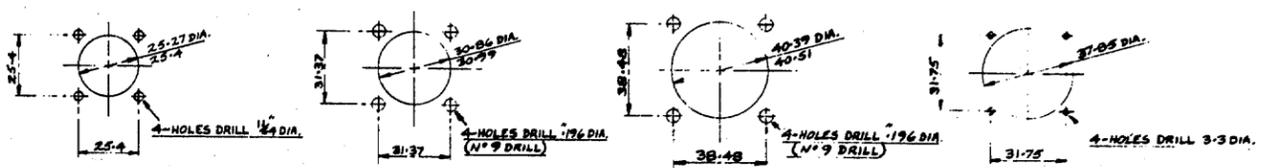
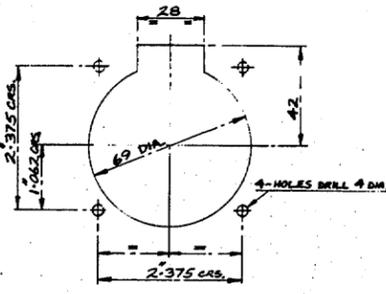


PANEL PIERCING DETAILS



DRILLING DETAILS FOR SOCKETS REF.:- G H E J A R S U  
 DRILLING DETAILS FOR SOCKETS REF.:- N F L B C  
 DRILLING DETAILS FOR SOCKETS REF.:- V M P  
 DRILLING DETAILS FOR SOCKETS REF.:- Q

DRILLING DETAILS FOR BULKHEAD FITTINGS REF.:- WATER NITROGEN



DRILLING DETAILS FOR SOCKET REF.:- D

DRILLING DETAILS FOR BULKHEAD FITTINGS REF.:- OIL

NOTE :- POSITIONS ON PLATES ARE IDENTIFIED BY CONNECTOR NUMBER FOLLOWED BY SOCKET REF. LETTER (SEE TELESCOPE CABLING DRG. NO TC1 000 02 SCHEDULE N° 22 SHTS 1 to 5) OR BY SERVICE PASSING THROUGH THAT POSITION e.g. OIL WATER NITROGEN  
 R'S & U SOCKET REFS. TO BE FITTED WITH INSULATING PLATES. SEE DETAILS TC1 123 24 FOR R'S AND TC1 123 25 FOR U  
 USE F14 F15 & F16 FOR ATTACHMENT.

20 HOLES POSITIONED ON CONCRETE FROM ASSEMBLED UNIT DRILL FOR M12 x 1.75 LOOSE BOLT TYPE RAWL BOLT. SEE SHT 3 OF ASSY FOR ORIENTATION OF HOLES  
 HOLES TO BE DRILLED BY H.G.P. DRILL HOLES 24 DIA TO A MIN DEPTH OF 68mm.

SOCKETS & BULKHEAD FITTINGS INSERTED FROM THIS SIDE OF PLATE

PENNY & GILES PRESSURE TRANSDUCER TEED INTO NITROGEN LINE

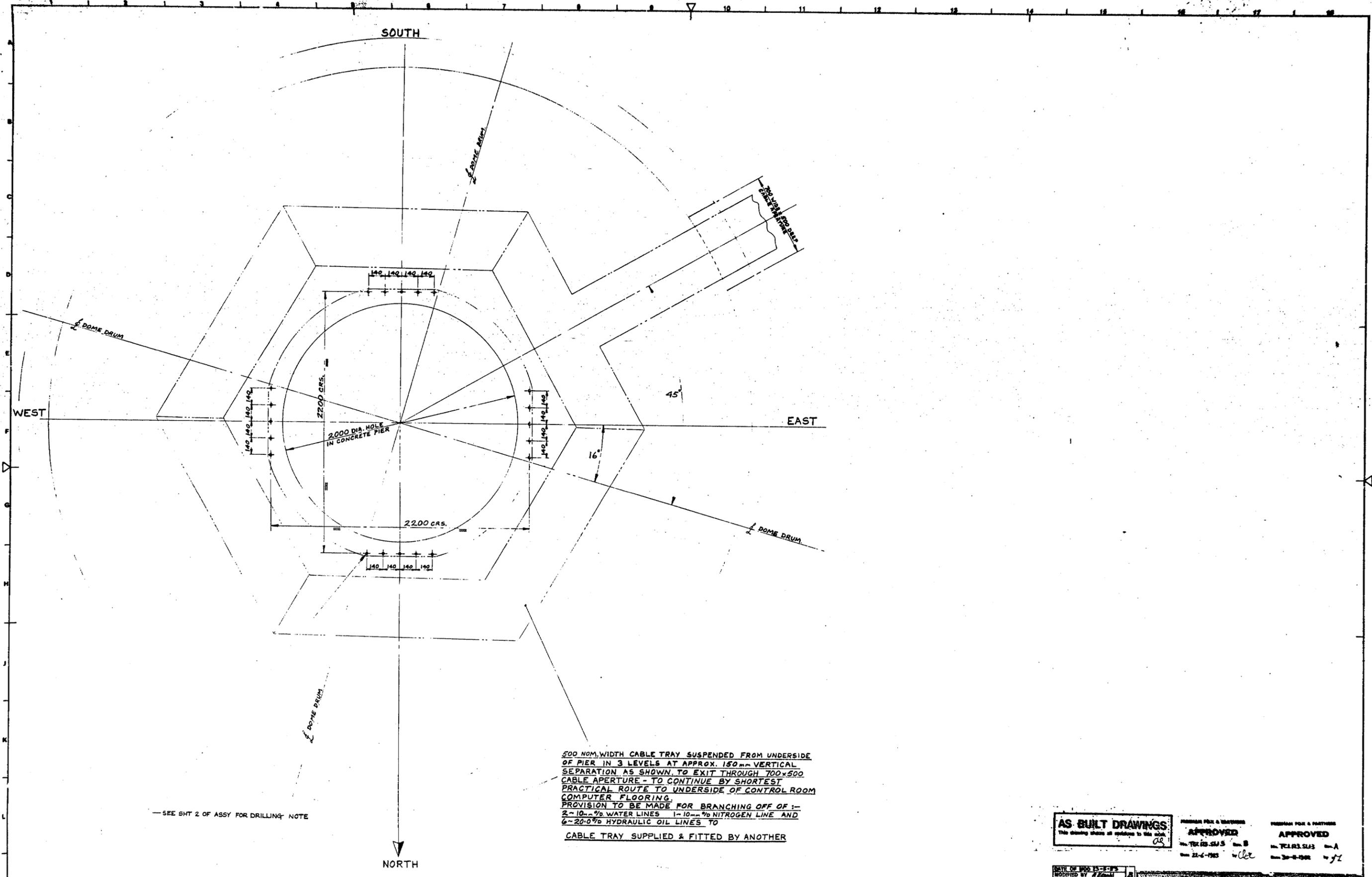
NOTE:- THESE 4 PLATES ARE IDENTICAL UNTIL DRILLED FOR SOCKETS ETC. THEY ARE TO BE CLEARLY MARKED WITH POSITIONAL REFS. SO THAT ANY DISMANTLE & RE-ASSEMBLY CAN BE EFFECTED WITHOUT DISPLACING PLATES.

FREEMAN FOX & PARTNERS <b>APPROVED</b> No. TC1 123 S42 Rev. F Date 22-11-1983 by JZ	FREEMAN FOX & PARTNERS <b>APPROVED</b> No. TC1 123 S42 Rev. E Date 22-6-1983 by JZ
FREEMAN FOX & PARTNERS <b>APPROVED</b> No. TC1 123 S42 Rev. D Date 12-5-1983 by GBE	FREEMAN FOX & PARTNERS <b>APPROVED</b> No. TC1 123 S42 Rev. C Date 23-3-1983 by JZ
FREEMAN FOX & PARTNERS <b>APPROVED</b> No. TC1 123 S42 Rev. B Date 21-1-1983 by JZ	FREEMAN FOX & PARTNERS <b>APPROVED</b> No. TC1 123 S42 Rev. A Date 30-11-1982 by JZ

AS BUILT DRAWINGS

4.2 METRE WILLIAMS DESIGN TELESCOPE

A member of Clarke Chapman and Reynolds Parsons SURFACE FINISH EQUIVALENTS DIMENSIONS 4 6 8 10 20 30 50 100 THIS DRAWING CONFORMS TO BS. 308	SURFACE FINISH SYMBOLS DENOTES NOT NECESSARILY MACHINED DENOTES MACHINED	WELD SYMBOLS TO BS. 499 PART 2 1989	FABRICATION TOLERANCES DIMENSIONS UP TO 250 : ± 0.20 DIMENSIONS FROM 250 TO 2500 : ± 0.30 ANGLES : ± 1' 00" STRAIGHTNESS/FLATNESS : 1' 00"	THIS DRAWING IS THE PROPERTY OF NPI PARSONS LTD. AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY WITHOUT GRUBB PARSONS WRITTEN CONSENT.	ALL DIMENSIONS ARE IN MILLI-METRES. PROJECTION CHECKED DATE 6-10-82	GRUBB PARSONS RECASTLE UPON TYNE NE6 2YB ASSY. OF AZIMUTH CABLE TWISTER DATE 6-10-82
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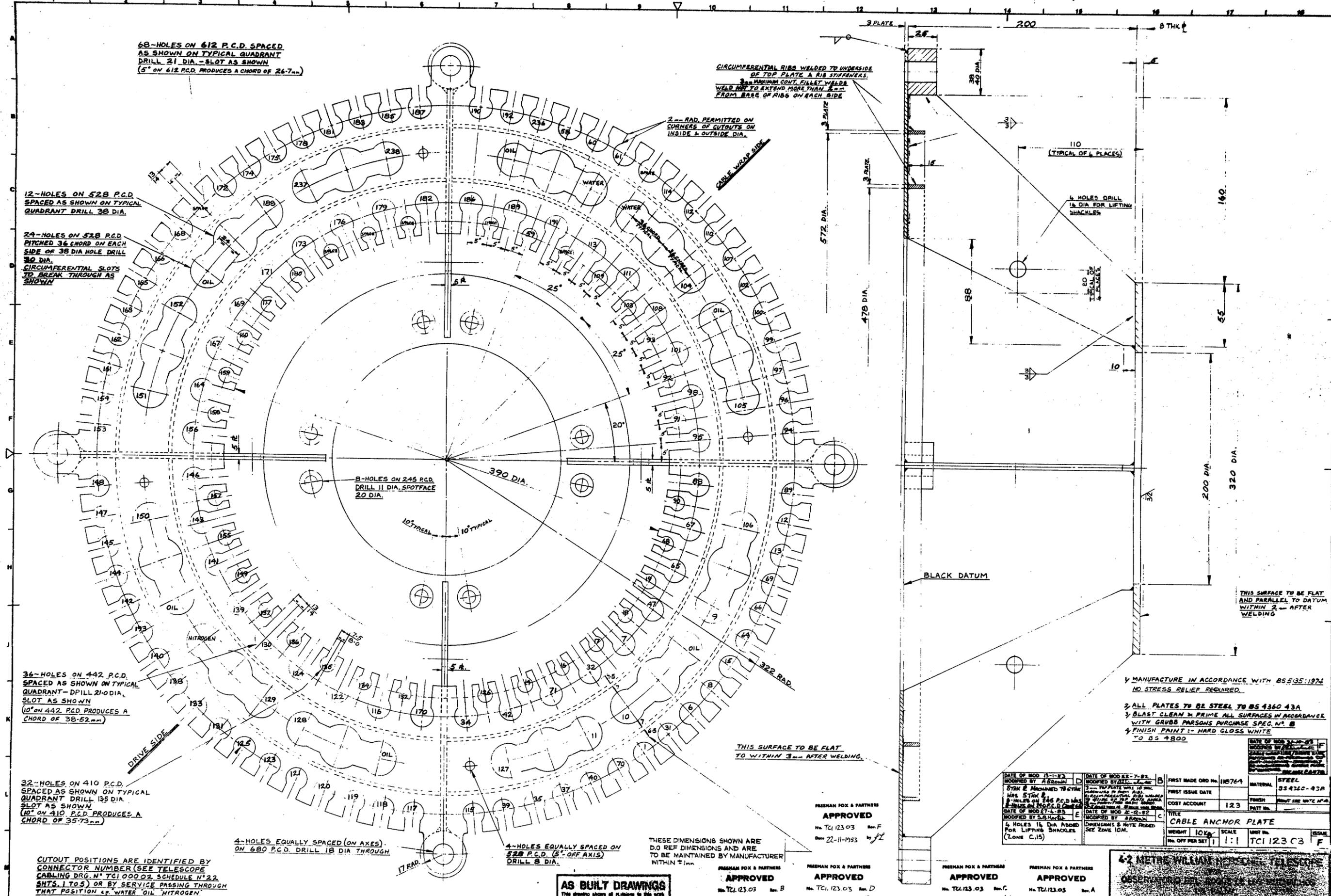


— SEE SHIT 2 OF ASSY FOR DRILLING NOTE

<b>AS BUILT DRAWINGS</b> This drawing shows all variations to the work.	APPROVED DATE 22-4-1983 BY <i>clt</i>	APPROVED DATE 22-4-1983 BY <i>clt</i>
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DATE OF MOD 15-8-83 MODIFIED BY <i>clt</i> NOTE FOR EXAMINER OF 22-4-1983 (See 31)	DATE OF MOD MODIFIED BY
--	----------------------------

A member of Clarke Chapman and Reynolds Parsons SURFACE FINISH EQUIVALENTS DIMENSIONS 1:4 2:4 3:4 4:4 5:4 6:4 7:4 8:4 9:4 10:4 11:4 12:4 13:4 14:4 15:4 16:4 17:4 18:4 19:4 20:4 DIMENSIONS 1:1 2:1 3:1 4:1 5:1 6:1 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 THIS DRAWING CONFORMS TO B.S. 308	SURFACE FINISH SYMBOLS ✓ DENOTES NOT NECESSARILY MACHINED ▽ DENOTES MACHINED	WELD SYMBOLS PART 2 1949	FABRICATION TOLERANCES DIMENSIONS UP TO 250 ± 0.20 DIMENSIONS FROM 250 TO 1000 ± 0.30 ANGLES ± 1.000 STRAIGHTNESS/FLATNESS ± 1.000	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.	GENERAL MACHINING TOLERANCES UNLESS OTHERWISE SPECIFIED: DIMENSIONS WITH - OVER ± 0.1 DIMENSIONS WITH - OVER ± 0.1 DIMENSIONS WITH - OVER ± 0.1	ALL DIMENSIONS ARE IN MILLIMETRES ANGLES - SCREW THREADS TO B.S. 3943 PART 2 MEDIUM FIT MACHINED DIA CONCENTRIC TO 0.1 TIR.	PROJECTION CHECKED 3rd ANGLE DRAWN BY <i>R.A. Powell</i> DATE 27-10-82	GRUBB PARSONS NEWCASTLE UPON TYNE NES 278 ASSY. OF AZIMUTH CABLE TWISTER PIER INTERFACE DETAILS SCALE 1:10 SHEET 3 of 3 TC1123
							DATE OF MOD 15-8-83 MODIFIED BY <i>clt</i> NOTE FOR EXAMINER OF 22-4-1983 (See 31)	DATE OF MOD MODIFIED BY



68-HOLES ON 612 P.C.D. SPACED AS SHOWN ON TYPICAL QUADRANT DRILL 21 DIA. - SLOT AS SHOWN (5° ON 612 P.C.D. PRODUCES A CHORD OF 26.7mm)

12-HOLES ON 528 P.C.D. SPACED AS SHOWN ON TYPICAL QUADRANT DRILL 38 DIA.

24-HOLES ON 528 P.C.D. PITCHED 36° CHORD ON EACH SIDE OF 38 DIA HOLE DRILL 30 DIA. CIRCUMFERENTIAL SLOTS TO BREAK THROUGH AS SHOWN

8-HOLES ON 245 P.C.D. DRILL 11 DIA. SPOTFACE 20 DIA.

36-HOLES ON 442 P.C.D. SPACED AS SHOWN ON TYPICAL QUADRANT - DRILL 21-0 DIA. SLOT AS SHOWN (10° ON 442 P.C.D. PRODUCES A CHORD OF 38.52mm)

22-HOLES ON 410 P.C.D. SPACED AS SHOWN ON TYPICAL QUADRANT DRILL 13.5 DIA. SLOT AS SHOWN (10° ON 410 P.C.D. PRODUCES A CHORD OF 35.73mm)

4-HOLES EQUALLY SPACED (ON AXES) ON 680 P.C.D. DRILL 18 DIA THROUGH

4-HOLES EQUALLY SPACED ON 528 P.C.D. (6° OFF AXIS) DRILL 8 DIA.

THESE DIMENSIONS SHOWN ARE DO REF DIMENSIONS AND ARE TO BE MAINTAINED BY MANUFACTURER WITHIN ± 1mm

CIRCUMFERENTIAL RIBS WELDED TO UNDERSIDE OF TOP PLATE & RIB STIFFENERS. 3mm MAXIMUM CONT. FILLET WELDS WELD NOT TO EXTEND MORE THAN 2mm FROM BASE OF RIBS ON EACH SIDE

2mm RAD. PERMITTED ON CORNERS OF GUTBOTS ON INSIDE & OUTSIDE DIA.

BLACK DATUM

THIS SURFACE TO BE FLAT TO WITHIN 3mm AFTER WELDING.

THIS SURFACE TO BE FLAT AND PARALLEL TO DATUM WITHIN 2mm AFTER WELDING

- 1 MANUFACTURE IN ACCORDANCE WITH BS 5335:1972 NO STRESS RELIEF REQUIRED.
- 2 ALL PLATES TO BE STEEL TO BS 4360 43A
- 3 BLAST CLEAN & PRIME ALL SURFACES IN ACCORDANCE WITH GRUBB PARSONS PURCHASE SPEC. N° 8
- 4 FINISH PAINT :- HARD GLOSS WHITE TO BS 4800

FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.03 Rev. F  
Date 22-11-1983 by *fl*

FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.03 Rev. B  
Date 12-5-1983 by *CRG*

FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.03 Rev. D  
Date 26-1-1983 by *CRG*

FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.03 Rev. C  
Date 21-1-1983 by *fl*

FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.03 Rev. A  
Date 30-11-1982 by *fl*

DATE OF MOD 15-11-83 MODIFIED BY A Brown	DATE OF MOD 27-1-85 MODIFIED BY A Brown	FIRST MADE ORD NO. 118764	MATERIAL STEEL
BY 2 MECHANICAL TO 67mm Hole 57mm Ø	DATE OF MOD 27-1-85 MODIFIED BY A Brown	FIRST ISSUE DATE	BS 4360-43A
8-HOLES ON 245 P.C.D. DRILL 11 DIA. SPOTFACE 20 DIA.	DATE OF MOD 27-1-85 MODIFIED BY A Brown	COST ACCOUNT 123	FINISH
4-HOLES ON 528 P.C.D. DRILL 38 DIA.	DATE OF MOD 27-1-85 MODIFIED BY A Brown	TITLE	PART NO.
4-HOLES 18 DIA ADDED FOR LIFTING SHACKLES (ZONE C.15)	DATE OF MOD 27-1-85 MODIFIED BY A Brown	CABLE ANCHOR PLATE	
	DATE OF MOD 27-1-85 MODIFIED BY A Brown	WEIGHT 10kg	SCALE 1:1
	DATE OF MOD 27-1-85 MODIFIED BY A Brown	No. OFF PER SET 1	UNIT No. TCI 123.03

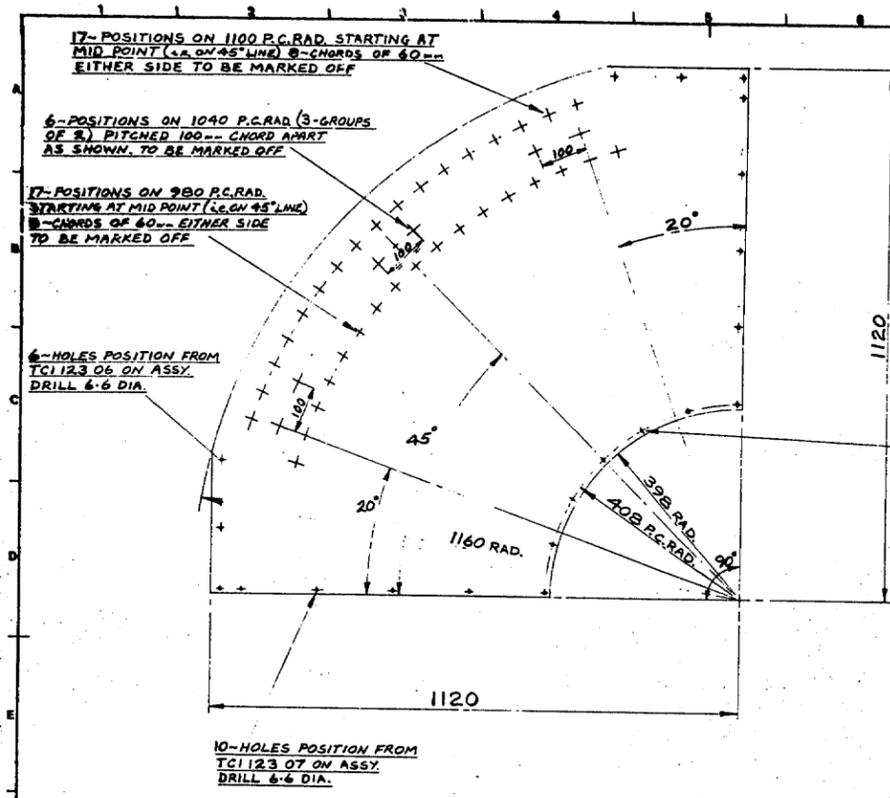
AS BUILT DRAWINGS  
This drawing shows all dimensions in mm

4.2 METRE WELDED TELESCOPE  
OBSERVING PORT  
GRUBB PARSONS  
NEWCASTLE UPON TYNE NEG 2YB  
DATE 30-6-82  
TITLE DETAILS FOR AZIMUTH AXIS CABLE TWISTER  
SCALE 1:1  
DRAWING NUMBER TCI 123.03

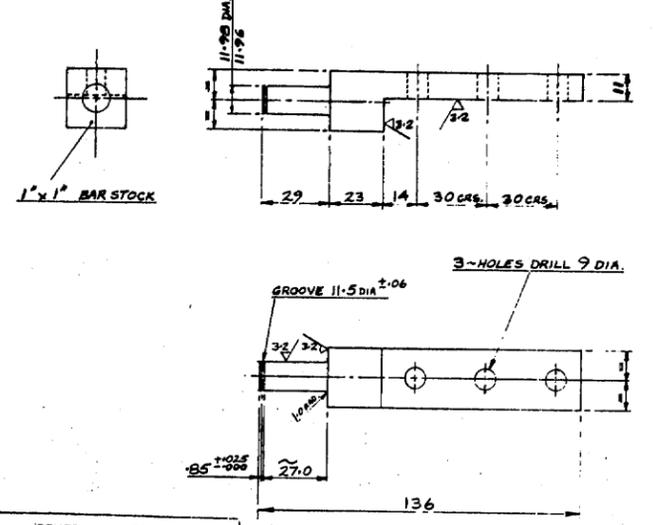
A merger of Clark Chapman and Reynolds Parsons	SURFACE FINISH EQUIVALENTS	SURFACE FINISH SYMBOLS	WELD SYMBOLS	PREPARATION TOLERANCES	THIS DRAWING IS THE PROPERTY OF NEI PARSONS LTD. AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY WITHOUT GRUBB PARSONS WRITTEN CONSENT	ALL DIMENSIONS ARE IN MILLIMETRES ANGLES - SCREEN THREADS TO BS 2643 PART 2 MEDIUM FIT MACHINED DIA CONCENTRIC TO 0.1 TIR	PROJECTION CHECKED 3rd ANGLE	DRAWN DATE	DATE
	THIS DRAWING CONFORMS TO S.S. 308	✓ DENOTES NOT NECESSARILY MACHINED ✓ DENOTES MACHINED	TO BS 499 PART 2 1980	DIMENSIONS UP TO 250 : ± 0.20 DIMENSIONS FROM 250 TO 2500 : ± 0.30 ANGLES : ± 0.5 STRAIGHTNESS/FLATNESS : 1:600					







NOTE 1- 4-OFF PLATES REQUIRED TO FORM A 2320 DIA. PLATE WITH SQUARED EDGES BUTTED TOGETHER.



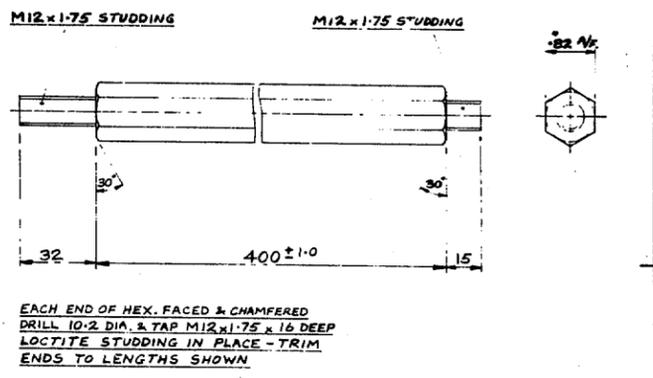
GENERAL TOLERANCES  
ALL DIMENSIONS ARE IN MILLIMETRES  
UNSPECIFIED DIMENSIONS TO 0.05  
DIMENSIONS WITH LINE AND DECIMAL SIGN TO 0.02  
DIMENSIONS WITH LINE AND DECIMAL SIGN TO 0.01

FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.09 Rev. A  
Date 30-11-1982 by JZ

PLANNING NOTE 1- TO AVOID REPETITIVE MARKING OFF ON OTHER 3- PLATES, POSITIONS INDICATED ON 980 P.C. RAD. & 1100 P.C. RAD. CAN BE TRANSFERRED BY STACKING & PILOT DRILLING (SAY 3-DIA.) THROUGH. FINAL PANEL CUT OUTS & DRILLING SHOWN ON DRG N° TCI 123 ASSY SHT 2.

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 3mm THICK MILD STEEL SHEET
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE CONNECTOR PLATE			
		WEIGHT 20.0kg	SCALE 1:5
		No. OFF PER SET 4	UNIT No. TCI 123 08
			ISSUE A

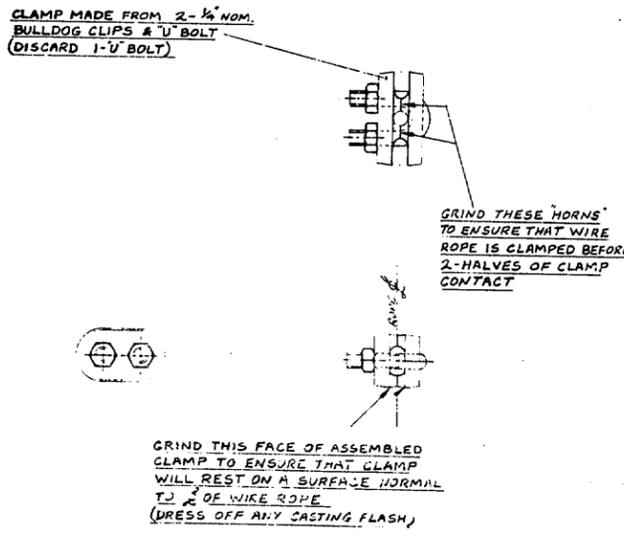
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 1 1/2 x 1 BAR STOCK
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE ROLLER SPINDLE			
		WEIGHT 0.51kg	SCALE 1:1
		No. OFF PER SET 4	UNIT No. TCI 123 09
			ISSUE A



AS BUILT DRAWINGS  
This drawing shows all features to the work.

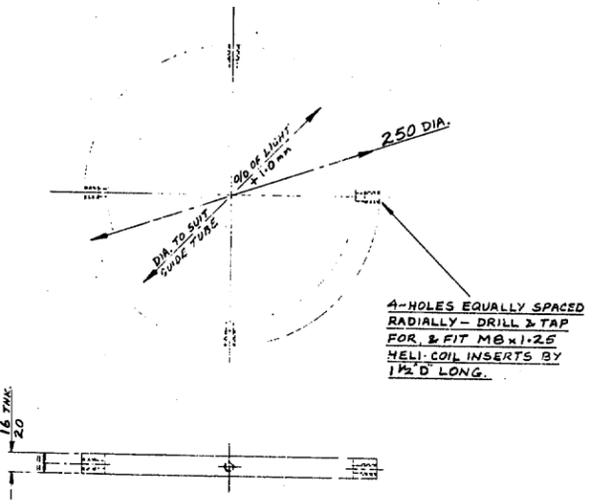
FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.14 Rev. A  
Date 30-11-1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 1 1/2 x 1 BAR STOCK
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE PILLAR			
		WEIGHT 1.20kg	SCALE 1:1
		No. OFF PER SET 4	UNIT No. TCI 123 14
			ISSUE A



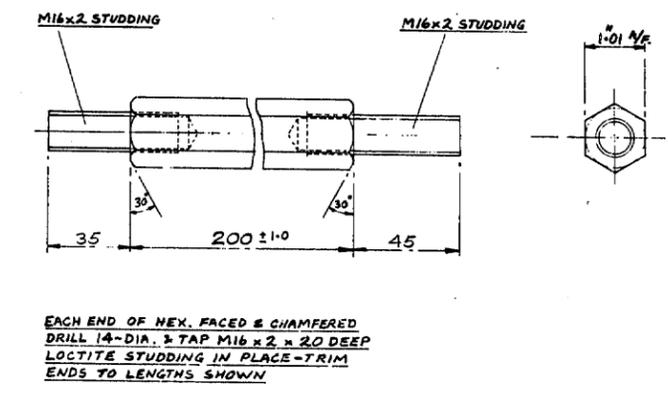
FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.11 Rev. A  
Date 30-11-1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL ASSEMBLED FROM BULLDOG CLIPS & U BOLT TCI 123 SB
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE CLAMP			
		WEIGHT 1.1kg	SCALE 1:1
		No. OFF PER SET 1	UNIT No. TCI 123 11
			ISSUE A



FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.12 Rev. A  
Date 30-11-1982 by JZ

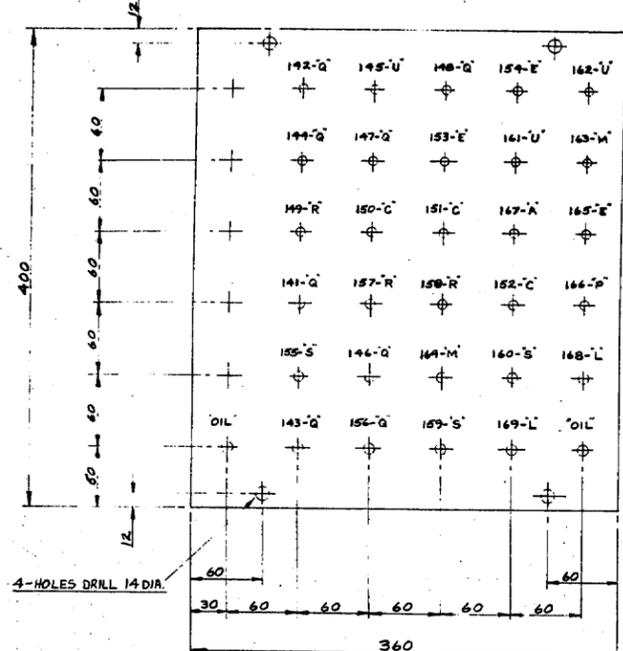
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL NYLON
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE BEARING			
		WEIGHT 0.297kg	SCALE 1:2
		No. OFF PER SET 1	UNIT No. TCI 123 12
			ISSUE A



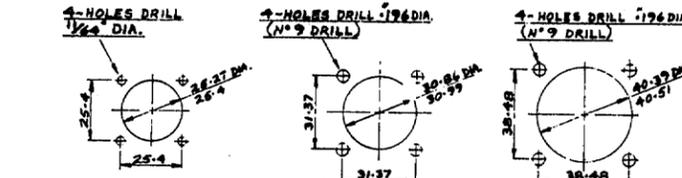
FREEMAN FOX & PARTNERS  
APPROVED  
No. TCI 123.13 Rev. A  
Date 30-11-1982 by JZ

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL M16 x 2 STUDDING
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE PILLAR			
		WEIGHT 1.0kg	SCALE 1:1
		No. OFF PER SET 4	UNIT No. TCI 123 13
			ISSUE A





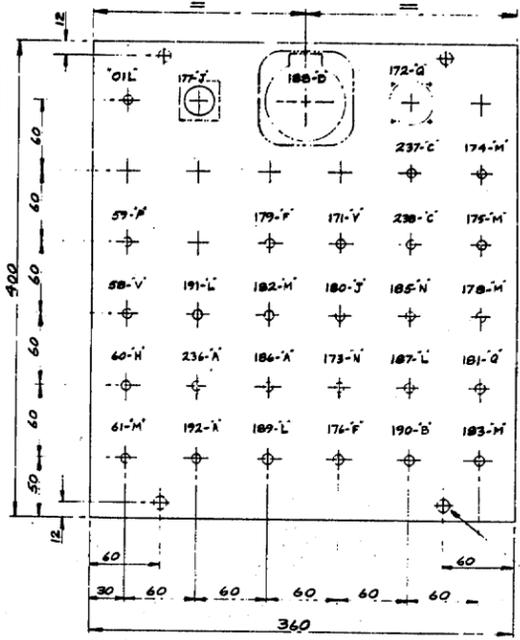
31- POSITIONS (5-SPARE) DRILLED TO SUIT SOCKET REF. SEE ENLARGED DETAILS



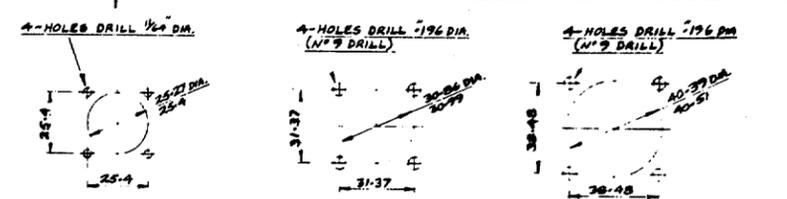
DRILLING DETAILS FOR SOCKETS REF: E A R S U  
 DRILLING DETAILS FOR SOCKETS REF: L C  
 DRILLING DETAILS FOR SOCKETS REF: M P



DRILLING DETAILS FOR BULKHEAD FITTING REF: OIL  
 DRILLING DETAILS FOR SOCKETS REF: Q  
 DRILLING DETAILS FOR SOCKETS REF: R S U  
 NOTE: POSITIONS ON PLATE ARE IDENTIFIED BY CONNECTOR NUMBER FOLLOWED BY SOCKET REF. LETTER (SEE TELESCOPE CABLE DRG. N° TC1000 OR SCHEDULE N° 22 SHTS 1 TO 5) OR BY SERVICE PASSING THROUGH THAT POSITION eg OIL  
 R S & U SOCKET REFS. TO BE FITTED WITH INSULATING PLATE SEE DETAILS TC1123 24 FOR R S AND TC1123 25 FOR U USE F14 F15 & F16 FOR ATTACHMENT



29- POSITIONS (4-SPARE + 2-POSSIBLE SPARES) DRILLED TO SUIT SOCKET REF. SEE ENLARGED DETAILS.



DRILLING DETAILS FOR SOCKETS REF: G H J A  
 DRILLING DETAILS FOR SOCKETS REF: N F L B C  
 DRILLING DETAILS FOR SOCKETS REF: V M P



DRILLING DETAILS FOR BULKHEAD FITTING REF: OIL  
 DRILLING DETAILS FOR SOCKETS REF: Q  
 DRILLING DETAILS FOR SOCKET REF: D  
 NOTE: POSITIONS ON PLATE ARE IDENTIFIED BY CONNECTOR NUMBER FOLLOWED BY SOCKET REF. LETTER (SEE TELESCOPE CABLE DRG. N° TC1000 OR SCHEDULE N° 22 SHTS 1 TO 5) OR BY SERVICE PASSING THROUGH THAT POSITION eg OIL

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TC1123 18 Rev. B  
 Date 3-12-1982 by JZ

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TC1123 18 Rev. C  
 Date 22-11-1983 by JZ

PLATE 180° FROM AS DRAWN

ORIENTATION KEY

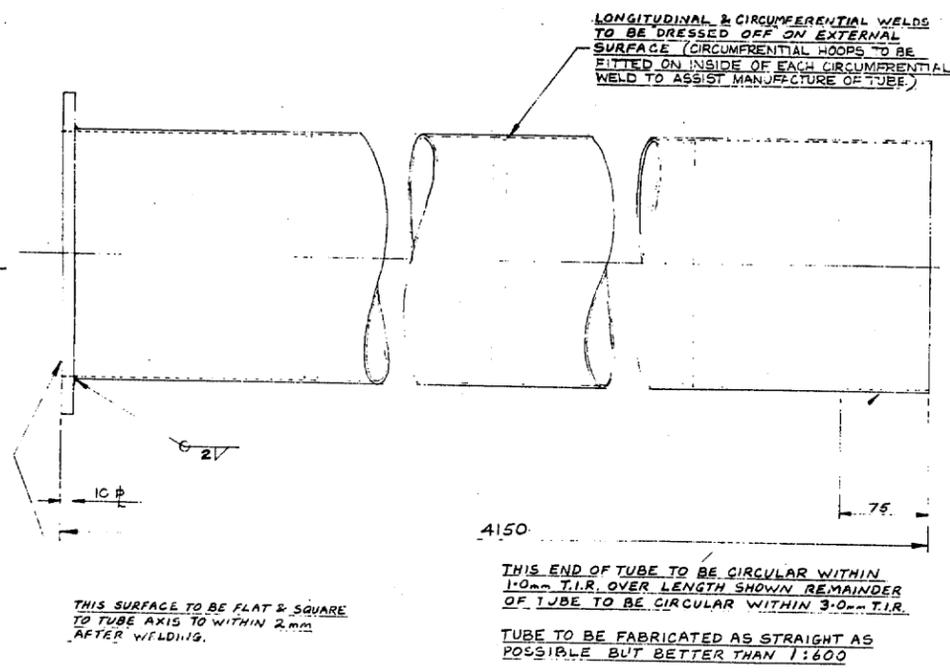
DATE OF MOD MODIFIED BY	DATE OF MOD 11-83 MODIFIED BY JZ	FIRST MADE ORD No. 118764	MATERIAL 3mm THK MILD STEEL PLATE
		FIRST ISSUE DATE	FINISH PAINT BLACK WHITE
		COST ACCOUNT 123	PATT No.
TITLE CONNECTOR PLATE			
WEIGHT 2.82kg		SCALE 1:1	UNIT No. TC1123 18
No. OFF PER SET 1			ISSUE C

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TC1123 19 Rev. B  
 Date 3-12-1982 by JZ

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TC1123 19 Rev. A  
 Date 30-11-1982 by JZ

ORIENTATION KEY

DATE OF MOD MODIFIED BY	DATE OF MOD 12-11-83 MODIFIED BY JZ	FIRST MADE ORD No. 118764	MATERIAL 3mm THK MILD STEEL PLATE
		FIRST ISSUE DATE	FINISH PAINT BLACK WHITE
		COST ACCOUNT 123	PATT No.
TITLE CONNECTOR PLATE			
WEIGHT 2.9kg		SCALE 1:1	UNIT No. TC1123 19
No. OFF PER SET 1			ISSUE D

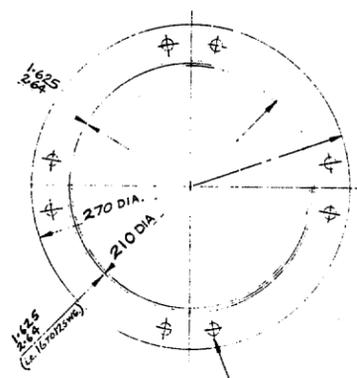


LONGITUDINAL & CIRCUMFERENTIAL WELDS TO BE DRESSED OFF ON EXTERNAL SURFACE (CIRCUMFERENTIAL HOOPS TO BE FITTED ON INSIDE OF EACH CIRCUMFERENTIAL WELD TO ASSIST MANUFACTURE OF TUBE)

THIS END OF TUBE TO BE CIRCULAR WITHIN 1.0mm T.I.R. OVER LENGTH SHOWN. REMAINDER OF TUBE TO BE CIRCULAR WITHIN 3.0mm T.I.R.

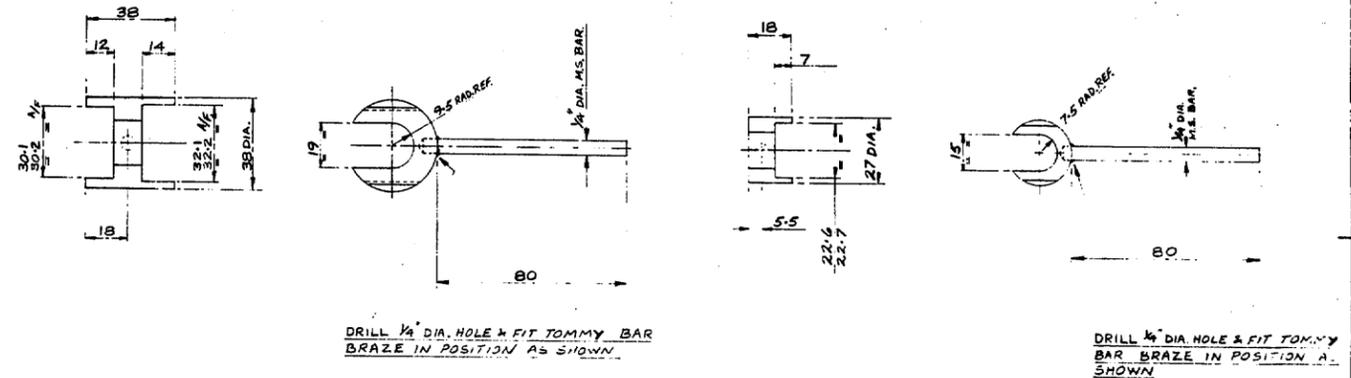
TUBE TO BE FABRICATED AS STRAIGHT AS POSSIBLE BUT BETTER THAN 1:600

THIS SURFACE TO BE FLAT & SQUARE TO TUBE AXIS TO WITHIN 2mm AFTER WELDING.



8-HOLES ON 245 P.C.D. POSITION ON ASSY. FROM TC1123 03. DRILL 11 DIA.

PAINT INTERNAL SURFACE DURABLE MATT BLACK EXTERNAL SURFACES GLOSS WHITE



DRILL 1/4 DIA. HOLE & FIT TOMMY BAR BRAZE IN POSITION AS SHOWN

DRILL 1/4 DIA. HOLE & FIT TOMMY BAR BRAZE IN POSITION AS SHOWN

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TC1123 22 Rev. A  
 Date 30-11-1982 by JZ

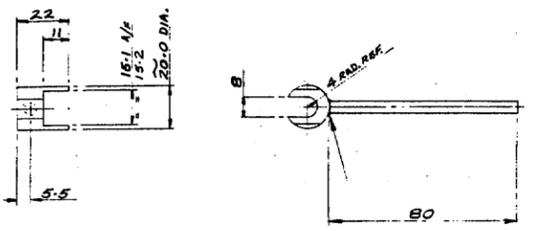
**AS BUILT DRAWINGS**  
 This drawing shows all revisions to this work

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL CAP SPEC II. A 1/4" M.S. BAR
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE GLAND KEY			
WEIGHT 43.27kg		SCALE 1:1	UNIT No. TC1123 22
No. OFF PER SET 2			ISSUE A

DATE OF MOD MODIFIED BY	DATE OF MOD 13-1-83 MODIFIED BY JZ	FIRST MADE ORD No. 118764	MATERIAL MILD STEEL
		FIRST ISSUE DATE	FINISH SEE NOTE
		COST ACCOUNT 123	PATT No.
TITLE COUDE BEAM CONDUIT			
WEIGHT 43.27kg		SCALE 1:1	UNIT No. TC1123 20
No. OFF PER SET 1			ISSUE B

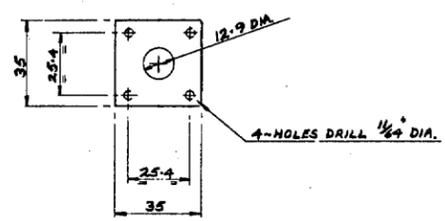
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL CAP SPEC II. A 1/4" M.S. BAR
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 123	PATT No.
TITLE GLAND KEY			
WEIGHT 43.27kg		SCALE 1:1	UNIT No. TC1123 21
No. OFF PER SET 2			ISSUE A

**4.2 METRE WILLIAM HERSCHEL TELESCOPE**  
 OBSERVATORY DEL. HOUSE TEL. US. NEWCASTLE  
 ROYAL GREENWICH OBSERVATORY

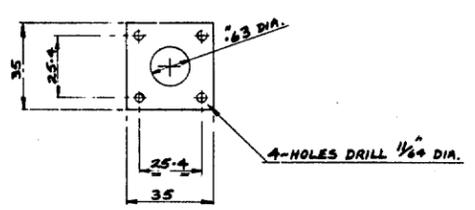


DRILL 3/4 DIA. HOLE & FIT TOMMY BAR BRAZE IN POSITION AS SHOWN

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.23 Rev. B  
 Date 23-3-1982 by JZ



FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.24 Rev. A  
 Date 30-11-1982 by JZ

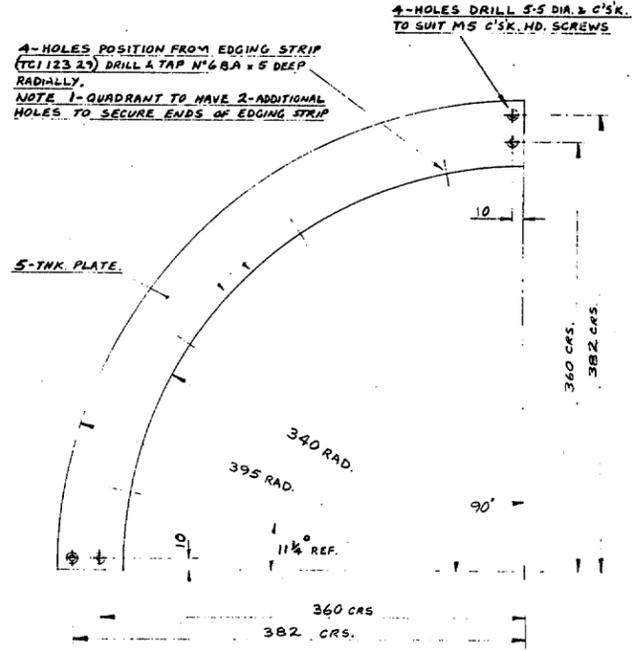


FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.25 Rev. A  
 Date 30-11-1982 by JZ

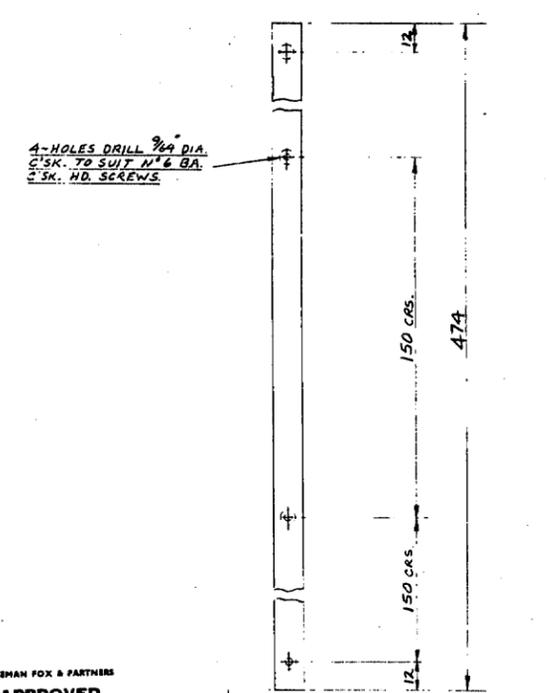


FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.26 Rev. A  
 Date 30-11-1982 by JZ

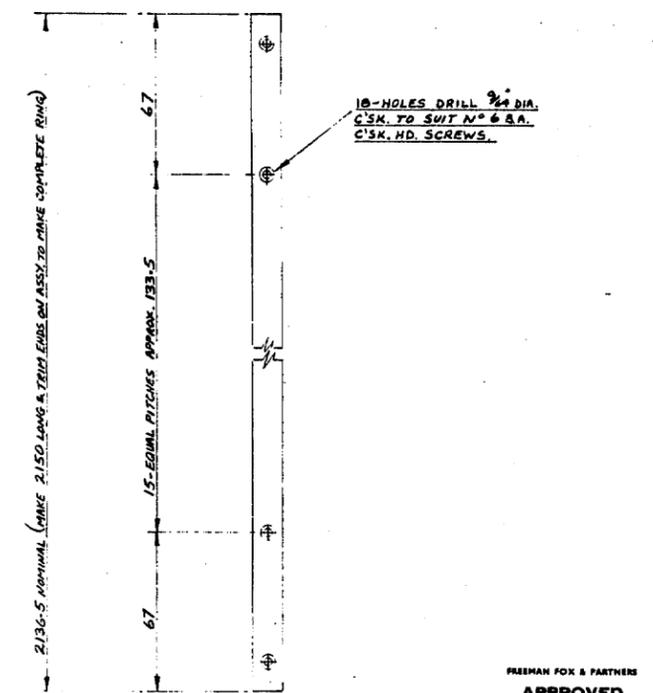
DATE OF MOD. MODIFIED BY	DATE OF MOD. MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL CAP 8 PRC. 11 20	DATE OF MOD. MODIFIED BY	DATE OF MOD. MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 3mm THK TUF/OL	DATE OF MOD. MODIFIED BY	DATE OF MOD. MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL BS 970 EN8				
		FIRST ISSUE DATE	FINISH PHEN. P.S. BAK.			FIRST ISSUE DATE	FINISH NATURAL			FIRST ISSUE DATE	FINISH PHEN. P.S. BAK.				
		COST ACCOUNT 123	PATT No.			COST ACCOUNT 123	PATT No.			COST ACCOUNT 123	PATT No.				
TITLE GLAND KEY				TITLE INSULATOR				TITLE INSULATOR				TITLE ROLLER			
WEIGHT 1.246kg SCALE 1:1 UNIT No. TCI.123.23 ISSUE B				WEIGHT 0.003kg SCALE 1:1 UNIT No. TCI.123.24 ISSUE A				WEIGHT 0.003kg SCALE 1:1 UNIT No. TCI.123.25 ISSUE A				WEIGHT 0.44kg SCALE 1:1 UNIT No. TCI.123.26 ISSUE A			



FREEMAN FOX & PARTNERS  
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 No. TCI.123.27 Rev. A  
 Date 30-11-1982 by JZ



FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.28 Rev. A  
 Date 30-11-1982 by JZ



FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.29 Rev. A  
 Date 30-11-1982 by JZ

**AS BUILT DRAWINGS**  
 This drawing shows all revisions to the work

FREEMAN FOX & PARTNERS  
**APPROVED**  
 No. TCI.123.30 Rev. A  
 Date 12-5-1983 by JZ

DATE OF MOD. MODIFIED BY	DATE OF MOD. MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL BS 4360-A3A	DATE OF MOD. MODIFIED BY	DATE OF MOD. MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 3/4" x 1/2" NYLON	DATE OF MOD. MODIFIED BY	DATE OF MOD. MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL 3/4" x 1/2" NYLON				
		FIRST ISSUE DATE	FINISH PHEN. P.S. BAK.			FIRST ISSUE DATE	FINISH NATURAL			FIRST ISSUE DATE	FINISH NATURAL				
		COST ACCOUNT 123	PATT No.			COST ACCOUNT 123	PATT No.			COST ACCOUNT 123	PATT No.				
TITLE DEFLECTOR PLATE				TITLE RUBBING STRIP				TITLE RUBBING STRIP				TITLE SPACER			
WEIGHT 1.246kg SCALE 1:1 UNIT No. TCI.123.27 ISSUE A				WEIGHT 0.033kg SCALE 1:1 UNIT No. TCI.123.28 ISSUE A				WEIGHT 0.167kg SCALE 1:1 UNIT No. TCI.123.29 ISSUE A				WEIGHT 0.44kg SCALE 1:1 UNIT No. TCI.123.30 ISSUE A			

**4.2 METRE WILLIAM HERSCHEL TELESCOPE**  
**OBSERVATORIO DEL MONTE DE LOS MALCACHOS**  
**LA PALMA**  
**ROYAL GREENWICH OBSERVATORY**