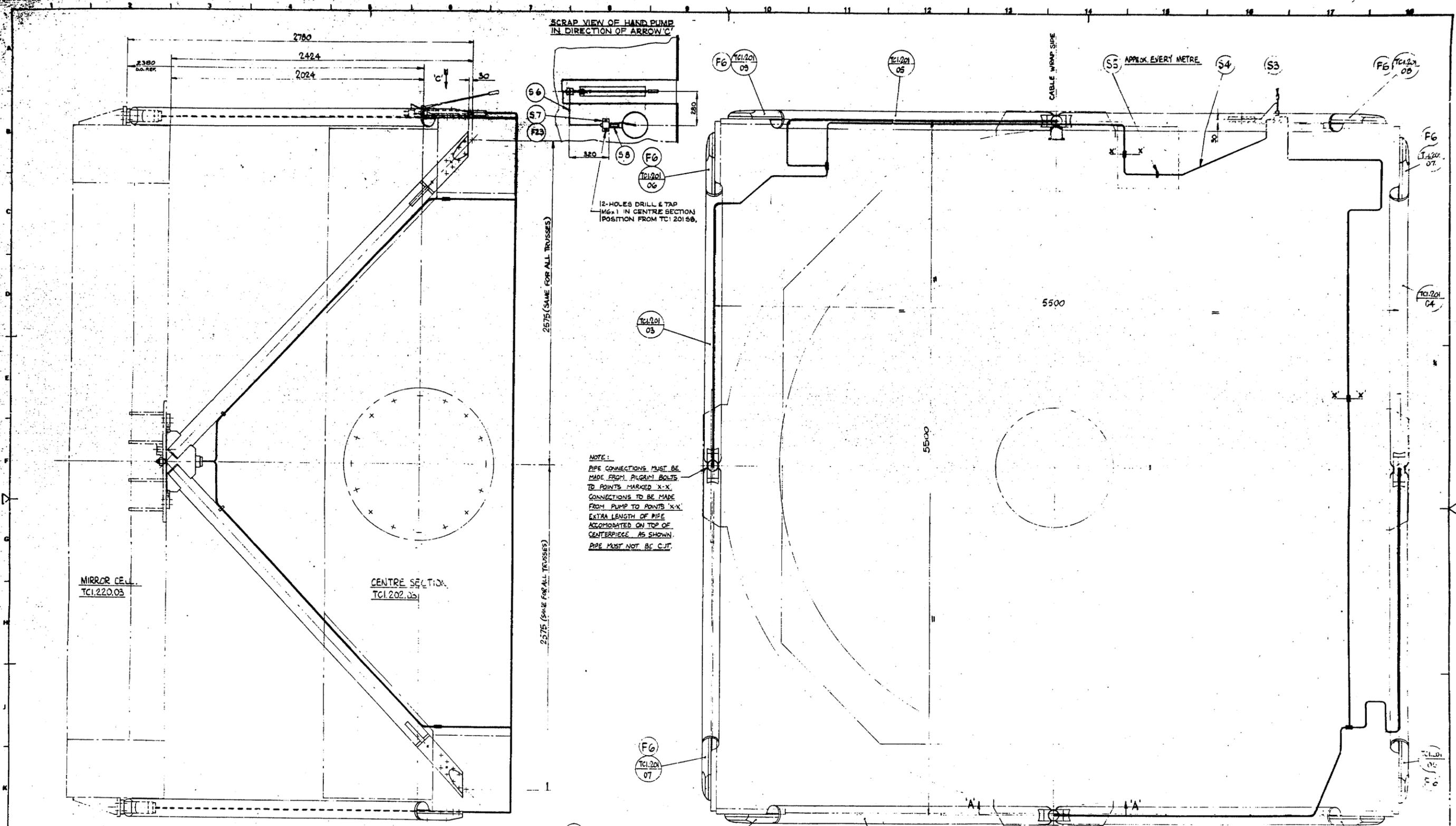
GRUBB PARSONS NEWCASTLE UPON TYNE NES 5YB SHEET 4 of 4 ASSY. OF TUBE (COVERS)	DATE: 13-12-83 SCALE: 1:5 DRAWING NUMBER: TCI 200 SHEET: A	PROJECTION: 1st ANGLE CHECKED: [Signature] APPROVED: [Signature]	ALL DIMENSIONS ARE IN MILLIMETRES ANGLES: SCREW THREADS TO B.S. 2043 PART 2 MEDIUM FIT MACHINED DIA CONCENTRIC TO 0.1	DIMENSIONAL TOLERANCES: DIMENSIONS UP TO 250 ± 0.20 DIMENSIONS FROM 250 TO 2500 ± 0.30 DIMENSIONS OVER 2500 ± 0.50 ANGLES STRAIGHTNESS/FLATNESS 1:800	WELD SYMBOLS TO BS 499 PART 2 1969 SURFACE FINISH SYMBOLS: ✓ DENOTES NOT NECESSARILY MACHINED, ▽ DENOTES MACHINED	SURFACE FINISH EQUIVALENTS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	THIS DRAWING IS THE PROPERTY OF NEI PARSONS LTD. AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY WITHOUT GRUBB PARSONS WRITTEN CONSENT.	A member of Clarke Chapman and Reynolds Parsons	THIS DRAWING CONFORMS TO B.S. 200
--	---	--	--	---	--	--	--	---	-----------------------------------



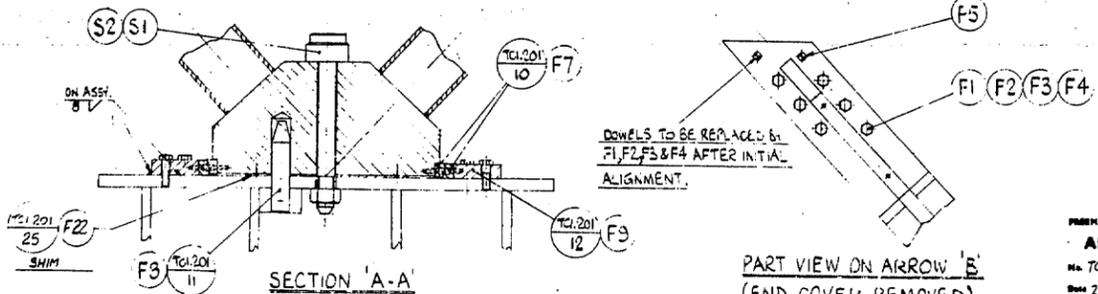
DATE OF MODIFIED BY	DATE OF MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	MILD STEEL	DATE OF MODIFIED BY	DATE OF MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	MILD STEEL	DATE OF MODIFIED BY	DATE OF MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STEEL OR IN. 30 AL. ALLOY
		FIRST ISSUE DATE	FINISH	PRIME PAINT BLACK			FIRST ISSUE DATE	FINISH	PRIME PAINT BLACK			FIRST ISSUE DATE	FINISH	PRIME PAINT BLACK
		COST ACCOUNT 200	PART No.				COST ACCOUNT 200	PART No.				COST ACCOUNT 200	PART No.	
TITLE COVER PLATE				TITLE COVER PLATE				TITLE ANGLE BRACKET						
WEIGHT 7.25 lb				WEIGHT 5.05 lb				WEIGHT						
SCALE 1:1.50				SCALE 1:1.50				SCALE 1:1						
UNIT No. TC1 200 03				UNIT No. TC1 200 04				UNIT No. TC1 200 05						
ISSUE A				ISSUE A				ISSUE A						

AS BUILT DRAWINGS
This drawing shows all variations to this work.

GRUBB PARSONS
NEWCASTLE UPON TYNE NE6 2YB



NOTE:
PIPE CONNECTIONS MUST BE MADE FROM PLUGWELD BOLTS TO POINTS MARKED X-X. CONNECTIONS TO BE MADE FROM PUMP TO POINTS X-X. EXTRA LENGTH OF PIPE ACCOMMODATED ON TOP OF CENTERPIECE AS SHOWN. PIPE MUST NOT BE CUT.



AS BUILT DRAWINGS
This drawing shows all variations to this work

SURFACE FINISH EQUIVALENTS FINISH SYMBOLS DENOTES NOT NECESSARILY MACHINED DENOTES MACHINED		WELD SYMBOLS TO BS 489 PART 2 1969		FABRICATION TOLERANCES DIMENSIONS UP TO 150 : 20 DIMENSIONS FROM 150 TO 7800 : 30 ANGLES : 600 STRAIGHTNESS/FLATNESS : 800		THIS DRAWING IS THE PROPERTY OF NEI PARSONS LTD. AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY WITHOUT GRUBB PARSONS WRITTEN CONSENT		ALL DIMENSIONS ARE IN MILLIMETRES ANGLES SCREW THREADS TO BS 3643 PART 2 MEDIUM FIT MACHINED TO CC-CENTRIC TO 0.1 TIR		PROJECTION 3RD ANGLE		DRAWN W.REEVE DATE 12-3-82		GRUBB PARSONS NEWCASTLE UPON TYNE NES 2YB ASSY. OF (LOWER) SERRURIER TRUSS SCALE 1:100'S TCI.201	
--	--	--	--	--	--	--	--	---	--	-------------------------	--	-------------------------------------	--	--	--

2-SETS OF 2-HOLES DRILL THRO.
 & REAM FOR 10MM DIA. DWELS
 IN CONJUNCTION WITH TCI.202.03
 ON ASSY.

2394
2543
43.21

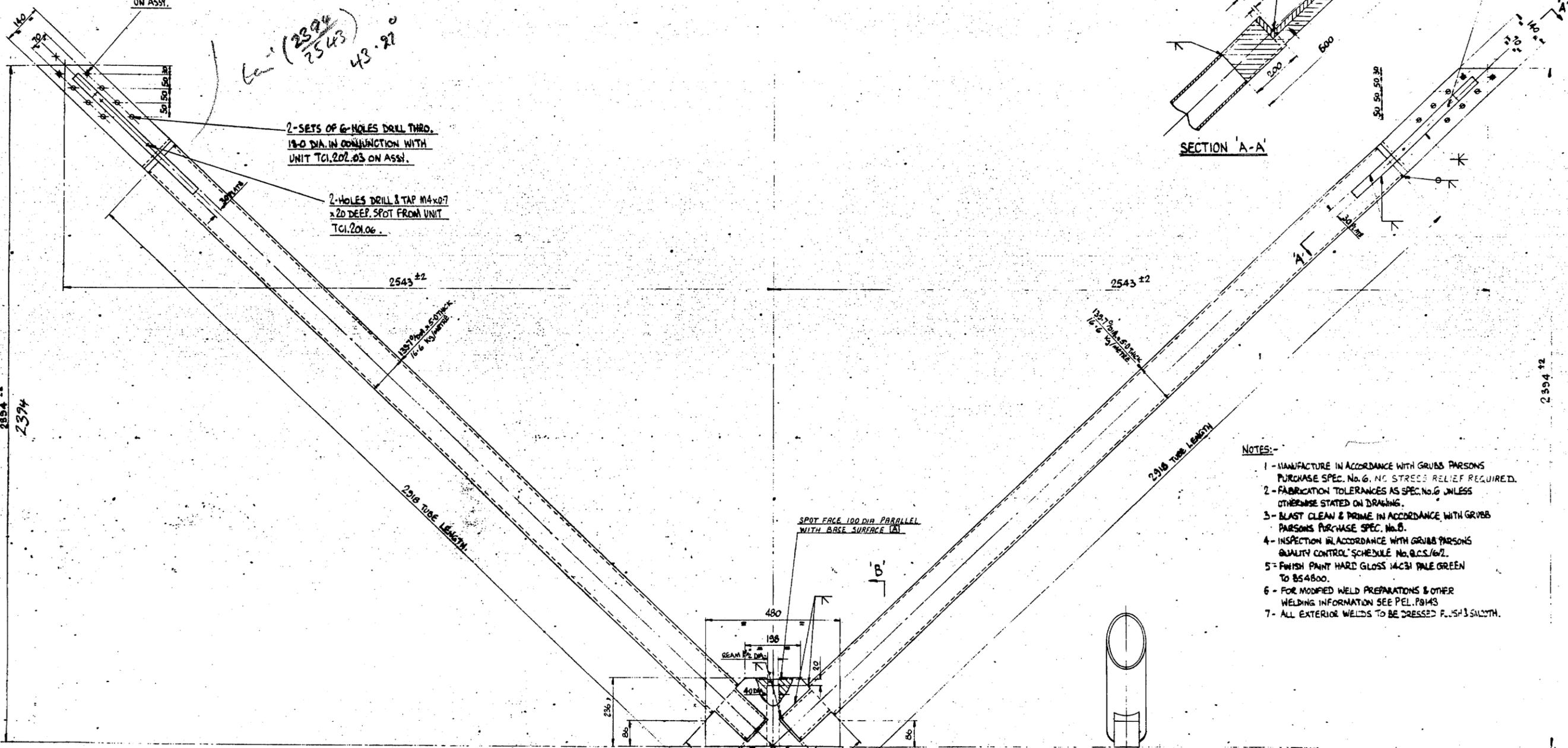
2-SETS OF 6-HOLES DRILL THRO.
 18.0 DIA. IN CONJUNCTION WITH
 UNIT TCI.202.03 ON ASSY.

2-HOLES DRILL & TAP M4x0.7
 x 20 DEEP. SPOT FROM UNIT
 TCI.201.06.

THIS FACE TO BE MACHINED
 TO 2.5mm ABOVE & OF USE

2-HOLES DRILL & TAP M4x0.7x20 DEEP
 SPOT FROM TCI.201.07

SECTION 'A-A'



- NOTES:-
- 1- MANUFACTURE IN ACCORDANCE WITH GRUBB PARSONS PURCHASE SPEC. No. 6. NO STRESS RELIEF REQUIRED.
 - 2- FABRICATION TOLERANCES AS SPEC. No. 6 UNLESS OTHERWISE STATED ON DRAWING.
 - 3- BLAST CLEAN & PRIME IN ACCORDANCE WITH GRUBB PARSONS PURCHASE SPEC. No. 6.
 - 4- INSPECTION IN ACCORDANCE WITH GRUBB PARSONS QUALITY CONTROL SCHEDULE No. Q.C.S./6/2.
 - 5- FINISH PAINT HARD GLOSS 14C31 PALE GREEN TO BS4800.
 - 6- FOR MODIFIED WELD PREPARATIONS & OTHER WELDING INFORMATION SEE PEL. FORMS.
 - 7- ALL EXTERIOR WELDS TO BE DRESSED FLUSH & SMOOTH.

MATERIAL:- 30MM THICK PLATE TO BS4360 GRADE 43C. WITH AVERAGE CHAMFY VALUE NOT LESS THAN 27J AT O.C. OTHER PLATES STEEL TO BS4360. GRADE 43A. TUBES TO BS4343 PART 2 GRADE 50 STEEL

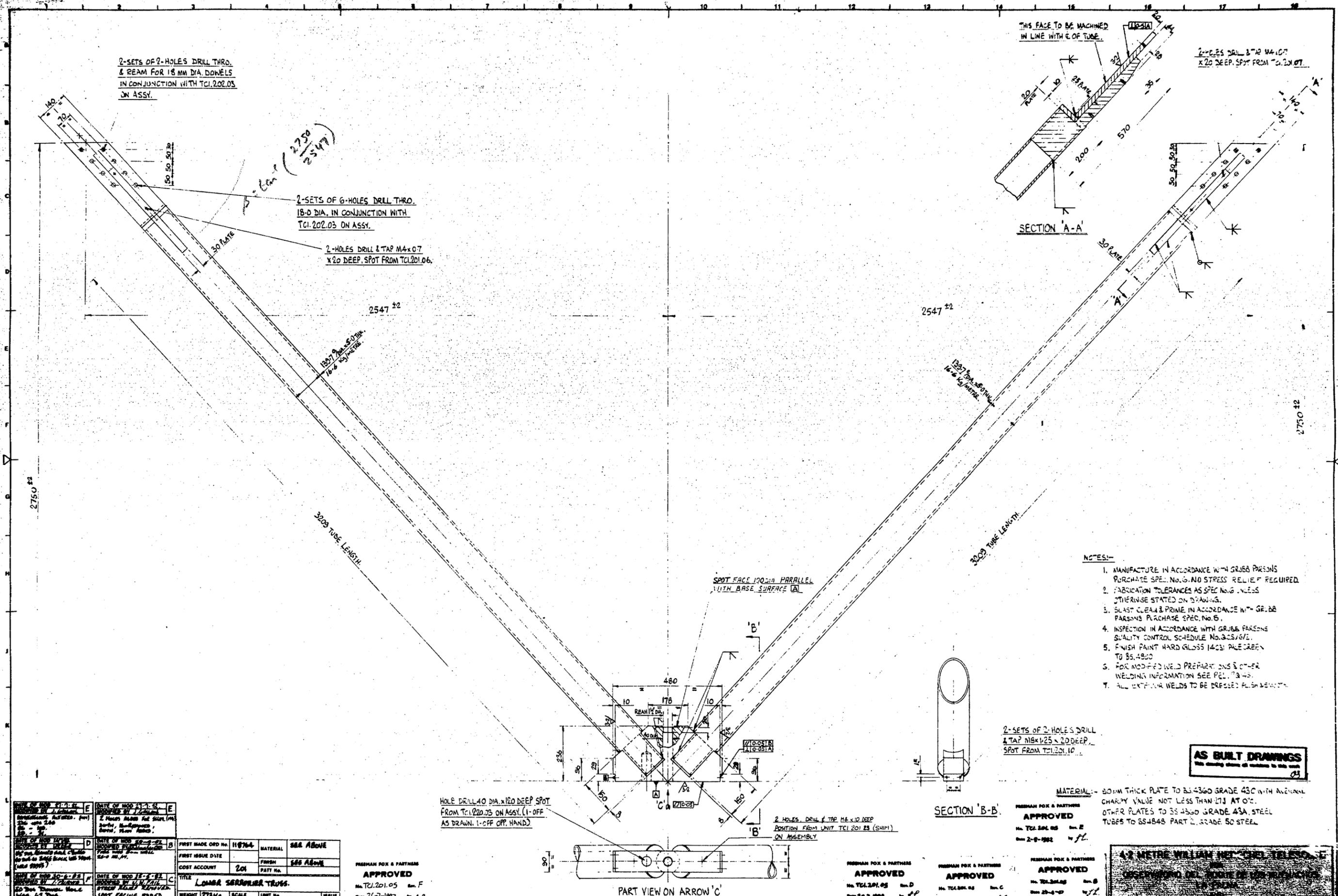
SECTION 'B-B'

PART VIEW ON ARROW 'C'

DESIGNED BY	DATE	APPROVED BY	DATE
DRAWN BY	DATE	APPROVED BY	DATE
CHECKED BY	DATE	APPROVED BY	DATE
ISSUED BY	DATE	APPROVED BY	DATE

APPROVED
 No. TCI.201.04
 Date 2-7-1982

AS BUILT DRAWINGS
 This drawing shows all changes to the work



2-SETS OF 2-HOLES DRILL THRO.
& REAM FOR 18 MM DIA. DOWELS
IN CONJUNCTION WITH TCI.202.03
ON ASSY.

2-SETS OF 6-HOLES DRILL THRO.
18.0 DIA. IN CONJUNCTION WITH
TCI.202.03 ON ASSY.

2-HOLES DRILL & TAP M4x0.7
x20 DEEP. SPOT FROM TCI.201.06.

THIS FACE TO BE MACHINED
IN LINE WITH E OF TUBE.

2-HOLES DRILL & TAP M4x0.7
x20 DEEP. SPOT FROM TCI.201.07.

SECTION A-A

1337 9mm 50mm
16.6 ±2 JEROME

SPOT FACE 100±0.15 PARALLEL
WITH BASE SURFACE A

NOTES:-

1. MANUFACTURE IN ACCORDANCE WITH GRUBB PARSONS PURCHASE SPEC. NO. 6. NO STRESS RELIEF REQUIRED.
2. FABRICATION TOLERANCES AS SPEC NO. 6 UNLESS OTHERWISE STATED ON DRAWING.
3. BLAST CLEAN & PRIME IN ACCORDANCE WITH GRUBB PARSONS PURCHASE SPEC. NO. 6.
4. INSPECTION IN ACCORDANCE WITH GRUBB PARSONS QUALITY CONTROL SCHEDULE NO. 6.2.5/6/7.
5. FINISH PAINT HARD GLOSS 14031 PALE GREEN TO BS.4800
6. FOR MODIFIED WELD PREPARATIONS & OTHER WELDING INFORMATION SEE PELL. 73-43.
7. ALL EXTERNAL WELDS TO BE DRESSED PLAIN SMOOTH.

2-SETS OF 2-HOLES DRILL
& TAP M4x0.7 x20 DEEP.
SPOT FROM TCI.201.10

AS BUILT DRAWINGS
This drawing shows all matters in this work.

MATERIAL:- 20mm THICK PLATE TO BS 4360 GRADE 43C WITH AVERAGE CHARPY VALUE NOT LESS THAN 27J AT 0°C.
OTHER PLATES TO BS 4360 GRADE 43A. STEEL TUBES TO BS 4848 PART 2, GRADE 50 STEEL.

SECTION B-B

PART VIEW ON ARROW C

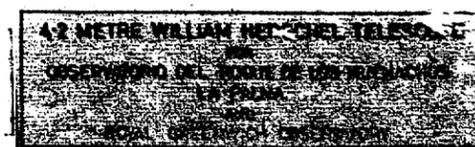
HOLE DRILL 40 DIA. x 120 DEEP SPOT
FROM TCI.220.03 ON ASSY. (1-OFF
AS DRAWN. 1-OFF OPP. HAND)

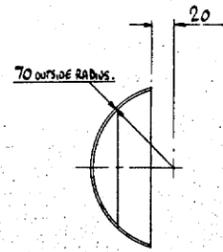
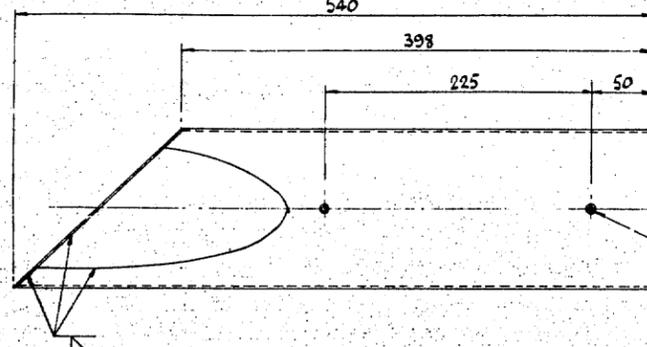
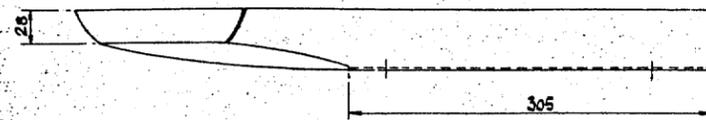
2 HOLES DRILL & TAP M4x0.7 DEEP
POSITION FROM UNIT TCI.201.23 (SHIP)
ON ASSEMBLY

DATE OF MOD 21-1-82			
2 HOLES ADDED FOR SHIP (1982)			
DATE OF MOD 18-6-82			
STRENGTH REVISION	STRENGTH REVISION	STRENGTH REVISION	STRENGTH REVISION
DATE OF MOD 18-6-82			
SPOT FACING ADDED	SPOT FACING ADDED	SPOT FACING ADDED	SPOT FACING ADDED

FIRST MADE ORD No.	110764	MATERIAL	SEE ABOVE
FIRST ISSUE DATE		FINISH	SEE ABOVE
COST ACCOUNT	201	PARTY No.	
TITLE	Lamba SERRURIER TRUSS.		
WEIGHT	273kg	SCALE	1/5
No. OFF PER SET	2	UNIT No.	TCI.201.05
ISSUE	F		

FRESHMAN FOX & PARTNERS
APPROVED
26-7-1983

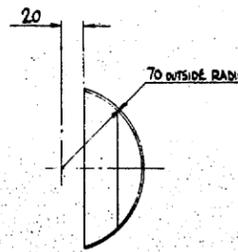
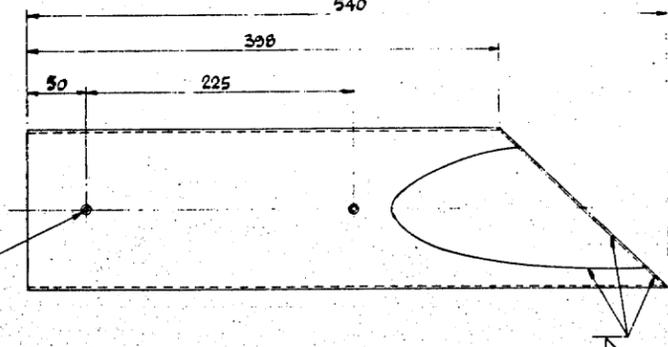




2-HOLES DRILL & C/SK. FOR
M4x0.7 C/SK. HD. SCREWS.

FRESHMAN FOX & PARTNERS
APPROVED
No. TC1.201.06 Rev. A
Date 16.4.1982 by JZ

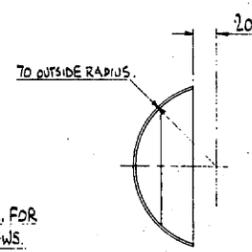
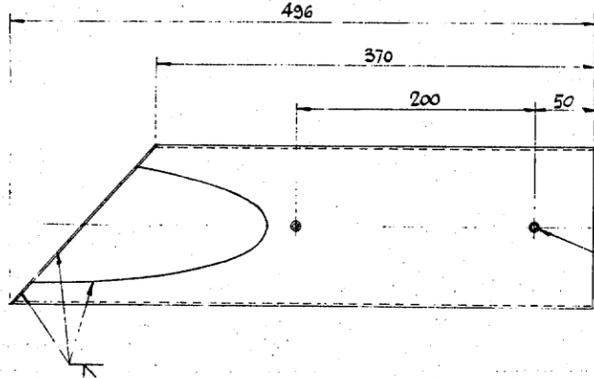
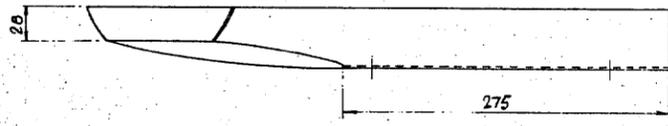
DATE OF MOD. RECORDED BY	DATE OF MOD. RECORDED BY	FIRST MADE ORD. No.	MATERIAL
		FIRST ISSUE DATE	
		COST ACCOUNT	201
		TITLE	END COVER
		WEIGHT	1.23 kg
		SCALE	1/2
		UNIT No.	TC1.201.06
		NO. OFF. PER SET	2



2-HOLES DRILL & C/SK. FOR
M4x0.7 C/SK. HD. SCREWS.

FRESHMAN FOX & PARTNERS
APPROVED
No. TC1.201.07 Rev. A
Date 16.4.1982 by JZ

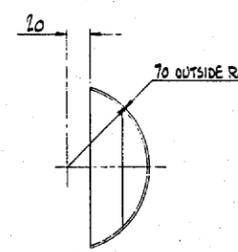
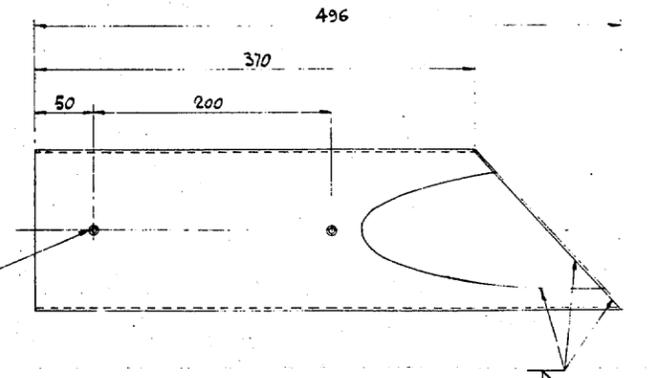
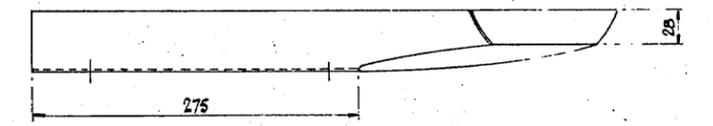
DATE OF MOD. RECORDED BY	DATE OF MOD. RECORDED BY	FIRST MADE ORD. No.	MATERIAL
		FIRST ISSUE DATE	
		COST ACCOUNT	201
		TITLE	END COVER
		WEIGHT	1.23 kg
		SCALE	1/2
		UNIT No.	TC1.201.07
		NO. OFF. PER SET	2



2-HOLES DRILL & C/SK. FOR
M4x0.7 C/SK. HD. SCREWS.

FRESHMAN FOX & PARTNERS
APPROVED
No. TC1.201.08 Rev. A
Date 16.4.1982 by JZ

DATE OF MOD. RECORDED BY	DATE OF MOD. RECORDED BY	FIRST MADE ORD. No.	MATERIAL
		FIRST ISSUE DATE	
		COST ACCOUNT	201
		TITLE	END COVER
		WEIGHT	1.23 kg
		SCALE	1/2
		UNIT No.	TC1.201.08
		NO. OFF. PER SET	2

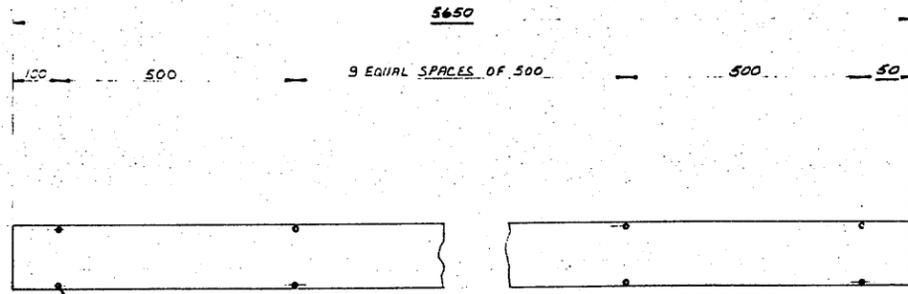


2-HOLES DRILL & C/SK. FOR
M4x0.7 C/SK. HD. SCREWS.

AS BUILT DRAWINGS
This drawing shows all modifications to this work.

FRESHMAN FOX & PARTNERS
APPROVED
No. TC1.201.09 Rev. A
Date 16.4.1982 by JZ

DATE OF MOD. RECORDED BY	DATE OF MOD. RECORDED BY	FIRST MADE ORD. No.	MATERIAL
		FIRST ISSUE DATE	
		COST ACCOUNT	201
		TITLE	END COVER
		WEIGHT	1.23 kg
		SCALE	1/2
		UNIT No.	TC1.201.09
		NO. OFF. PER SET	2

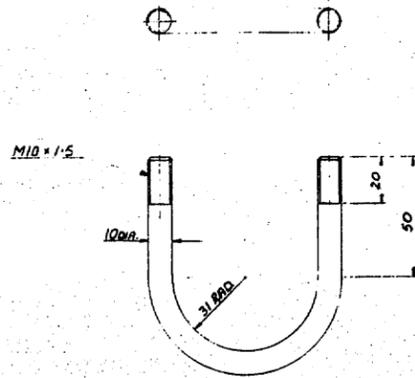


24 HOLES DRILL # C'SK FOR
M4x0.7 CSK HD SCREWS

FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.20 Rev. B
Date 15.4.1982 by JZ

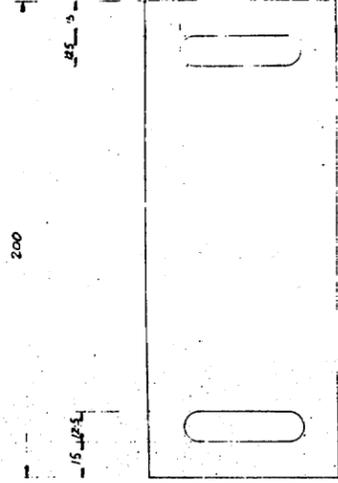
FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.21 Rev. A
Date 15.4.1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH PALE GREEN M.C.S.I.
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE CABLE DUCT LID.	WEIGHT 18.35	SCALE 1:5
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.20	ISSUE B	



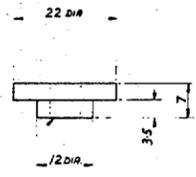
FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.21 Rev. A
Date 15.4.1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH PALE GREEN M.C.S.I.
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE U-BOLT.	WEIGHT 0.000	SCALE 1:1
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.21	ISSUE A	



FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.22 Rev. A
Date 15.4.1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH PALE GREEN M.C.S.I.
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE CABLE DUCT BRACKET	WEIGHT 0.000	SCALE 1:1
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.22	ISSUE A	



DRILL 6.6 DIA.

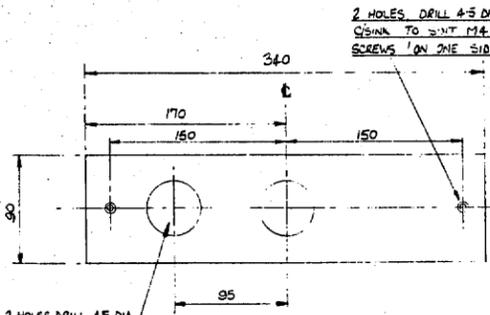
3/2 ALL OVER.

FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.23 Rev. A
Date 15.4.1982 by JZ

FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.24 Rev. A
Date 15.4.1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH PALE GREEN M.C.S.I.
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE SPACER	WEIGHT 0.000	SCALE 2:1
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.23	ISSUE A	

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH PALE GREEN M.C.S.I.
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE CABLE DUCT LID.	WEIGHT 18.35	SCALE 1:5
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.24	ISSUE A	

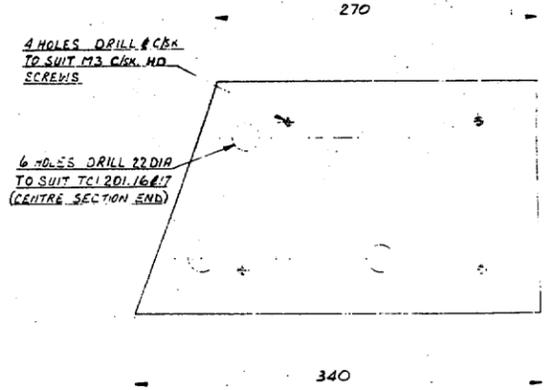


NOTE: NOMINAL THICKNESS
± 4 MM, FINAL THICKNESS
TO BE DETERMINED ON MGS.

AS-BUILT DRAWINGS
This drawing shows all dimensions to be used.

FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.25 Rev. A
Date 2-9-1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH ASPHUDAL
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE SHIM.	WEIGHT 0.000	SCALE 1:2
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.25	ISSUE A	



NOTES: 1. SHIMS TO BE FITTED TO COMPENSATE FOR MACHINING ERROR ON CENTRE SECTION.
2. SHIMS TO BE DRILLED AND COUNTERSUNK AS SHOWN TO SUIT TCI.201.16. 2 SHIMS TO BE DRILLED AND COUNTERSUNK ON OPPOSITE SIDE TO SUIT TCI.201.17. SPOT CHECK ASSESSMENT.

FREEMAN FOX & PARTNERS
APPROVED
No. TCI.201.25 Rev. A
Date 22-9-1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 20	FINISH ASPHUDAL
FIRST ISSUE DATE	COST ACCOUNT 201	TITLE SHIM	WEIGHT 0.000	SCALE 1:2
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	UNIT No. TCI.201.26	ISSUE A	