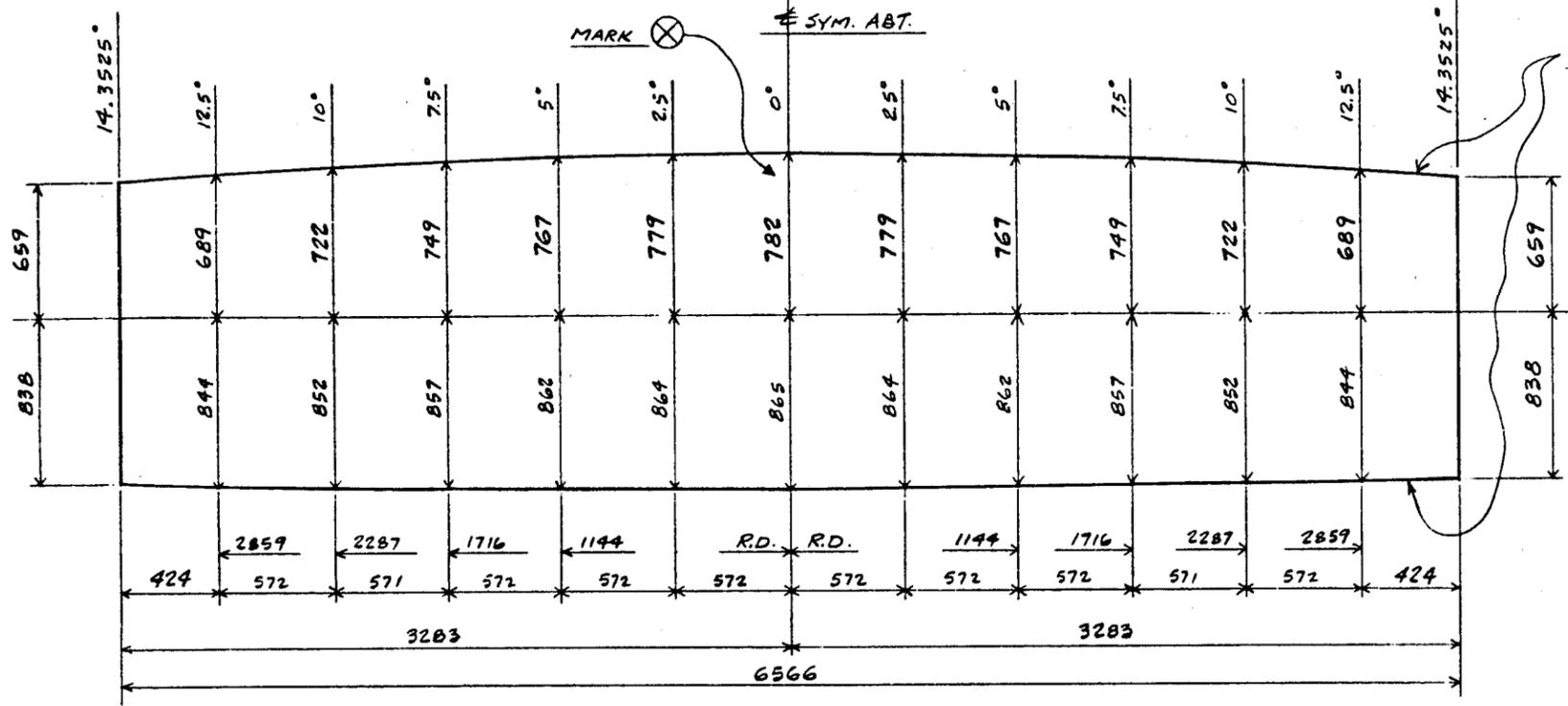


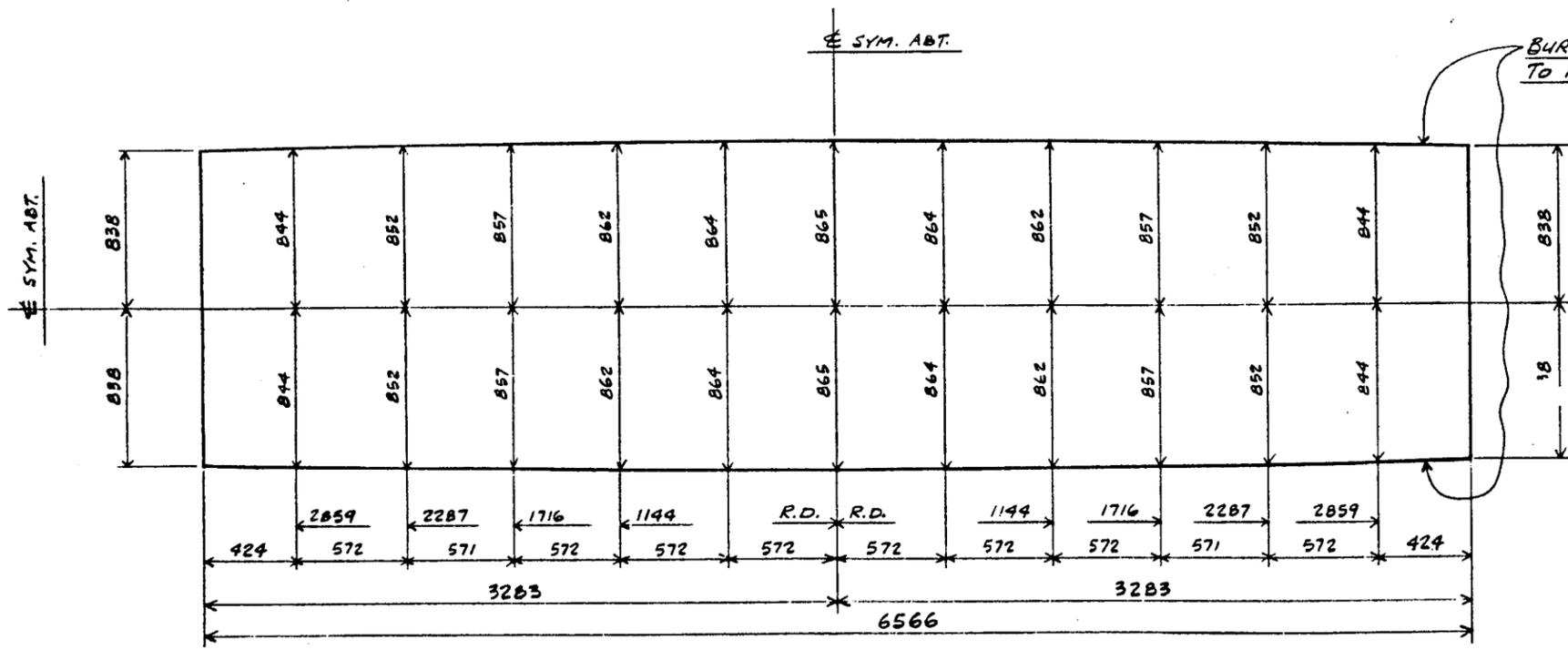
MATERIAL BILL
BRITAIN STEEL LTD.

CONTRACT 1420

LINE NO.	MARK	QTY.	SHAPE	SIZE	LENGTH	REMARKS	MATL. TYPE	W. G.	WEIGHT
1									
2						ONE REQ'D. ~ MK. A1B			
3									
4	1	1	R	1647 x 6.35	6566	CUT TO PROFILE 44W 2 1/8			
5						(4')			
6									
7									
8									
9						2-REQ'D. ~ MK. B1B			
10									
11	2	2	R	1730 x 6.35	6566	CUT TO PROFILE 44W 2 1/8			
12						(4')			
13									
14						9-REQ'D. ~ MK. 61B			
15									
16									
17	9	9	R	1730 x 6.35	6566	CUT TO PROFILE 44W 2 1/8			
18						(4')			
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									



ONE REQ'D. ~ BACK SHELL R ~ MK. A1B



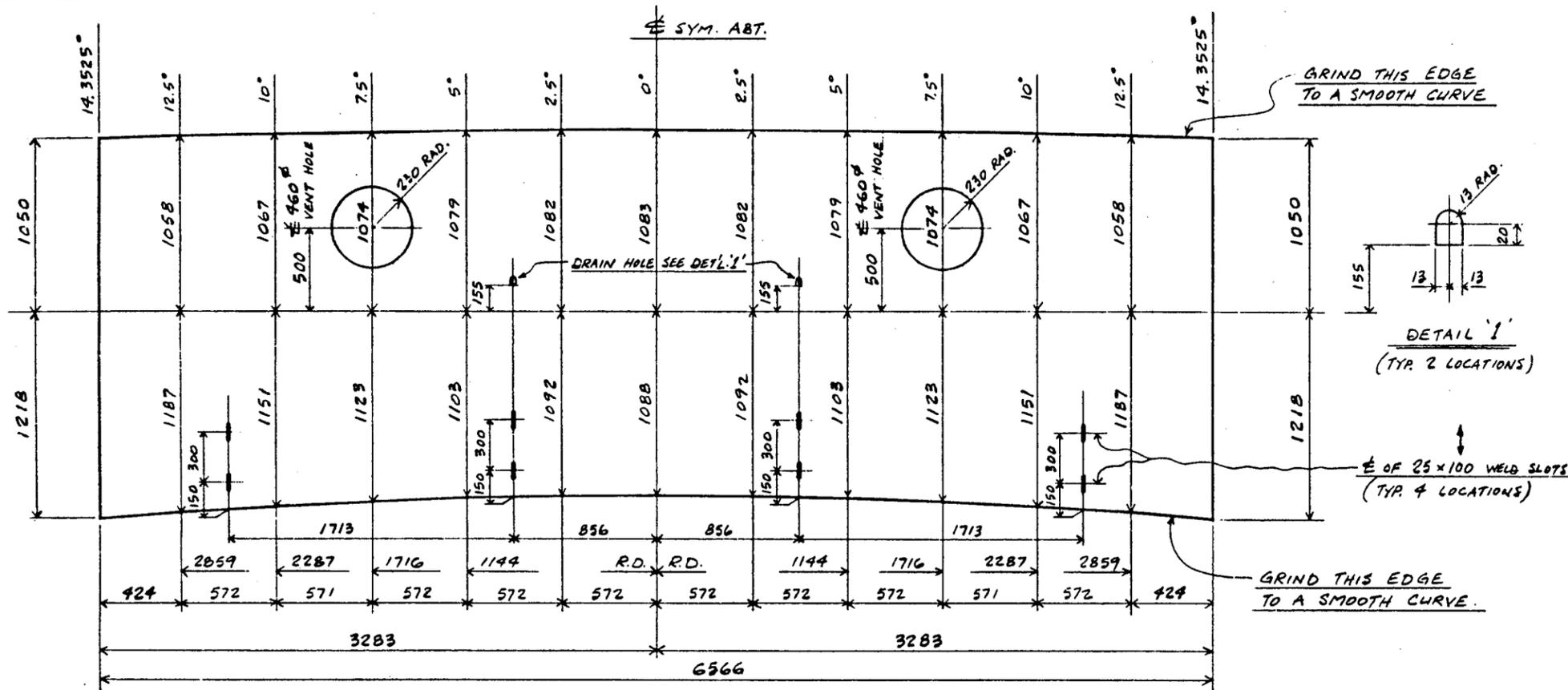
2-REQ'D. ~ BACK SHELL R ~ MK. B1B } ALIKE EXCEPT FOR MARK
9-REQ'D. ~ BACK SHELL R ~ MK. 61B

- NOTE:**
- 1) FOR FINAL ASSEMBLY SEE DWG. 186.
 - 2) R MK. A1B & B1B SHIPPED TO DOME SEE DWG. E4
 - 3) R MK. 61B SHIPPED TO JIG PANEL SEE DWG. 24.

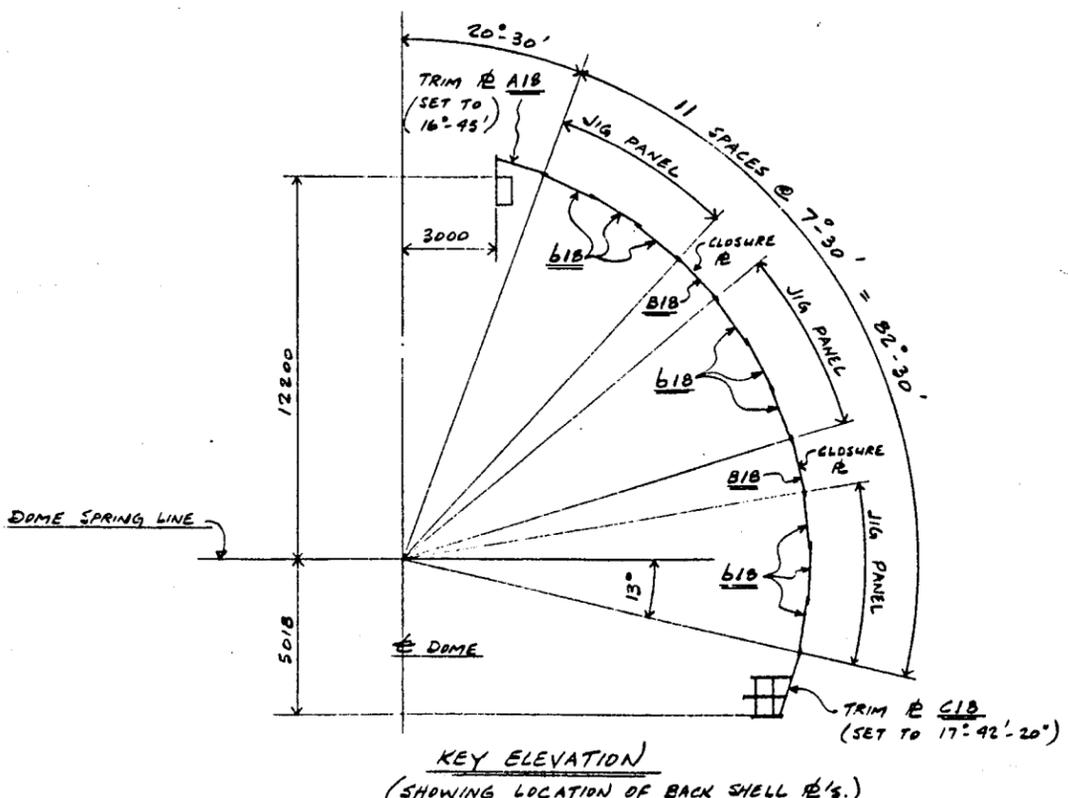
	MATERIAL	G40 21 (44W)	DETAILS	
	SURF PREP & PAINT	SEE MEMO	BACK SHELL R'S	
	OPEN HOLES		FOR 4.2 M TELESCOPE DOME LA PALMA	
	DRAWN	G.V.A.	DATE	July/83
CHECKED		DATE		DRAWING NO.
				1420-18a
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.				



SHOP DEPARTMENT



ONE REQ'D. ~ BACK SHELL R ~ MK. C18



KEY ELEVATION (SHOWING LOCATION OF BACK SHELL R'S.)

MATERIAL BILL

CONTRACT 1420

MARK	QTY.	SHAPE	SIZE	LENGTH	REMARKS	MATL. TYPE	WEIGHT
1							
2							
3							
4	1	R	2301 x 6.36	6566	CUT TO PROFILE	44W 2.19	
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							

GENERAL NOTES:

1) R C18 SHIPPED TO DOME SEE DWG. E4.

BRITAIN logo and drawing information:

MATERIAL: G40.21 (44W) SURF. PREP & PAINT: SEE MEMO OPEN HOLES: []

FOR 42" TELESCOPE DOME LA PALMA

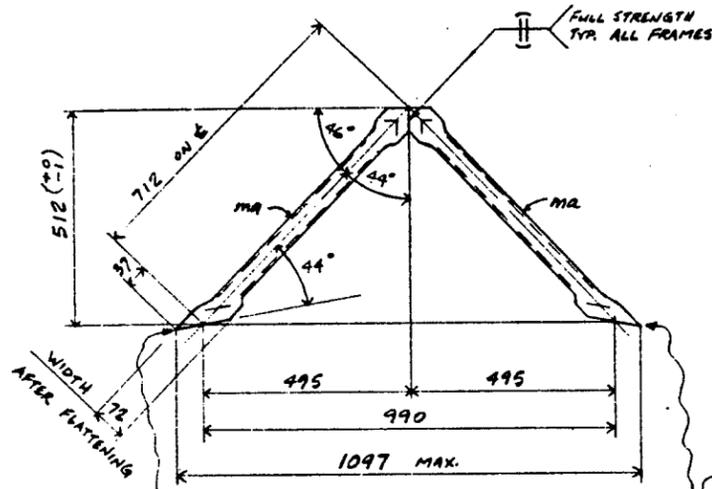
BRITAIN STEEL LTD. 401 BALTER AVENUE, NEW WESTMINSTER, B.C.



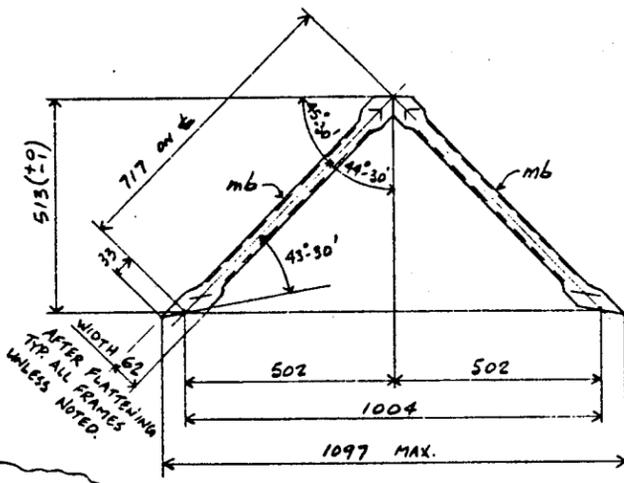
MATERIAL BILL
BRITAIN STEEL LTD.

CONTRACT 1420

LINE NO.	MARK	QTY.	SHAPE	SIZE	LENGTH	REMARKS	MATL. TYPE	WEIGHT
1								
2	10B 'A'							
3	MA	216	PIPE STD.	38" (1 1/2")	749	FLATTEN & REV. CUT BOTH ENDS	SOW	2 10
4								
5	396 'B'							
6	mb	792	PIPE STD.	32" (1 1/4")	750			2 11
7								
8								
9								
10	36 'C'							
11	mc	36	PIPE STD.	51" (2")	831			2 19
12	MA	36						2 10
13	MV	36	PIPE STD.	38" (1 1/2")	450	ABT. FLATTEN & REV. O.C.I.E. / G.S.I.E.		2 10
14								
15	4 'D'							
16	md	4	PIPE STD.	32" (1 1/4")	904	FLATTEN & REV.		2 11
17	mf	4			877	CUT BOTH ENDS		2 11
18								
19								
20	4 'E'							
21	mq	4	PIPE STD.	32" (1 1/4")	874			2 11
22	mh	4			846			2 11
23								
24								
25	4 'G'							
26	mg	4						2 11
27	mh	4						2 11
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								

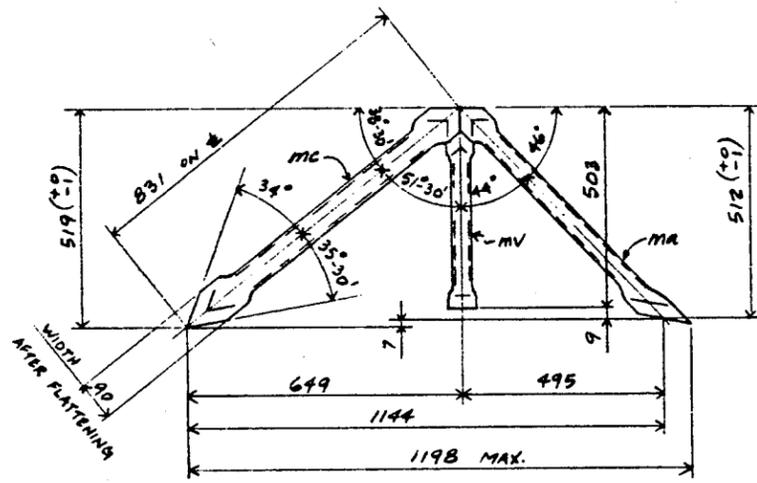


10B-REQ'D ~ RIB FRAMES ~ MK. 'A'

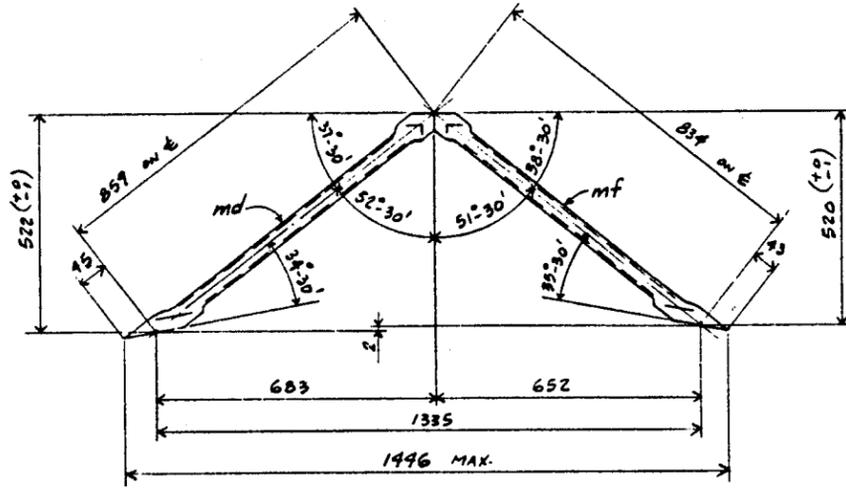


396-REQ'D ~ RIB FRAMES ~ MK. 'B'

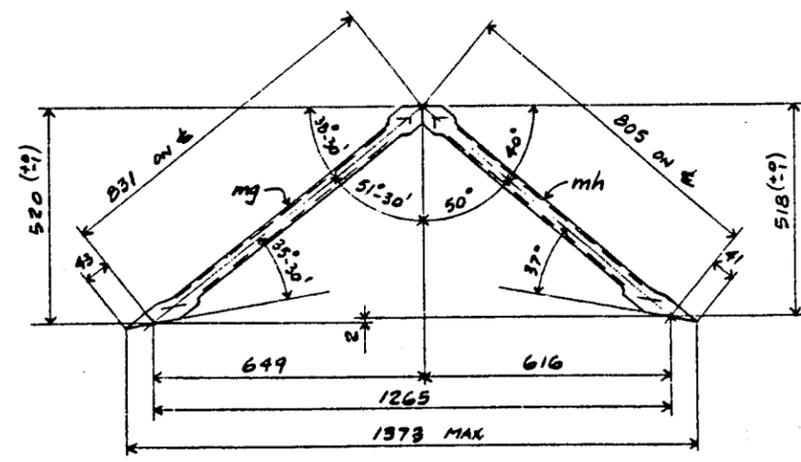
SHOP NOTE:-
CLIP OR GRIND ENDS IF LENGTH EXCEEDS MAX. TYR. ALL FRAMES.



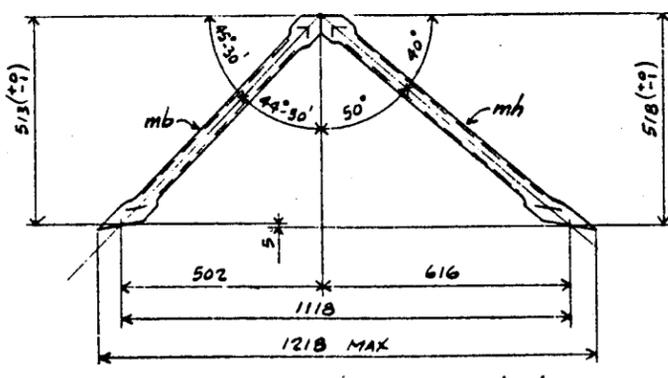
36-REQ'D ~ RIB FRAMES ~ MK. 'C'



4-REQ'D ~ RIB FRAME ~ MK. 'D'



4-REQ'D ~ RIB FRAME ~ MK. 'F'

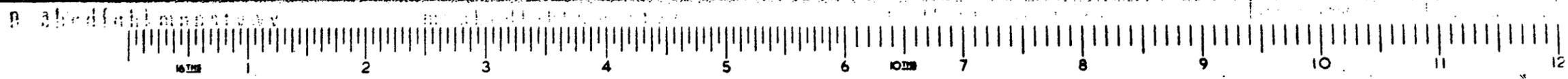


4-REQ'D ~ RIB FRAME ~ MK. 'G'

NOTE:-

- FOR SHOP ASSEMBLY SEE DWGS. 19c, 19d, 19f, 19g, 19h, 19k, 19m, 19n, 19p & 19s

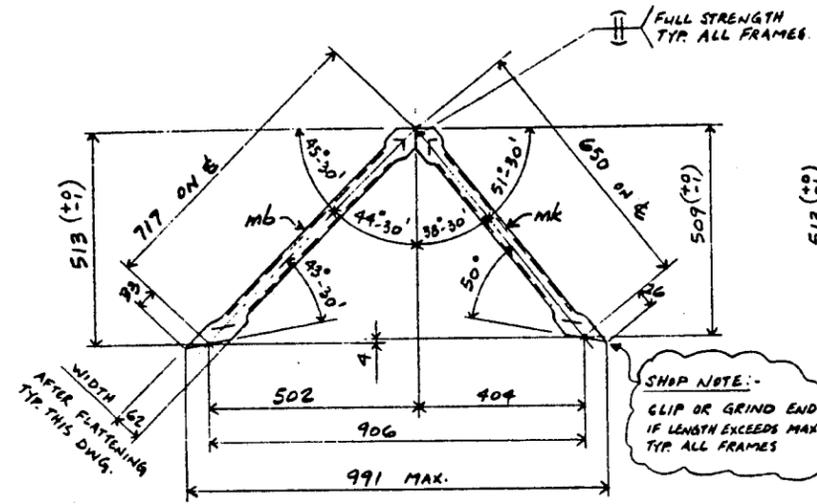
	MATERIAL	G40.21 (44W) W/	SOW	DETAILS	MAIN RIB WEB FRAMES
	SURF. PREP & PAINT	STD.	SEE MEMO	FOR	4.2" TELESCOPE DOME LA PALMA
	OPEN HOLES				
	PAINT ON FINAL ASSEMBLY				
DRAWN	DATE	CHECKED	DATE	DRAWING NO.	1420-19a
G.V.A. / ANA / BS				REV	
BRITAIN STEEL LTD. 401 GALTER AVENUE, NEW WESTMINSTER, B.C.					



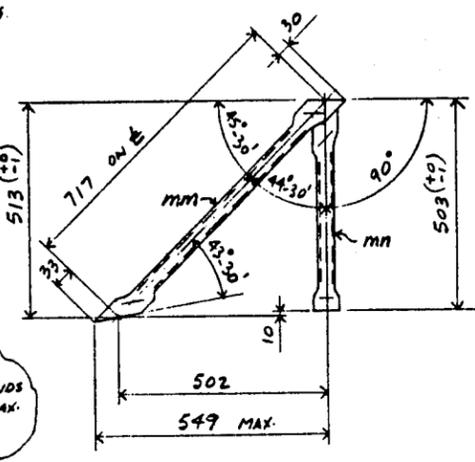
MATERIAL BILL
BRITAIN STEEL LTD.

CONTRACT 1420

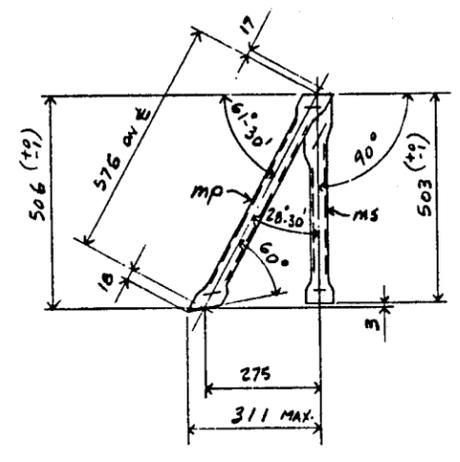
NO	MARK	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	W	W	WEIGHT
1										
2	4 H									
3	mb	4	PIPE STD	32" (14)	750	FLATTEN & REV. CUT	SOW			2 11
4	mk	4			676	BOTH ENDS				
5										
6										
7	4 K									
8	mm	4	PIPE STD	32" (14)	780					
9	mn	4			490	ALT. FLATTEN 2 E.				
10						R.G.I.E.				
11										
12	4 M'					FLATTEN & REV. CUT				
13	mp	4	PIPE STD	32" (14)	611	BOTH ENDS				
14	ms	4			500	REV. FLATTEN 2 E.				
15						R.G.I.E.				
16										
17	4 N'									
18	mh	4	PIPE STD	32" (14)	846	FLATTEN & REV. CUT				
19	mb	4				BOTH ENDS				
20										
21										
22	4 P'									
23	mt	4	PIPE STD	32" (14)	695					
24	mb	4								
25										
26										
27	36 S									
28	mb	36								
29										
30										
31	32 T19									
32	mb	32								
33										
34										
35	4 T19									
36	mb	4								
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
53										
54										
55										



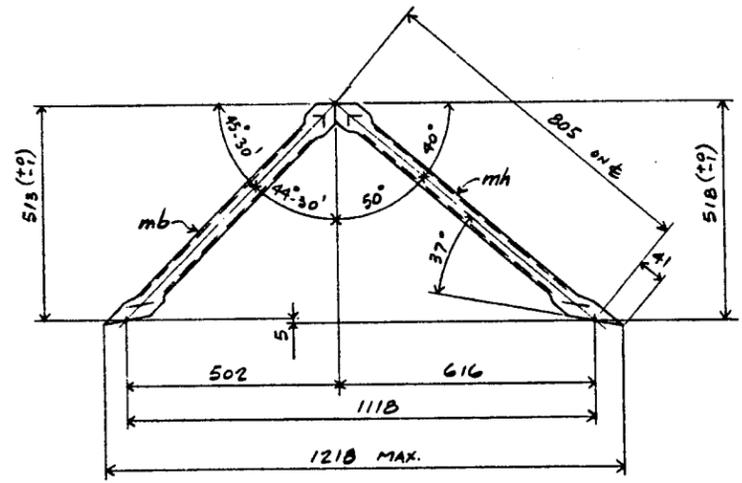
4-REQ'D. ~ RIB FRAME ~ MK. 'H'



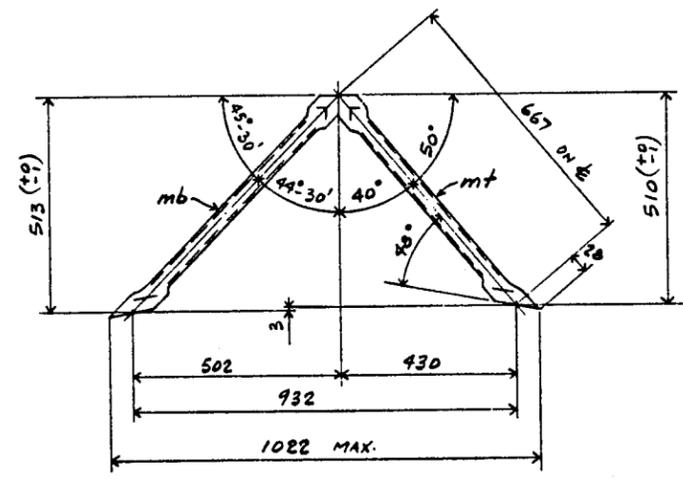
4-REQ'D. ~ RIB FRAME ~ MK. 'K'



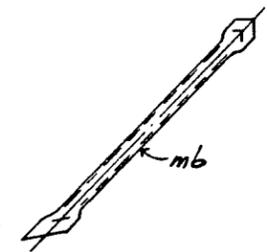
4-REQ'D. ~ RIB FRAME ~ MK. 'M'



4-REQ'D. ~ RIB FRAME ~ MK. 'N'



4-REQ'D. ~ RIB FRAME ~ MK. 'P'

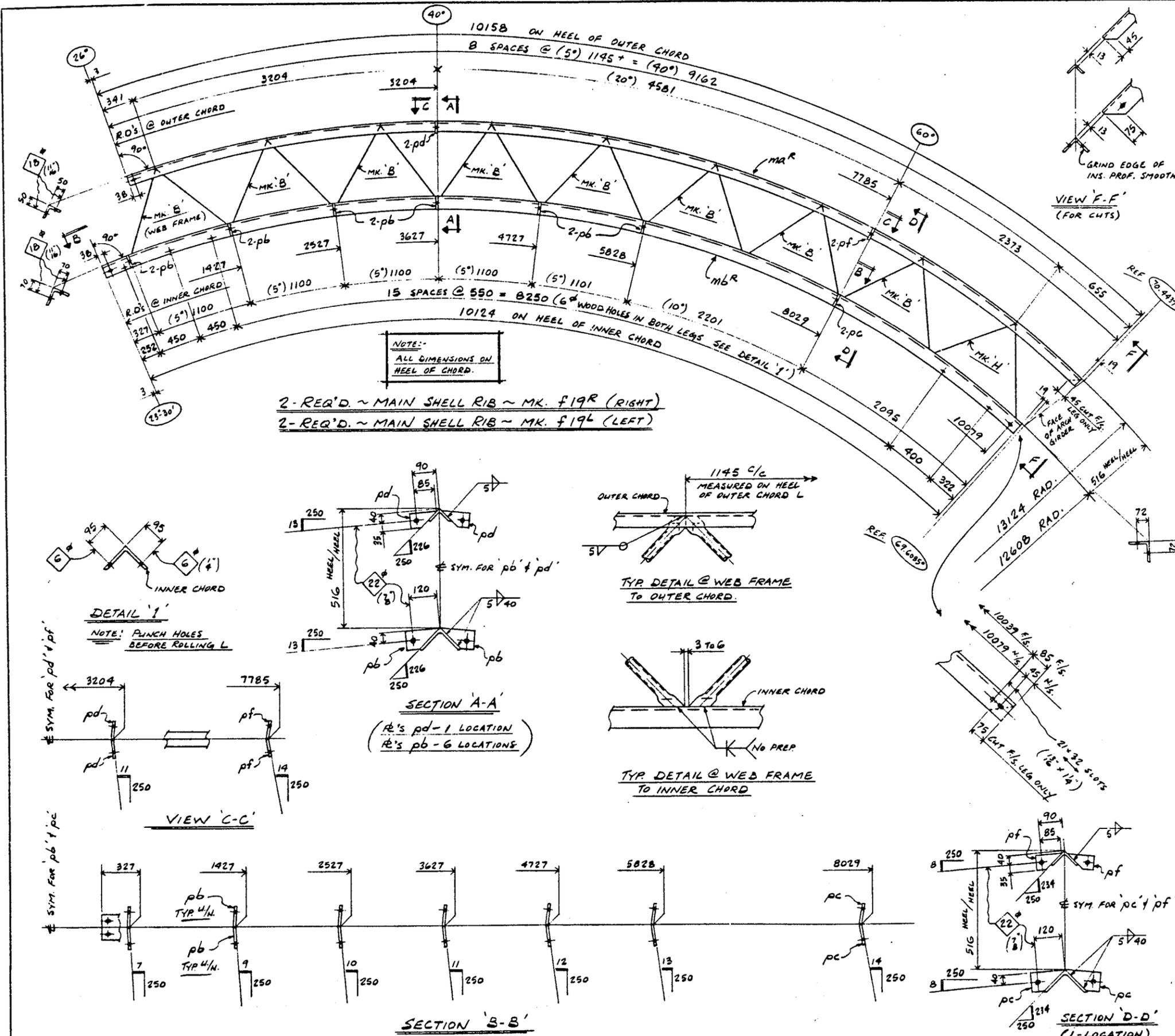


- 36-REQ'D. ~ RIB WEB MEMBER ~ MK. 'S' (SHOP WELDED)
 - 32-REQ'D. ~ RIB WEB MEMBER ~ MK. T19 (FIELD WELDED)
 - 4-REQ'D. ~ RIB WEB MEMBER ~ MK. T19 (FIELD WELDED)
- ALIKE EXCEPT FOR MARKS

- NOTES:**
- FOR SHOP ASSEMBLY OF RIB FRAMES MK. 'H', MK. 'K', MK. 'M', MK. 'N', MK. 'P' & MK. 'S' SEE DWG'S. 19c, 19h, 19k, 19n, 19p & 19s
 - FOR JIG ASSEMBLY AND FIELD WELDING OF RIB WEB MEMBER MK. T19 SEE DWG. 23a & 23b
 - FOR FIELD ASSEMBLY AND FIELD WELDING OF RIB WEB MEMBER MK. T19 SEE DWG. E3c

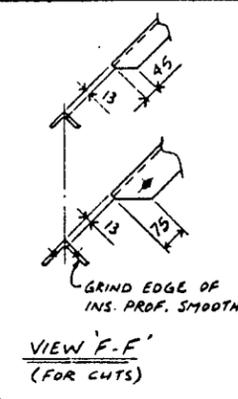
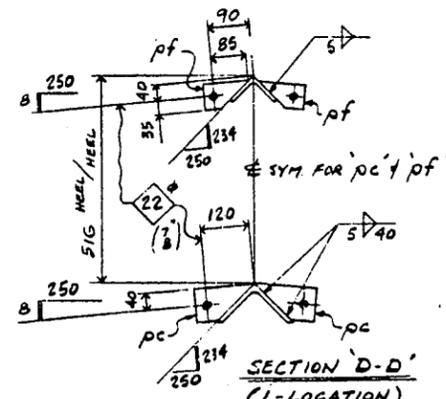
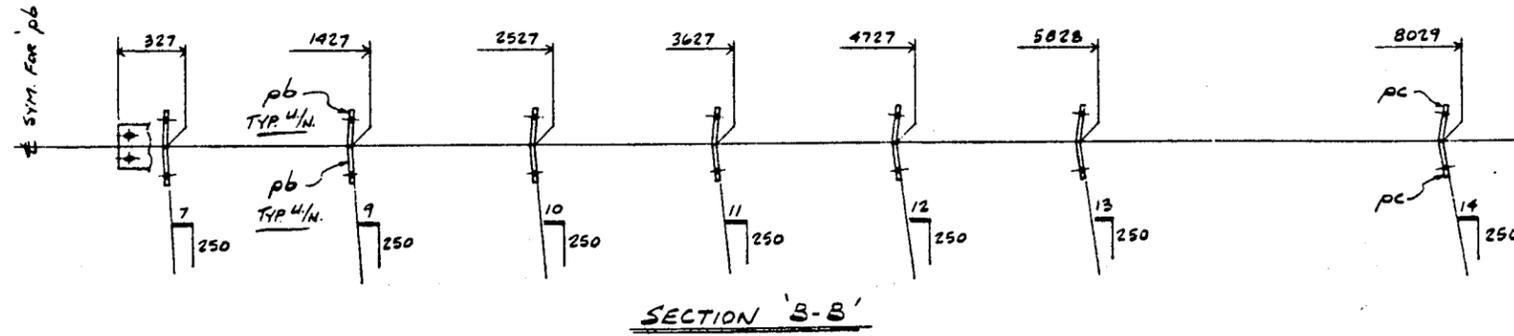
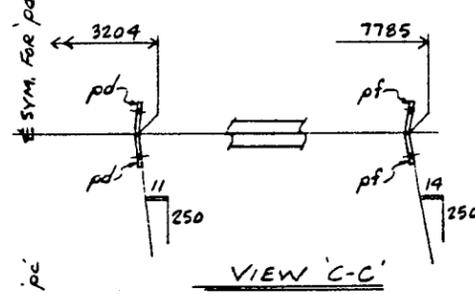
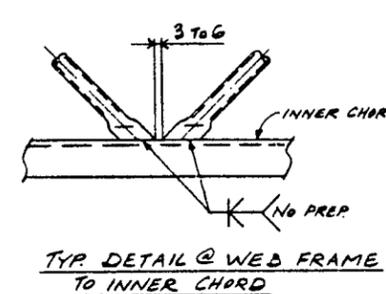
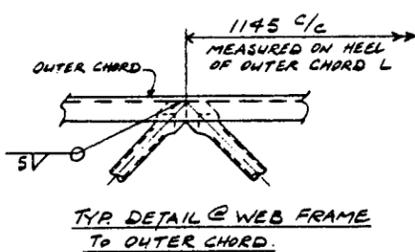
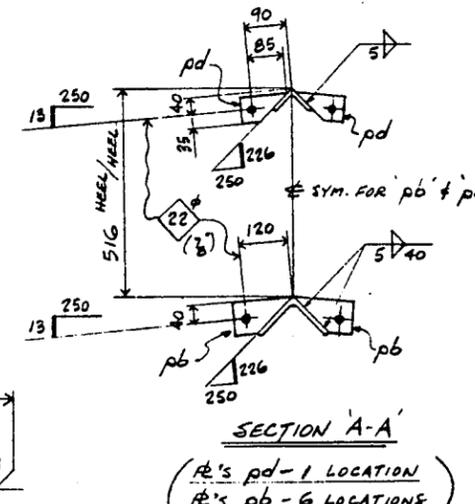
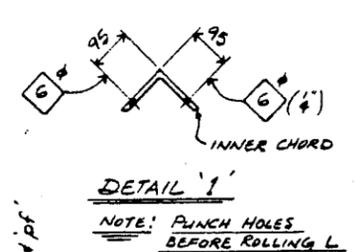
	MATERIAL	G40 21 (44W) W/1	SOW	NO	BY	DATE	REVISION
	SURF PREP & PAINT	SEE MEMO		DETAILS			
	OPEN HOLES	SEE MEMO		MAIN RIB WEB FRAMES			
	PAINT ON FINAL ASSEMBLY	SEE MEMO		FOR 4.2 TELESCOPE DOME - CA PALMA			
DRAWN	DATE	CHECKED	DATE	DRAWING NO.		REV.	
G. V. A.	Aug. / 03			1420-196			
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.							





2-REQ'D ~ MAIN SHELL RIB ~ MK. F19R (RIGHT)
 2-REQ'D ~ MAIN SHELL RIB ~ MK. F19L (LEFT)

NOTE:-
 ALL DIMENSIONS ON HEEL OF CHORD.



MATERIAL BILL						BRITAIN STEEL LTD.		CONTRACT 1920	
LINE	MARK	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	WGT	WEIGHT
1									
2									
3									
4									
5	maR	4	L	76 x 76 x 6	10158			44W	1.25
6									
7	mbR	4	L	127 x 127 x 8	10124				2.3
8									
9									
10	pb	48	B	80 x 6.35 (4)	150				
11	pc	8	B	80 x 6.35 (4)	150				
12	pd	8	B	70 x 6.35 (4)	115				
13	pf	8	B	70 x 6.35 (4)	115				
14									
15									
16									
17	B	32	PIPE	WEB FRAMES		SEE DWG. 19A			
18	H	4	L			196 FOR			
19						DETAILS			
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									

- NOTES:
- FOR FINAL ASSEMBLY SEE DWG. 195
 - FOR PLYWOOD CANT STRIPS SEE DWG. 194
 - FOR DETAILS OF WEB FRAMES SEE DWG. 19A & 19B
 - ALL RIBS SHIPPED TO JIG PANEL SEE DWG. 23A

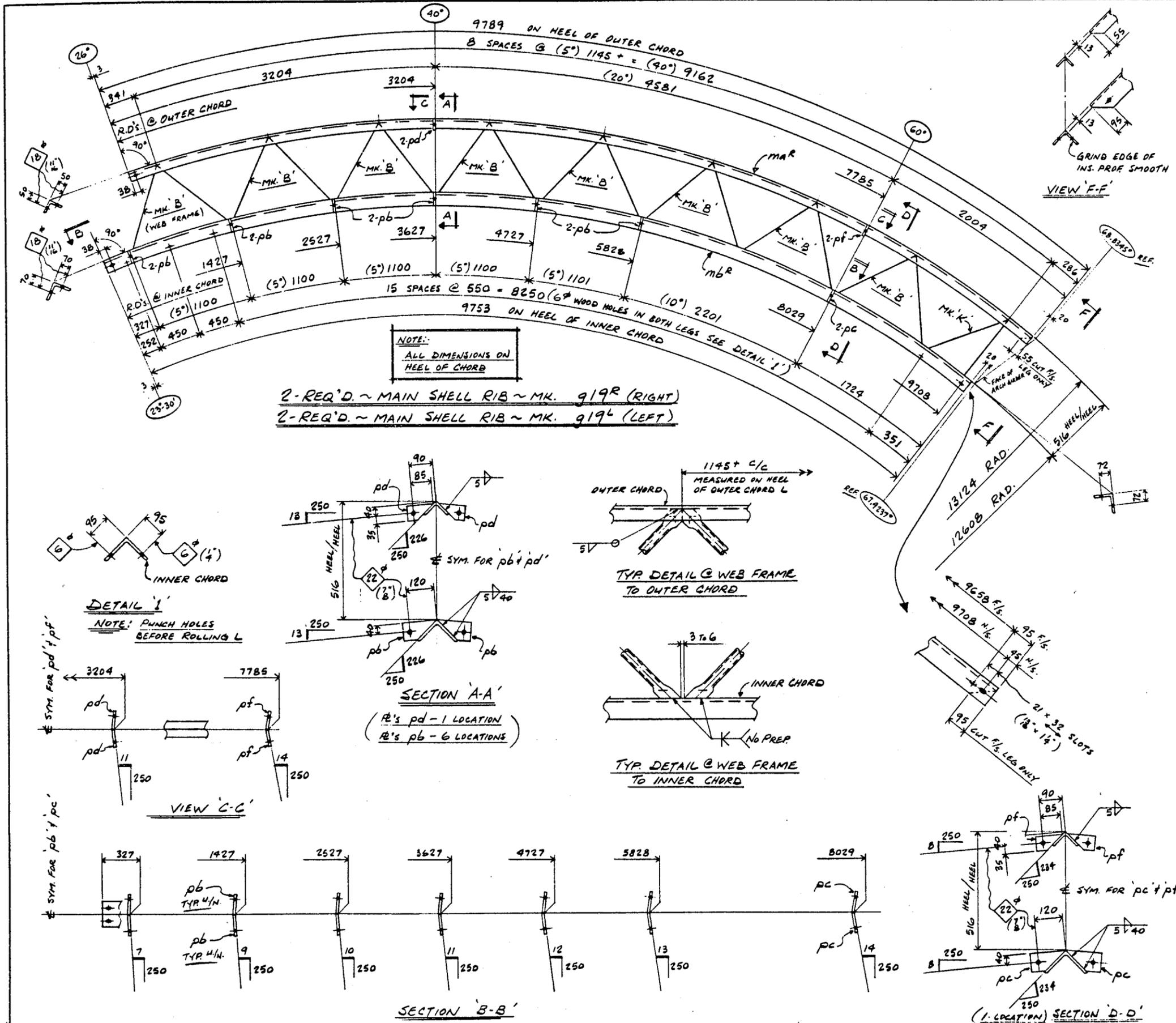
BRITAIN STEEL LTD. 401 GALTER AVENUE, NEW WESTMINSTER, B.C.

MATERIAL G40 21 (44W) w/n
 SURF PREP & PAINT SEE MEMO
 OPEN HOLES AS NOTED

DETAILS MAIN SHELL UPPER RIB SECTION R4 FOR 4.2" TELESCOPE DOME LA. PALMA

DRAWN G.V.A. DATE Aug '63 CHECKED DATE DRAWING NO 1420-19h REV





2-REQ'D. ~ MAIN SHELL RIB ~ MK. 919R (RIGHT)
 2-REQ'D. ~ MAIN SHELL RIB ~ MK. 919L (LEFT)

NOTE:
 ALL DIMENSIONS ON
 HEEL OF CHORD

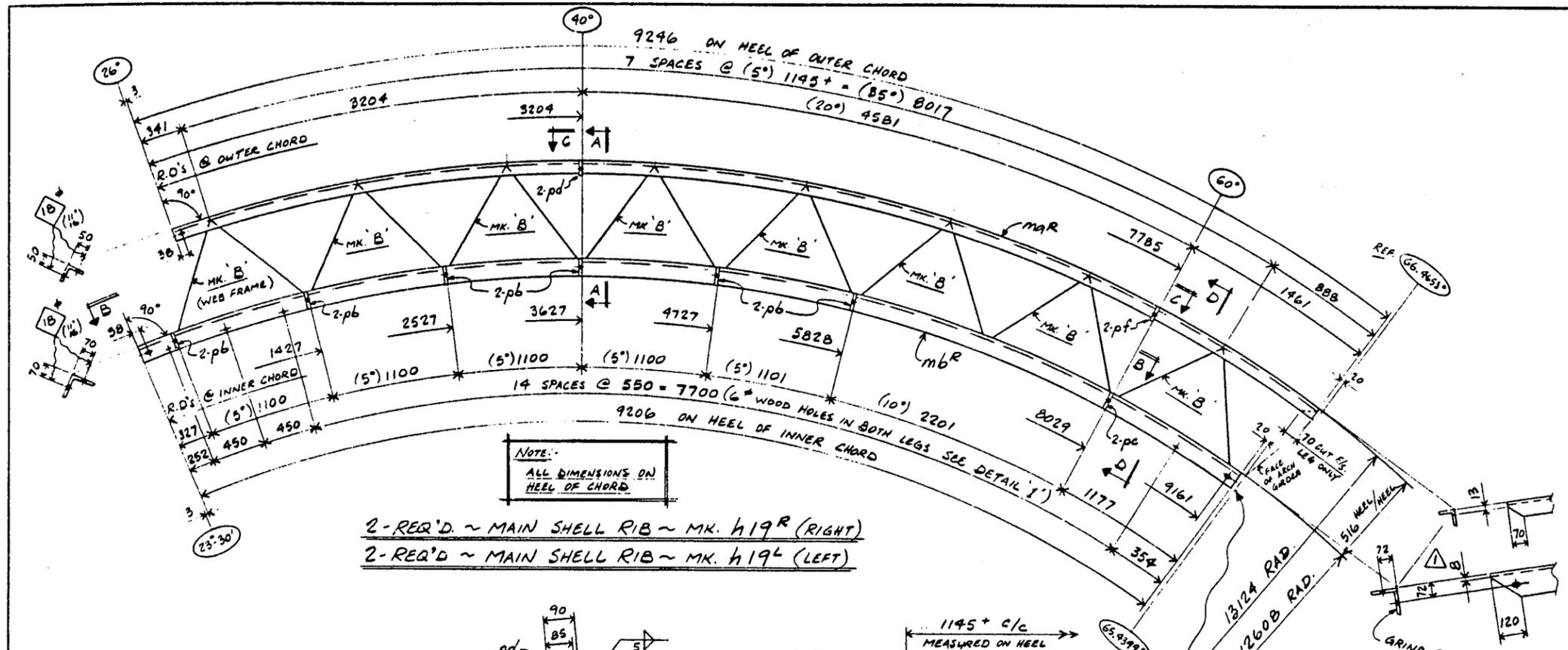
MATERIAL BILL		BRITAIN STEEL LTD.		CONTRACT 1920				
NO	MAR	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	WGT
1								
2								
3								
4								
5	MAR	9	L	76x76x6	9789			44W 126
6				(3x3x4)				
7	mBR	9	L	127x127x8	9753			24
8				(5x5x6)				
9								
10	pb	48	R	80x6.35(4)	150			
11	pc	8	R	80x6.35(4)	150			
12	pd	8	R	70x6.35(4)	115			
13	pf	8	R	70x6.35(4)	115			
14								
15								
16								
17	B	32	PIPE	WEB FRAMES		SEE DWG. 19A		
18	K	4	L	L		+ 196 FOR		
19						DETAILS		
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								

- NOTES:
- 1) FOR FINAL ASSEMBLY SEE DWG. 195
 - 2) FOR PLYWOOD CANT STRIPS SEE DWG. 194
 - 3) FOR DETAILS OF WEB FRAMES SEE DWG. 19A + 196
 - 4) ALL RIBS SHIPPED TO JIG PANEL SEE DWG. 236

	MATERIAL	G40 21 (44W) UN	NO	BY	DATE	REVISION		
	SURF PREP	PAINT	SEE MEMO	DETAILS MAIN SHELL UPPER RIB SECTION R5				
	OPEN HOLES	AS NOTED	FOR 4.2M TELESCOPE DOME LA FAUTA					
	DRAWN	G.V.A.	DATE	AUG/83	CHECKED	DATE	DRAWING NO	1420-19K
BRITAIN STEEL LTD								

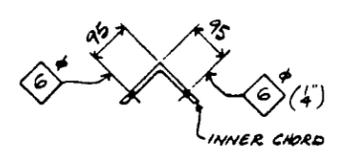


LINE NO.	MARK	QTY.	SHAPE	SIZE	LENGTH	REMARKS	MAT. TYPE	WEIGHT
1								
2								
3								
4								
5	MBR	4	L	76x76x6	9246		44W	1.27
6								
7	MBR	4	L	127x127x8	9204			2.5
8								
9								
10	pb	48	PL	80x6.35(4)	150			
11	pc	8	PL	80x6.35(4)	150			
12	pd	8	PL	70x6.35(4)	115			
13	pf	8	PL	70x6.35(4)	115			
14								
15								
16	B	32	PIPE	WEB FRAMES		SEE DWG. 19a		
17						FOR DETAILS		
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								

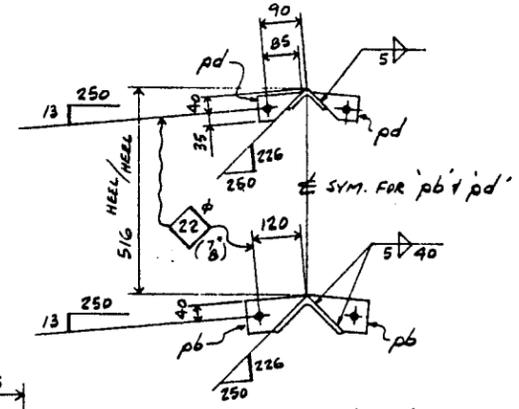


2-REQ'D ~ MAIN SHELL RIB ~ MK. H19R (RIGHT)
2-REQ'D ~ MAIN SHELL RIB ~ MK. H19L (LEFT)

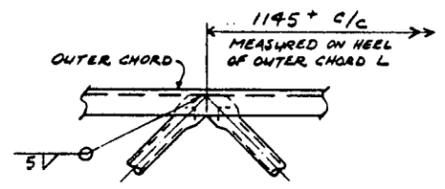
NOTE:
ALL DIMENSIONS ON
HEEL OF CHORD



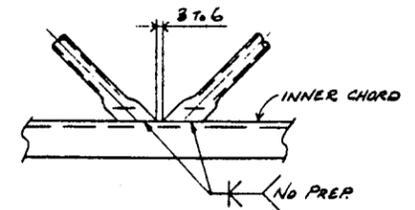
NOTE: PUNCH HOLES
BEFORE ROLLING L



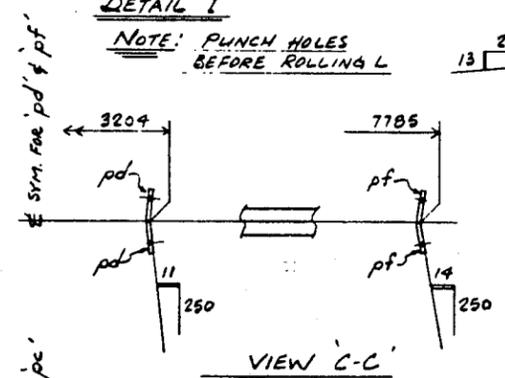
SECTION A-A
(B's pd - 1 LOCATION)
(B's pb - 6 LOCATIONS)



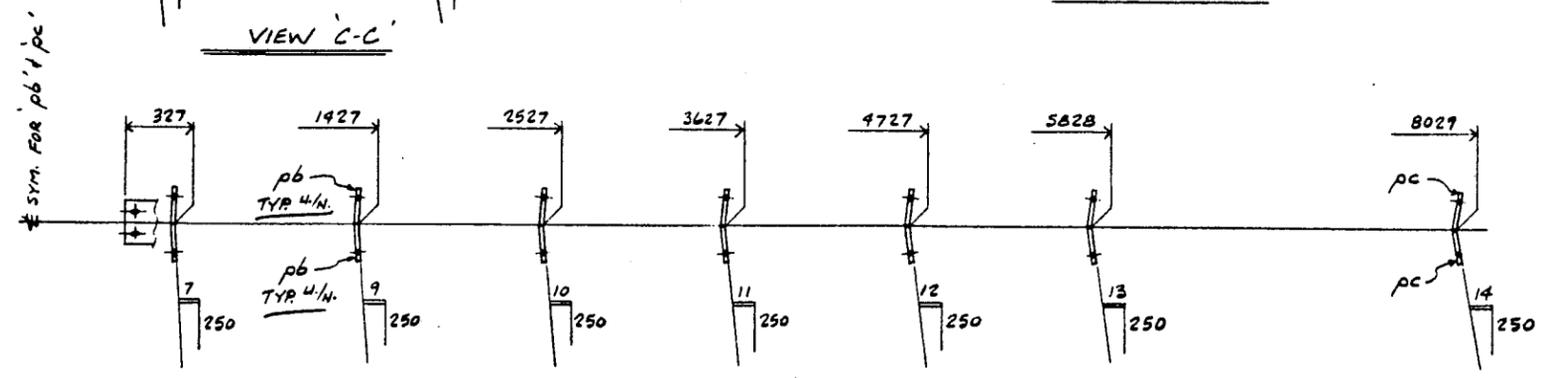
TYP. DETAIL B WEB FRAME
TO OUTER CHORD



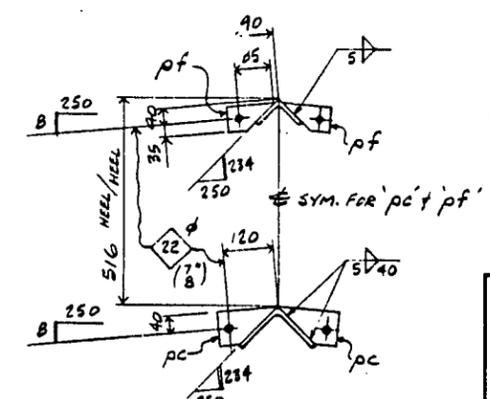
TYP. DETAIL C WEB FRAME
TO INNER CHORD



VIEW C-C



SECTION B-B



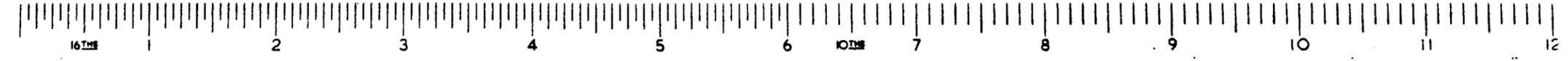
(I-LOCATION) SECTION D-D

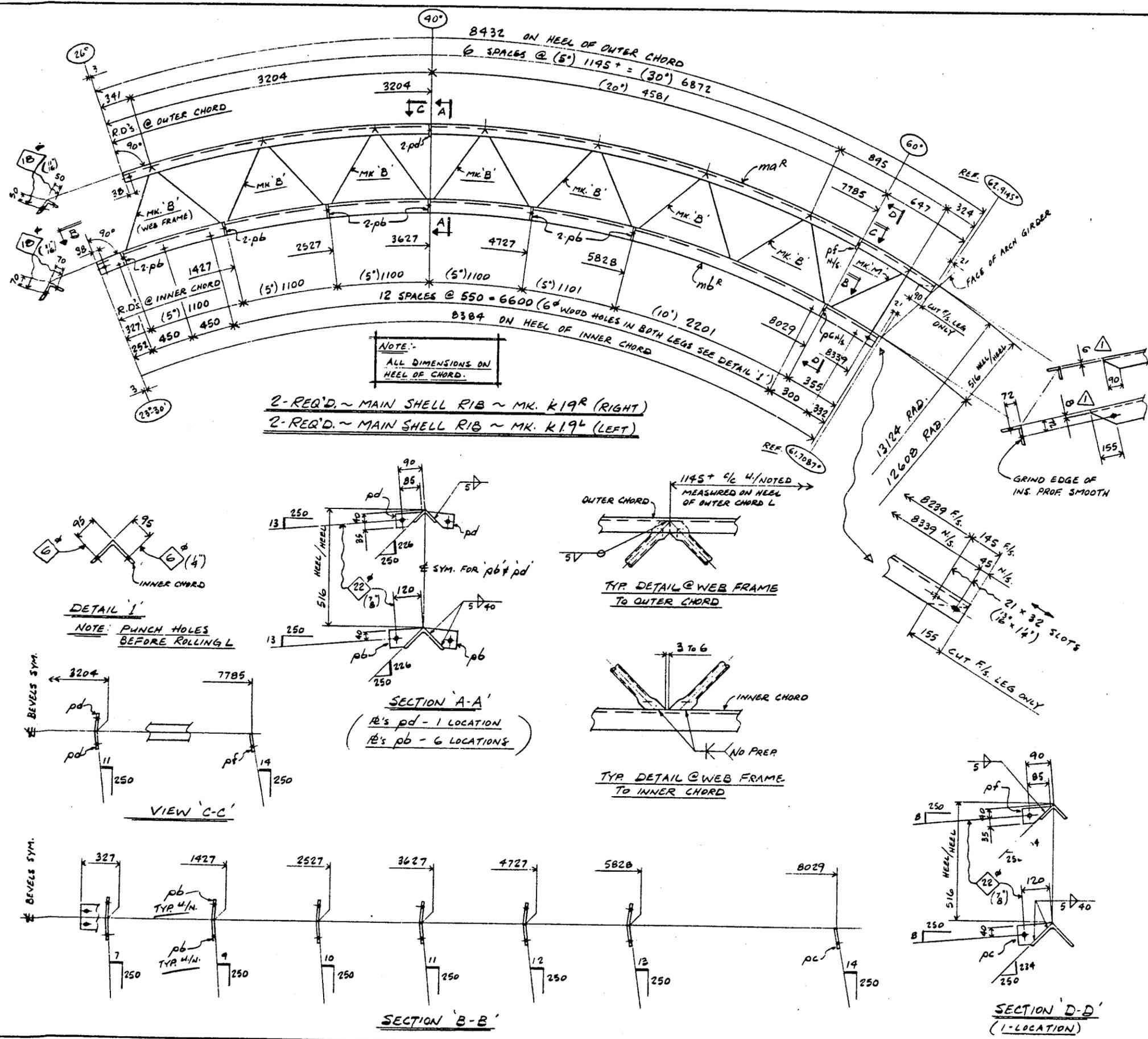
- NOTES:
- 1) FOR FINAL ASSEMBLY SEE DWG. 19S
 - 2) FOR PLYWOOD CANT STRIPS SEE DWG. 19T
 - 3) FOR DETAILS OF WEB FRAMES SEE DWG. 19a
 - 4) ALL RIBS SHIPPED TO JIG PANEL SEE DWG. 23b

	MATERIAL	G4021(44W)W	DETAILS MAIN SHELL
	SURF PREP & PAINT	SEE MEMO	UPPER RIB SECTION RIG
	OPEN HOLES	AS NOTED	FOR 4.2M TELESCOPE DOME
			LA PALMA
DRAWN	DATE	CHECKED	DATE
G.V.A.	Aug/83		
BRITAIN STEEL LTD			DRAWING No 1420-19m

p-ahedfghkmonstvw

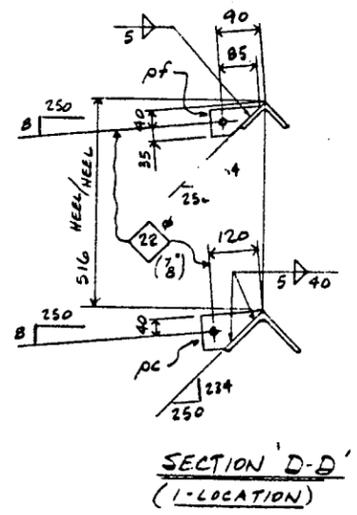
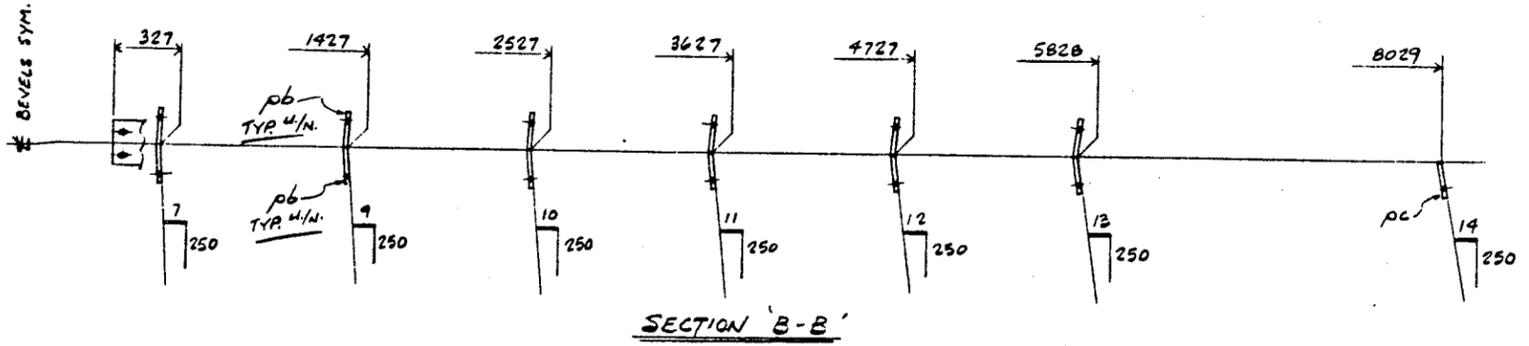
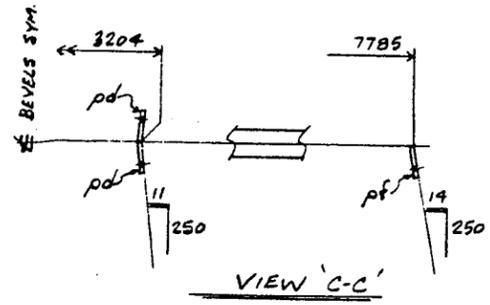
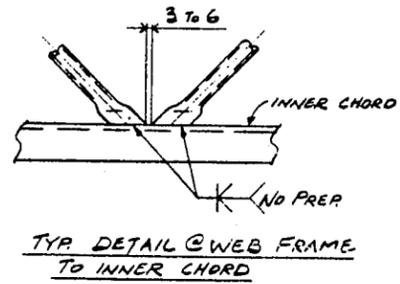
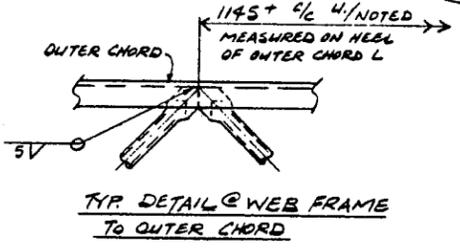
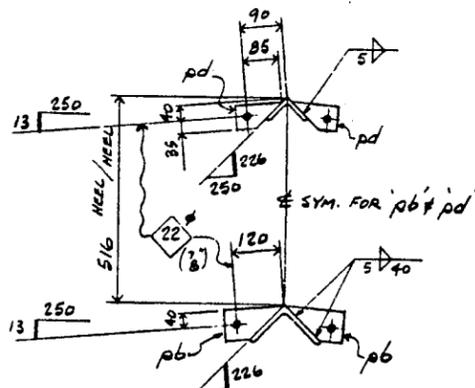
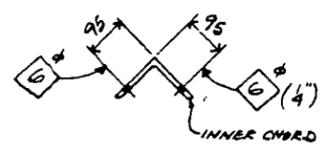
m-ahedfghkmonstvw





2-REQ'D. ~ MAIN SHELL RIB ~ MK. K19R (RIGHT)
 2-REQ'D. ~ MAIN SHELL RIB ~ MK. K19L (LEFT)

NOTE:-
 ALL DIMENSIONS ON
 HEEL OF CHORD.



MATERIAL BILL										BRITAIN STEEL LTD.		CONTRACT 1420	
NO	MARK	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	REV	WEIGHT				
1													
2						2-REQ'D ~ MK. K19R							
3						2-REQ'D ~ MK. K19L							
4													
5	mar	4	L	76x76x6	8932					44W	1	28	
6						(3x3x4)							
7	mbr	4	L	127x127x8	8384							2	6
8						(5x5x3/4)							
9													
10	pb	98	R	80x6.35(4)	150								
11	pc	4	R	80x6.35(4)	150								
12	pd	8	R	70x6.35(4)	115								
13	pf	4	R	70x6.35(4)	115								
14													
15													
16													
17	B	28	PIPE	WEB FRAMES									SEE DWG 199
18	M	4	L	L									AND 196 FOR
19													DETAILS
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													

- NOTES:
- 1) FOR FINAL ASSEMBLY SEE DWG. 195
 - 2) FOR PLYWOOD CANT STRIPS SEE DWG 197.
 - 3) FOR DETAILS OF WEB FRAMES SEE DWG 199 & 196
 - 4) ALL RIBS SHIPPED TO JIG PANEL SEE DWG 236

	MATERIAL	G4021(44W)W	DETAILS MAIN SHELL	
	SURF PREP & PAINT	SEE MEMO	UPPER RIB SECTION R7	
	OPEN HOLES	AS NOTED	FOR 4.2" TELESCOPE DOME	
			LA PALMA	
DRAWN	DATE	CHECKED	DATE	DRAWING NO
G.V.A.	Aug/82			1420-191
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, E.C.				

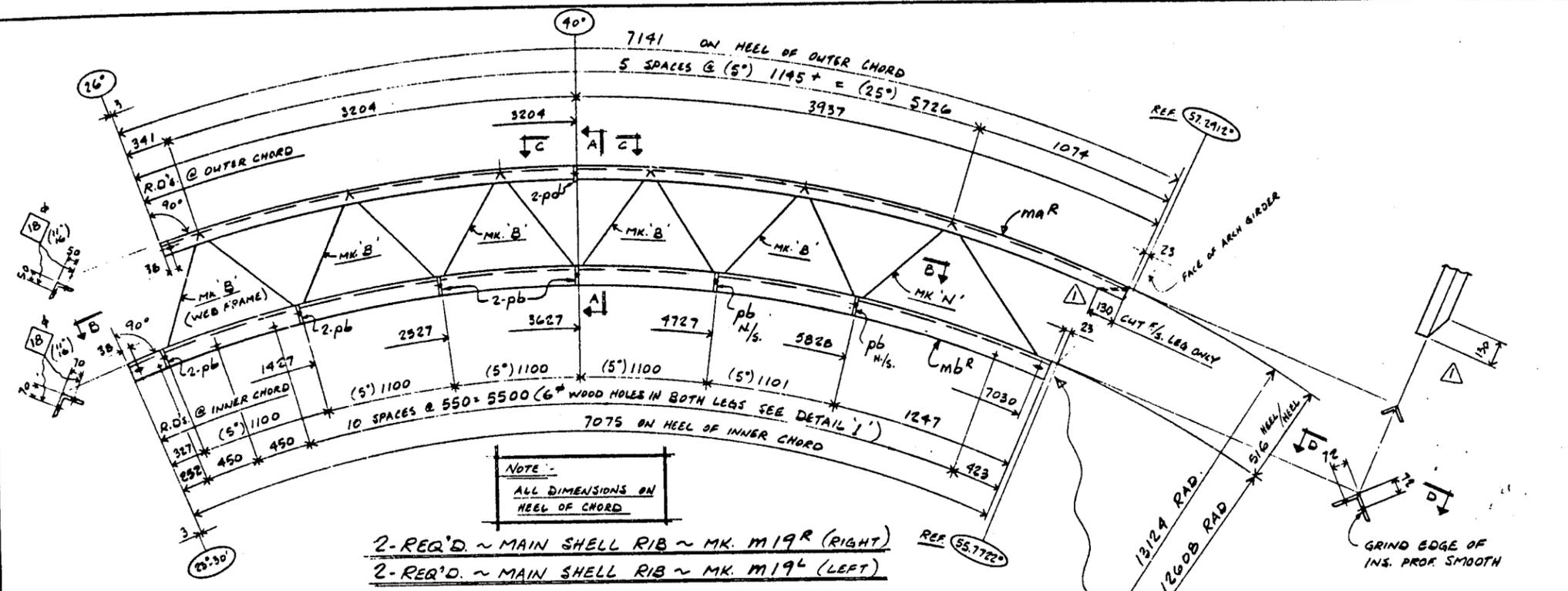
p-abcdefghijklmnopstwy | m-abcdefghijklmnopstwy | s-abcdefghijklmnopstwy



MATERIAL BILL
BRITAIN STEEL LTD.

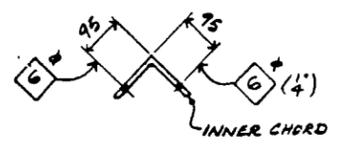
CONTRACT 1420

MARK	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	WEIGHT
1							
2							
3							
4							
5	4	L	76x76x6	7191			44W 127
6							
7	4	L	127x127x6	7075			27
8							
9	50	R	80x6.35(3)	150			
10	50	R	70x6.35(4)	115			
11							
12							
13	20	PIPE	WEB FRAMES		SEE DWG. 19a		
14	4				19b FOR DETAILS		
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							

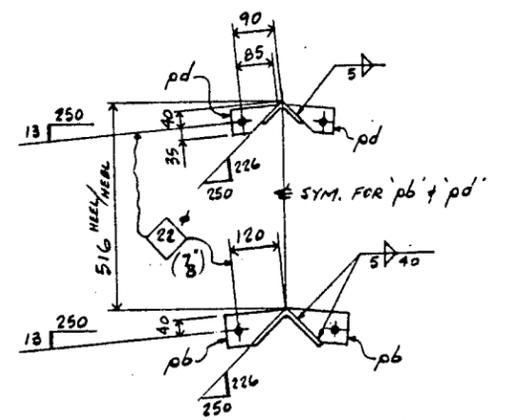


NOTE:
ALL DIMENSIONS ON
HEEL OF CHORD

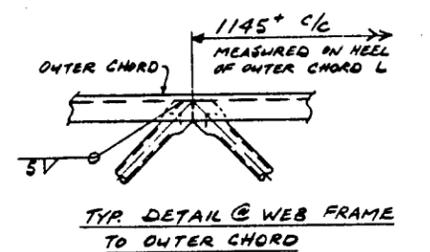
2-REQ'D ~ MAIN SHELL RIB ~ MK. M19R (RIGHT)
2-REQ'D ~ MAIN SHELL RIB ~ MK. M19L (LEFT)



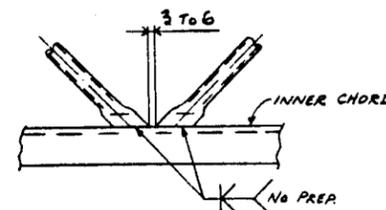
DETAIL I
NOTE: PUNCH HOLES
BEFORE ROLLING L



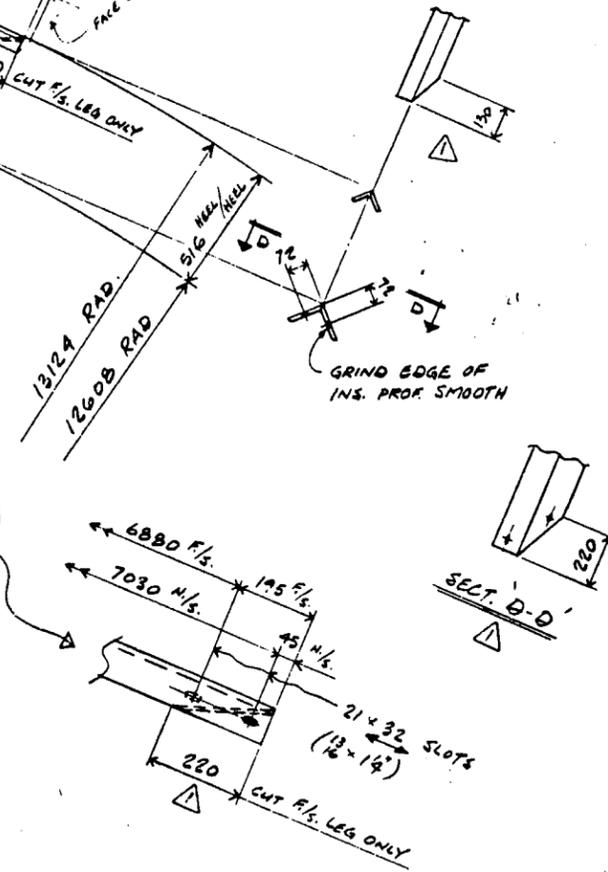
SECTION A-A
(R's pd - 1 LOCATION
R's pb - 6 LOCATIONS)



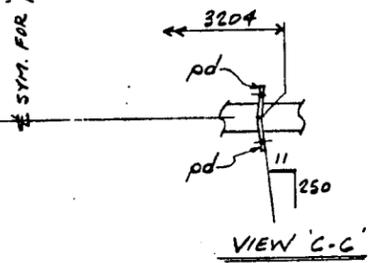
TYP. DETAIL @ WEB FRAME
TO OUTER CHORD



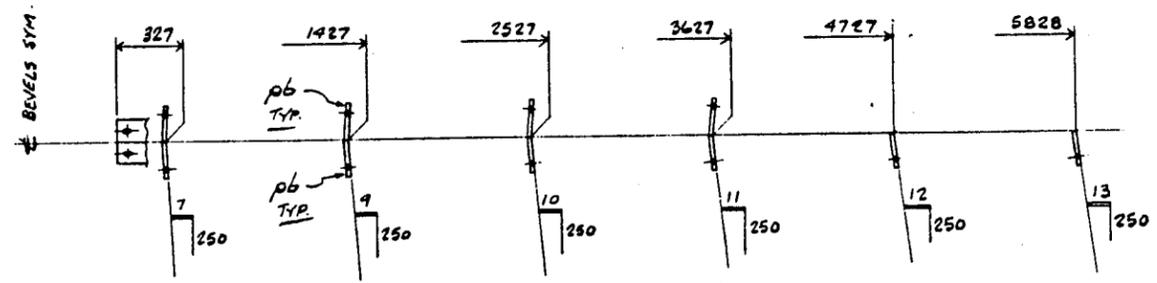
TYP. DETAIL @ WEB FRAME
TO INNER CHORD



SECT. B-D



VIEW C-C



SECTION B-B

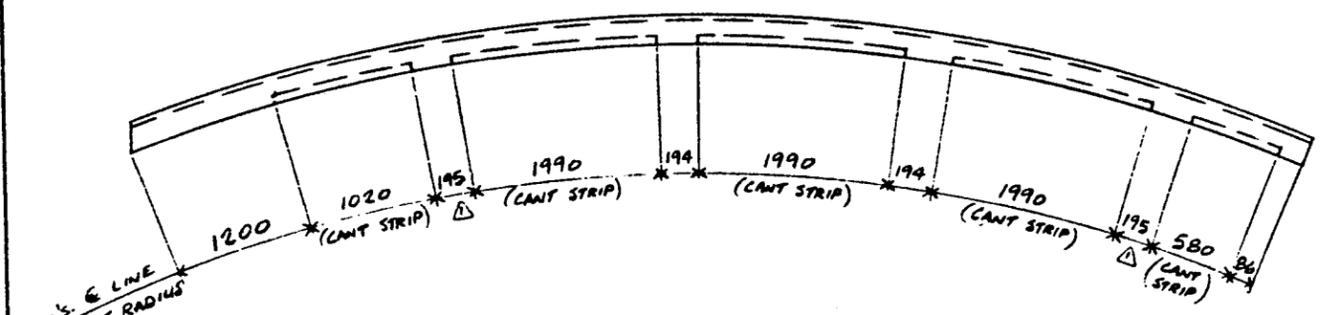
- NOTES:
- 1) FOR FINAL ASSEMBLY SEE DWG. 195
 - 2) FOR PLYWOOD CANT STRIPS SEE DWG. 19f
 - 3) FOR DETAILS OF WEB FRAMES SEE DWG. 19a & 19b
 - 4) ALL RIBS SHIPPED TO JIG PANEL SEE DWG. 236

	MATERIAL	G4021 (M.W.) W/P	DETAILS MAIN SHELL
	SURF. PREP	SEE MEMO	UPPER RIB SECTION R.B.
	PAINT	SEE MEMO	FOR 4.2M TELESCOPE DOME
	OPEN HOLES	AS NOTED	LA PALMA
DRAWN	DATE	CHECKED	DATE
G.V.A.	14/6/73		
DRAWING NO.			1420-19P
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WORTHINGTON, S.C.			

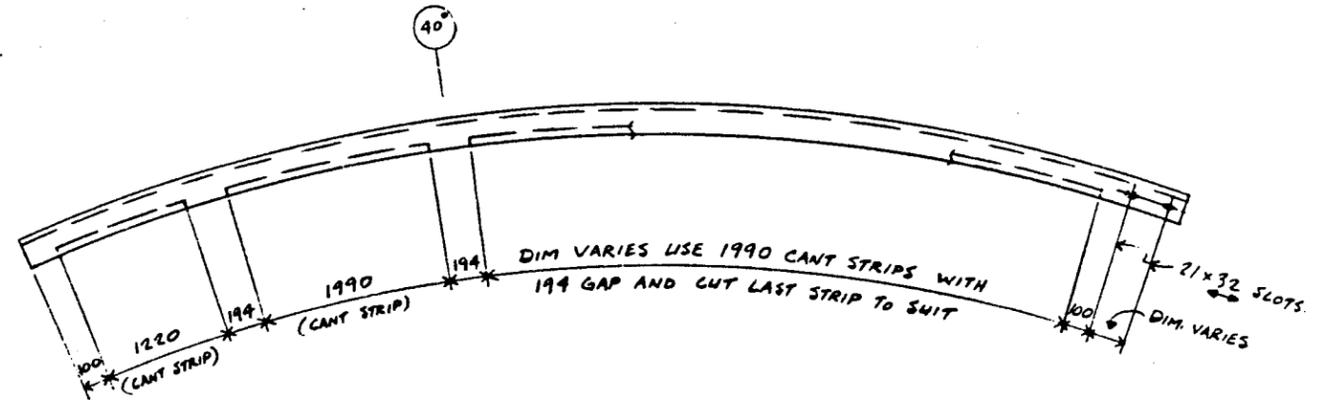


REF. 106 @ 1990
 36 @ 1020
 36 @ 580

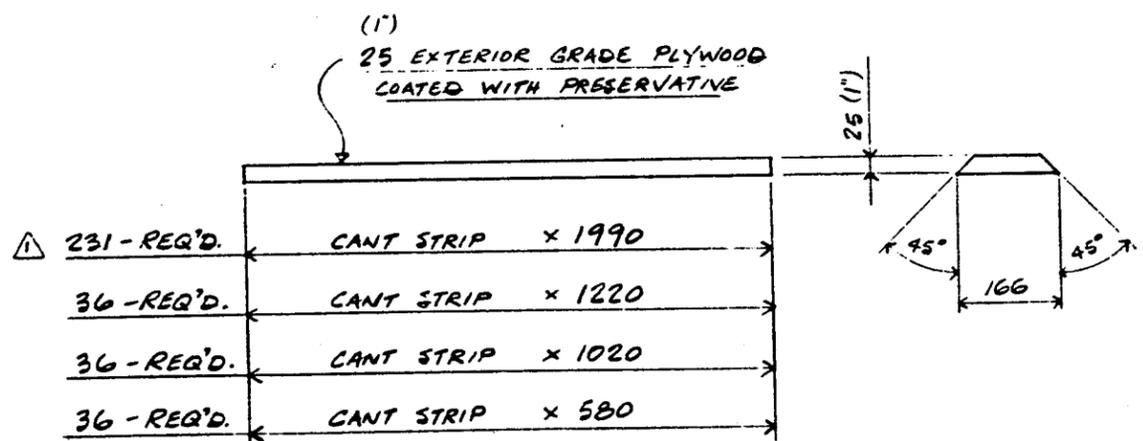
REF. 109 @ 1990
 36 @ 1220



LOCATION OF PLYWOOD CANT STRIPS ON LOWER RIB SECTIONS MK. A19 & Q19

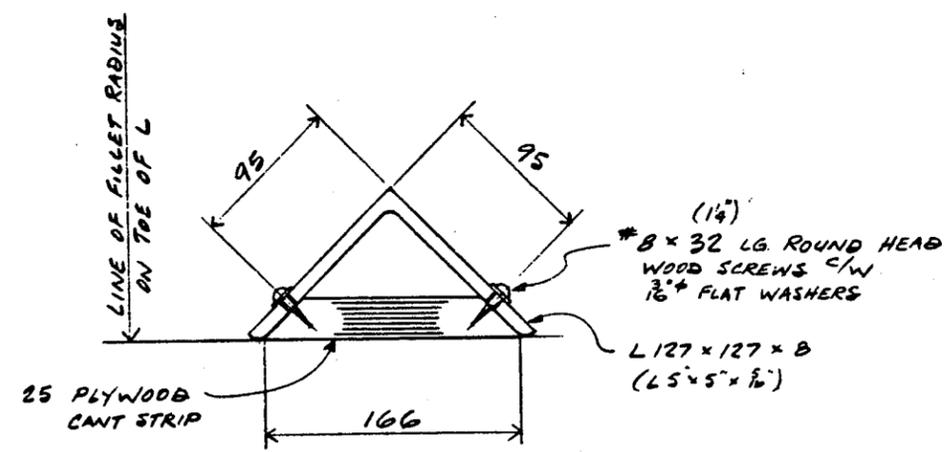


LOCATION OF PLYWOOD CANT STRIPS ON UPPER RIB SECTIONS MK. 619, C19R, d19R, fR, gR, hR, kR, mR & NR



ALSO REQ'D. (FOR ATTACHING CANT STRIPS TO CHORD)

- 2360 - 8 x 32 (14) LG. ROUND HEAD WOOD SCREWS (ROBERTSON TYPE) GALV.
- 2360 - 3/16 STD. FLAT WASHERS. GALV.

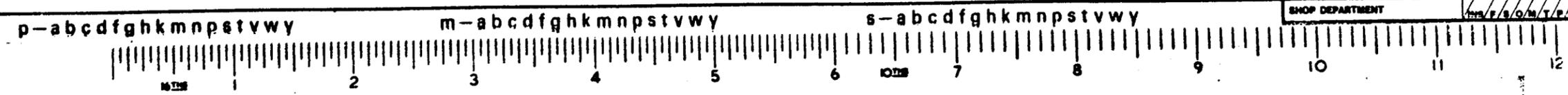


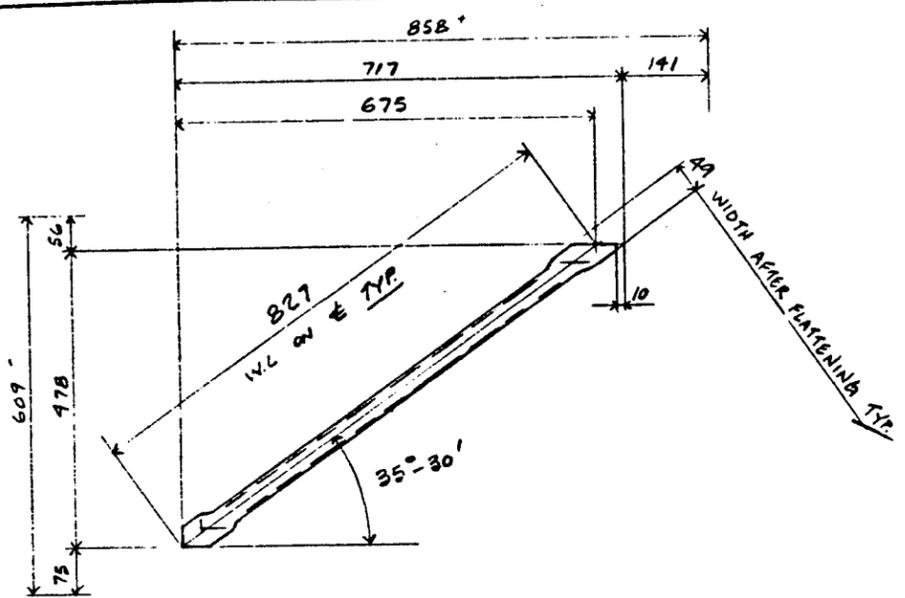
DETAIL SHOWING SHOP ATTACHMENT OF PLYWOOD CANT STRIPS TO INNER CHORD OF MAIN RIB SECTIONS.

NOTE:
 - FOR RIB SECTIONS SEE DWG'S. 19C TO 19S.

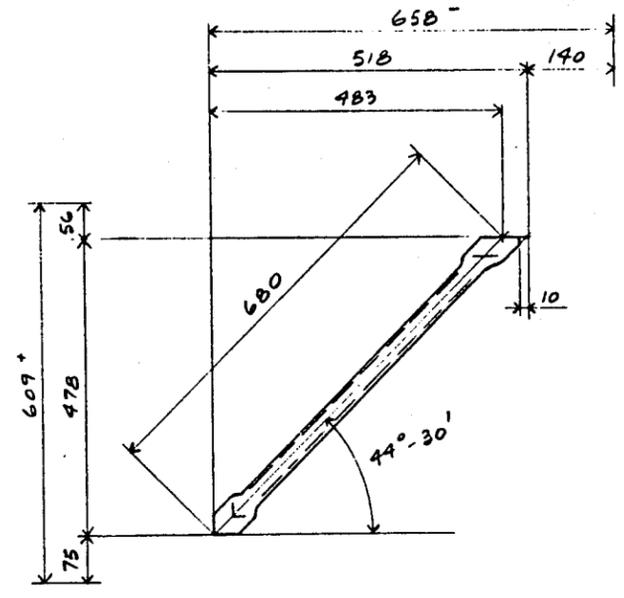
SHOP NOTE:
 RIBS ARE TO BE PAINTED BEFORE CANT STRIPS ARE INSTALLED.

	MATERIAL			DETAILS PLYWOOD CANT STRIPS TO INNER CHORD OF MAIN RIBS	
	DRY PREP & PAINT			FOR 4.2m TELESCOPE DOME LA PALMA	
	OPEN HOLES			DRAWING NO.	1420-19f
	DRY PREP & PAINT	DATE	CHECKED	DATE	REV
	G.V.A.	AM/02			
BRITAIN STEEL LTD. 4th FLOOR, NEW WESTMINSTER, B.C.					

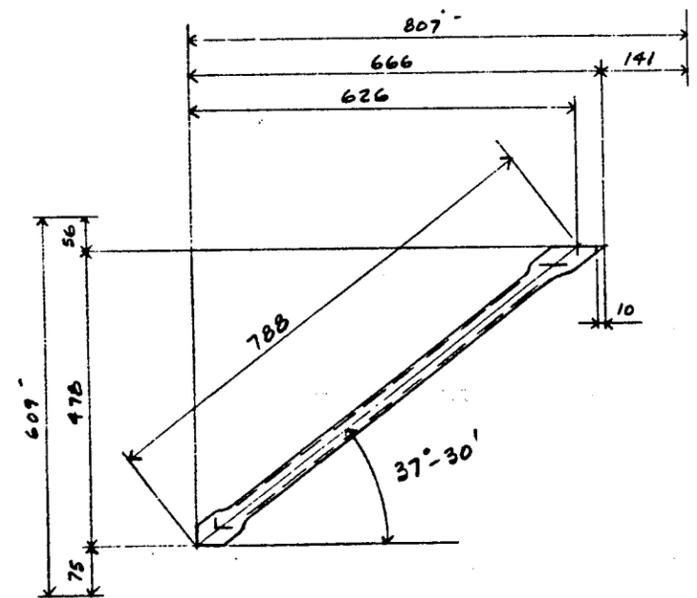




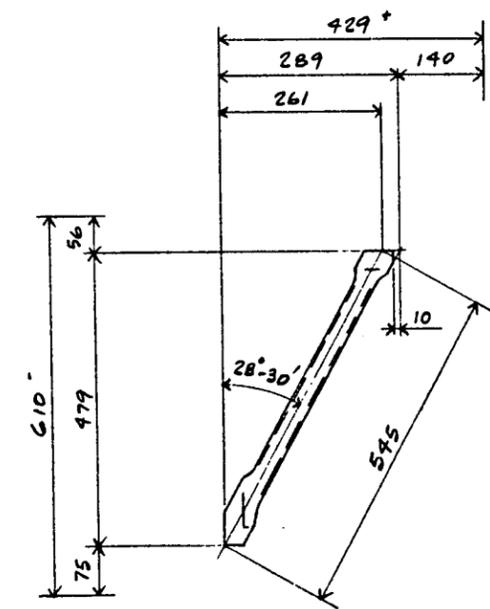
48-REQ'D ~ WEB MEMBER ~ MK. A20 } ALIKE EXCEPT
 28-REQ'D ~ I I ~ MK. A20 } FOR MARK



48-REQ'D ~ WEB MEMBER ~ MK. C20 } ALIKE EXCEPT
 20-REQ'D ~ I I ~ MK. C20 } FOR MARK



48-REQ'D ~ WEB MEMBER ~ MK. 620 } ALIKE EXCEPT
 28-REQ'D ~ I I ~ MK. 620 } FOR MARK



40-REQ'D ~ WEB MEMBER ~ MK. d20 } ALIKE EXCEPT
 12-REQ'D ~ I I ~ MK. D20 } FOR MARK

MATERIAL BILL										BRITAIN STEEL LTD.		CONTRACT 1420	
LINE	MARK	QTY.	SHAPE	SIZE	LENGTH	REMARKS	MATL. TYPE	NO.	REV.	WEIGHT			
1				(1)									
2	A20	48	PIPE	25" STD.	862	FLATTEN & BEV	SOW	2	19				
3	A20	28	I	I		862 CUT BOTH ENDS							
4													
5													
6	620	48	PIPE	25" STD.	820								
7	620	28	I	I									
8													
9													
10	C20	48	PIPE	25" STD.	705								
11	C20	20	I	I									
12													
13													
14	d20	40	PIPE	25" STD.	558								
15	D20	12	I	I									
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													

GENERAL NOTES:

- MEMBERS MK. A20, 620, C20 & d20 SHIPPED TO JIG PANELS SEE DWG. 23A & 23B.
- MEMBERS MK. A20, 620, C20 & D20 SHIPPED TO DOME SEE DWG. E3A, E3B, & E3C.

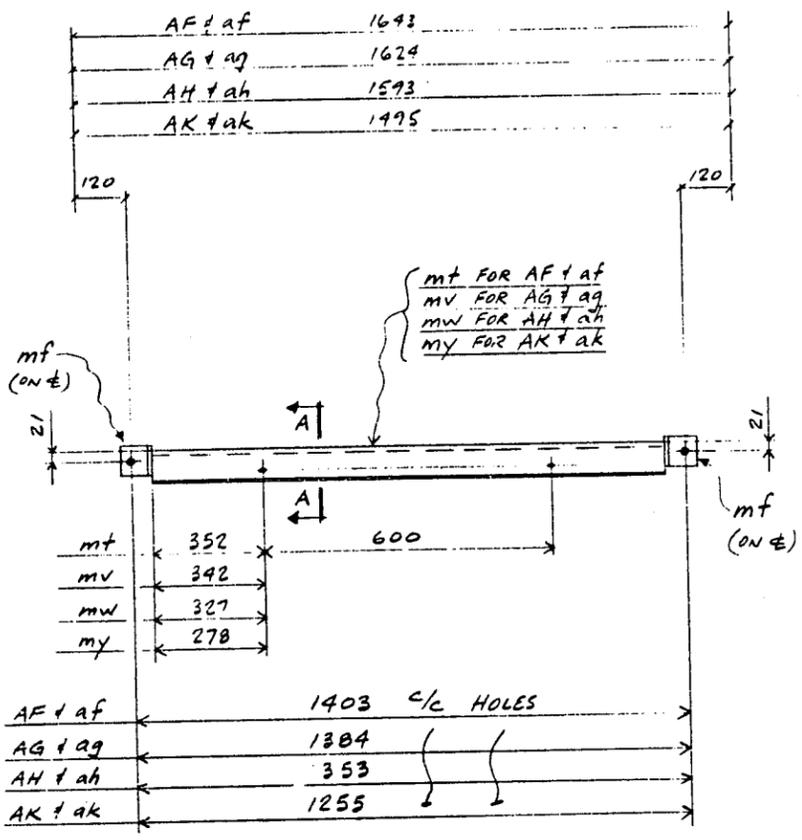
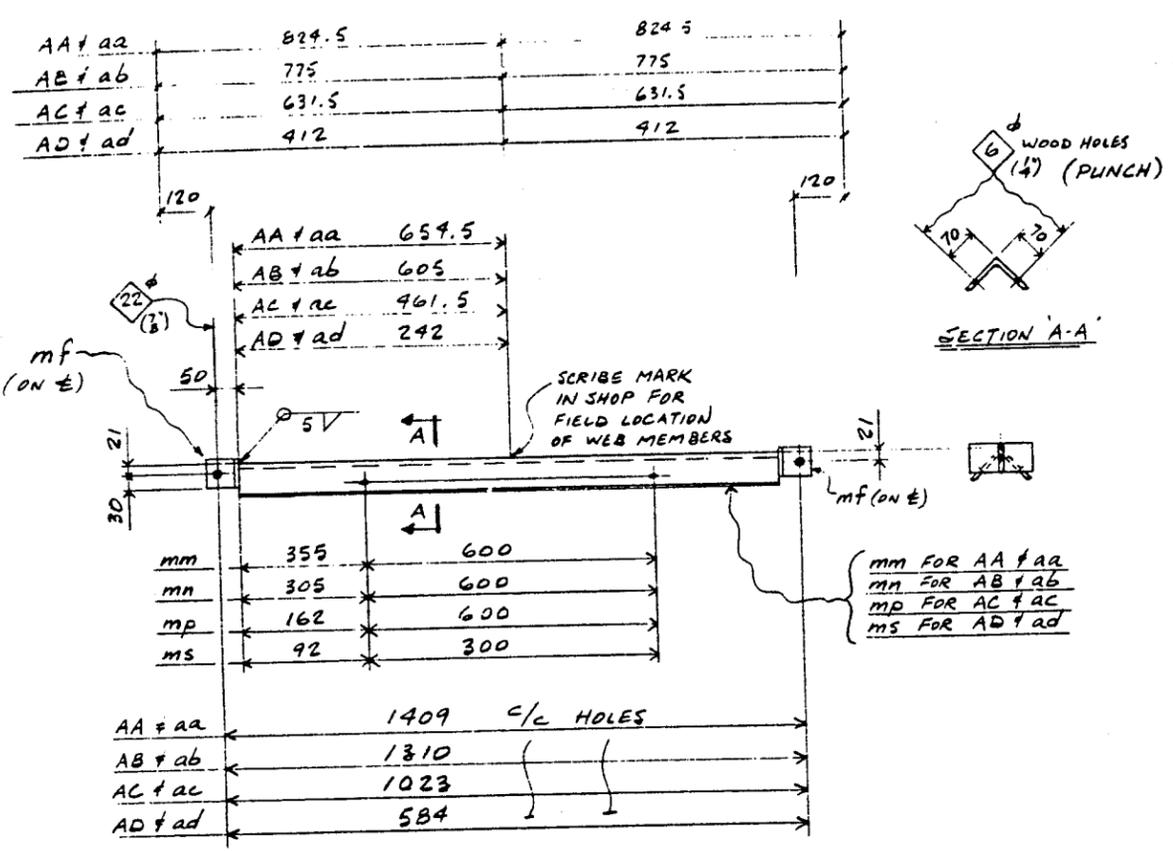
BRITAIN	MATERIAL	BRITAIN STEEL LTD.	SOW	DETAILS MAIN RIG BRACE
	SLURF PREP. & PAINT	SEE MEMO		FRAME WEB MEMBERS
	OPEN HOLES			FOR 4.2" TELESCOPE DOME LA PALMA
DRAWN	DATE	CHECKED	DATE	DRAWING No.
G.V.A	ANA/BS			1420-20a
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, S.C.				REV



MATERIAL BILL
BRITAIN STEEL LTD.

CONTRACT 1420

LINE NO.	MARK	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	WGT
1						10-REQ'D ~ MK. AA20		
2						24-REQ'D ~ MK. aa20		
3	mm	34	L	102x102x6	1309	C.S.2E.		44W 212
4						(4"x4"x4")		
5	mf	6B	WT	152x76x6x11	60	SPLIT W/50x22		
6						(6"x3"x4"x7.5)		
7								
8						10-REQ'D ~ MK. AB20		
9						24-REQ'D ~ MK. ab20		
10	mm	34	L	102x102x6	1210	C.S.2E.		27
11	mf	6B						
12								
13						10-REQ'D ~ MK. AC20		
14						24-REQ'D ~ MK. ac20		
15	mq	34	L	102x102x6	923	C.S.2E.		
16	mf	6B						
17								
18						6-REQ'D ~ MK. AD20		
19						20-REQ'D ~ MK. ad20		
20	ms	26	L	102x102x6	984	C.S.2E.		
21	mf	52						
22								
23						20-REQ'D ~ MK. AF20		
24						48-REQ'D ~ MK. af20		
25	mf	6B	L	102x102x6	1303	C.S.2E.		
26	mf	136						
27								
28						20-REQ'D ~ MK. AG20		
29						48-REQ'D ~ MK. ag20		
30	mw	68	L	102x102x6	1284	C.S.2E.		
31	mf	136						
32								
33						10-REQ'D ~ MK. AH20		
34						24-REQ'D ~ MK. ah20		
35	mw	34	L	102x102x6	1253	C.S.2E.		
36	mf	68						
37								
38						10-REQ'D ~ MK. AK20		
39						24-REQ'D ~ MK. ak20		
40	mw	34	L	102x102x6	1155	C.S.2E.		
41	mf	68						
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								



REF. LOCATION

0°	{ 10-REQ'D ~ INNER CHORD STRUT ~ MK. AA20 } ALIKE EXCEPT FOR MARK	{ 24-REQ'D. ~ ~ MK. aa20 }
20°	{ 10-REQ'D. ~ ~ MK. AB20 } ALIKE EXCEPT FOR MARK	{ 24-REQ'D. ~ ~ MK. ab20 }
40°	{ 10-REQ'D. ~ ~ MK. AC20 } ALIKE EXCEPT FOR MARK	{ 24-REQ'D. ~ ~ MK. ac20 }
60°	{ 6-REQ'D. ~ ~ MK. AD20 } ALIKE EXCEPT FOR MARK	{ 20-REQ'D. ~ ~ MK. ad20 }

REF. LOCATION

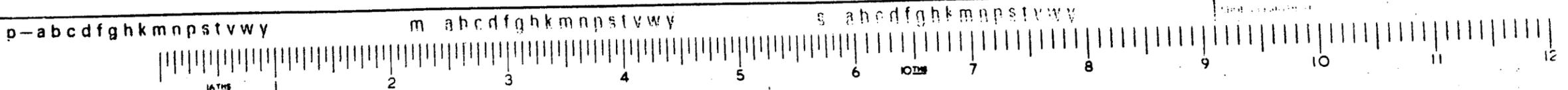
± 5°	{ 20-REQ'D. ~ INNER CHORD STRUT ~ MK. AF20 } ALIKE EXCEPT FOR MARK	{ 48-REQ'D. ~ ~ MK. af20 }
± 10°	{ 20-REQ'D. ~ ~ MK. AG20 } ALIKE EXCEPT FOR MARK	{ 48-REQ'D. ~ ~ MK. ag20 }
15°	{ 10-REQ'D. ~ ~ MK. AH20 } ALIKE EXCEPT FOR MARK	{ 24-REQ'D. ~ ~ MK. ah20 }
25°	{ 10-REQ'D. ~ ~ MK. AK20 } ALIKE EXCEPT FOR MARK	{ 24-REQ'D. ~ ~ MK. ak20 }

GENERAL NOTES:

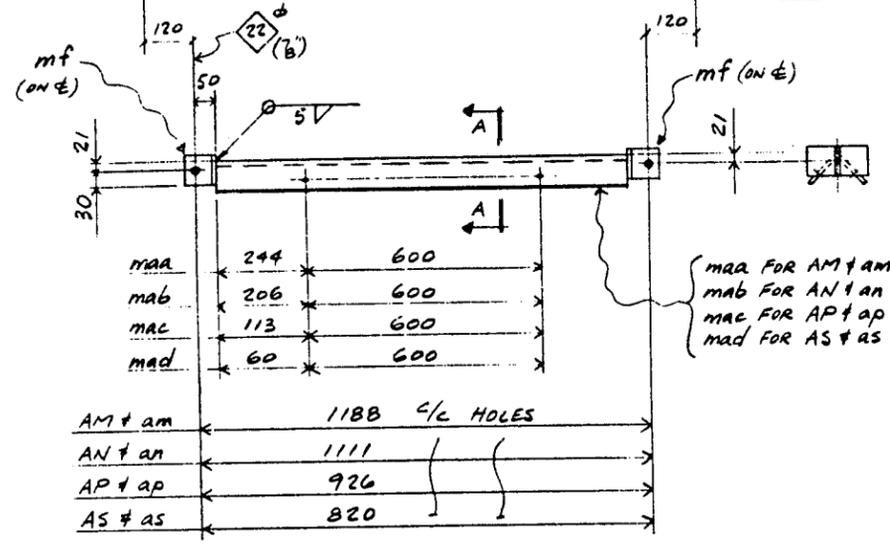
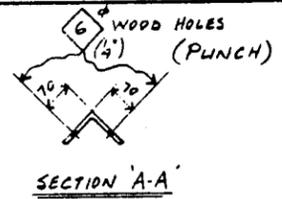
- 1) STRUTS MK. aa20, ab20, ac20, ad20, af20, ag20, ah20, ak20 ARE SHIPPED TO JIG PANELS SEE DWG. 23a & 23b.
- 2) STRUTS MK. AA20, AB20, AC20, AD20, AF20, AG20, AH20, AK20 ARE SHIPPED TO DOME SEE DWG. E3a, E3b & E3c.
- 3) FOR PLYWOOD CANT STRIPS SEE DWG. 20f.



MATERIAL	G40 21 (44W) W/P	NO. BY DATE	REVISION
SURF PREP	SEE MEMO	DETAILS MAIN R.I.R	
PAINT	SEE MEMO	INNER CHORD STRUTS	
OPEN HOLES	AS NOTED	FOR 4.2" TELESCOPE DOME LA PALMA	
DRAWN	DATE	CHECKED	DATE
G.V.A.	AUG '83		
DRAWING NO.	1420-20c	REV.	
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, S.C.			

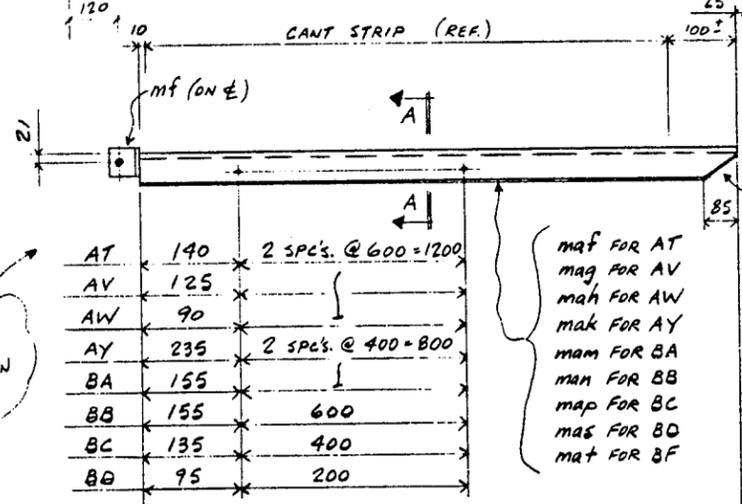


AM + am	1928
AN + an	1351
AP + ap	1166
AS + as	1060



REF. LOCATION	10-REQ'D. ~ INNER CHORD STRUT ~ MK. AM20	24-REQ'D. ~	ALIKE EXCEPT FOR MARK
30°	10-REQ'D. ~	24-REQ'D. ~	ALIKE EXCEPT FOR MARK
35°	10-REQ'D. ~	24-REQ'D. ~	ALIKE EXCEPT FOR MARK
45°	6-REQ'D. ~	24-REQ'D. ~	ALIKE EXCEPT FOR MARK
50°	6-REQ'D. ~	24-REQ'D. ~	ALIKE EXCEPT FOR MARK

AT	825	937
AV	821	919
AW	812	860
AY	797	761
BA	775	625
BB	747	451
BC	714	242
BD		673
BF		353



AT	140	2 SPLS. @ 600 = 1200
AV	125	
AW	90	
AY	235	2 SPLS. @ 400 = 800
BA	155	
BB	155	600
BC	135	400
BD	95	200

SHOP NOTE!
WOOD HOLES NOT REQ'D. IN MAT (BF20)

REF. LOCATION	4-REQ'D. ~ INNER CHORD STRUT ~ MK. AT20	8-REQ'D. ~	8-REQ'D. ~	4-REQ'D. ~				
0°	4-REQ'D. ~							
5°	8-REQ'D. ~							
10°	8-REQ'D. ~							
15°	4-REQ'D. ~							
20°	4-REQ'D. ~							
25°	4-REQ'D. ~							
30°	4-REQ'D. ~							
35°	4-REQ'D. ~							
40°	4-REQ'D. ~							

MATERIAL BILL
BRITAIN STEEL LTD. CONTRACT 1420

NO.	MARK	QTY.	SHAPE	SIZE	LENGTH	REMARKS	MATL. TYPE	WEIGHT
1								
2								
3	maa	34	L	102x102x6	1080	C.S.2E.		44W/27
4								
5	mf	68	WT	152x76x6x11	60	SPLIT W/50x22		
6								
7								
8								
9								
10	maa	34	L	102x102x6	1011	C.S.2E.		218
11	mf	68						
12								
13								
14								
15	mac	30	L	102x102x6	826	C.S.2E.		
16	mf	60						
17								
18								
19								
20	mad	30	L	102x102x6	720	C.S.2E.		
21	mf	60						
22								
23								
24	maf	4	L	102x102x6	1569	C.S.1E.		
25	mf	4						
26								
27								
28	mah	8	L	102x102x6	1545	C.S.1E.		
29	mf	8						
30								
31								
32	mam	8	L	102x102x6	1477	C.S.1E.		
33	mf	8						
34								
35								
36	man	4	L	102x102x6	1363	C.S.1E.		
37	mf	4						
38								
39								
40	mab	4	L	102x102x6	1205	C.S.1E.		
41	mf	4						
42								
43								
44	map	4	L	102x102x6	1003	C.S.1E.		
45	mf	4						
46								
47								
48	mas	4	L	102x102x6	761	C.S.1E.		
49	mf	4						
50								
51								
52	mat	4	L	102x102x6	478	C.S.1E.		
53	mf	4						
54								
55								
56	mf	4	L	102x102x6	158	C.S.1E.		
57	mf	4						

- GENERAL NOTES:
- 1) STRUTS am 20, an 20, ap 20 & as 20 SHIPPED TO JIG PANELS SEE DWG. 23a & 23b.
 - 2) STRUTS AT 20 TO BF 20 SHIPPED TO DOME SEE DWG. E3a, E3b & E3c.
 - 3) FOR PLYWOOD CANT STRIPS SEE DWG. 20f.

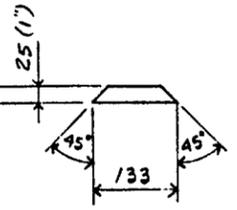
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, S.E.

DETAILS MAIN RIB INNER CHORD STRUTS FOR 4.2m TELESCOPE DOME LA PALMA

DATE: 1420-20d



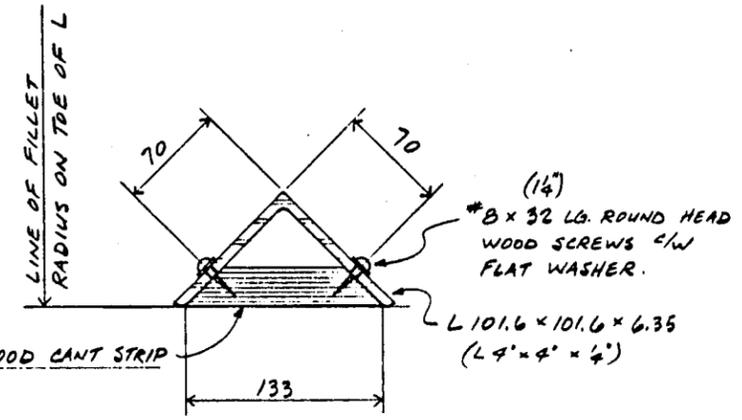
(1')
25 EXTERIOR GRADE PLYWOOD
COATED WITH PRESERVATIVE



102-REQ'D.	CANT STRIP	x 1300	FOR AA20, aa20, AF20, af20
106-REQ'D.		x 1250	FOR AG20, ag20, AH20, ah20, AY20
34-REQ'D.		x 1200	FOR AB20, ab20
34-REQ'D.		x 1140	FOR AK20, ak20
38-REQ'D.		x 1080	FOR AM20, am20, BA20
34-REQ'D.		x 1000	FOR AN20, an20
34-REQ'D.		x 900	FOR AC20, ac20
30-REQ'D.		x 820	FOR AP20, ap20
30-REQ'D.		x 700	FOR AS20, as20
4-REQ'D.		x 890	FOR BB20
26-REQ'D.		x 480	FOR AD20, ad20
4-REQ'D.		x 660	FOR BC20
4-REQ'D.		x 370	FOR BD20
12-REQ'D.		x 1450	FOR AT20, AV20
8-REQ'D.		x 1350	FOR AW20

ALSO REQ'D.

2056 - #8 x 32 LG. ROUND HEAD WOOD SCREWS (ROBERTSON TYPE) GALV.
2056 - STD. FLAT WASHERS FOR 3/16" φ GALV.



DETAIL SHOWING SHOP ATTACHMENT
OF PLYWOOD CANT STRIPS TO
INNER CHORD STRUTS

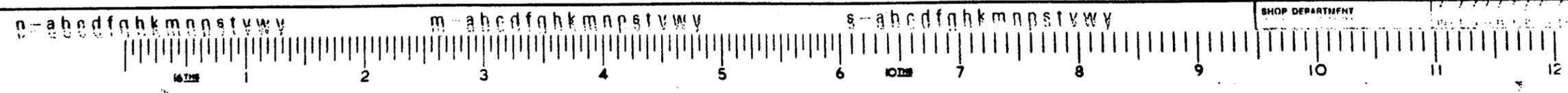
SHOP NOTE:
INNER CHORD STRUTS TO BE PAINTED
BEFORE CANT STRIPS ARE INSTALLED

MATERIAL BILL
BRITAIN STEEL LTD.

CONTRACT 1420

LINE	MARK	QTY	SHAPE	SIZE	LENGTH	REMARKS	MATL TYPE	WEIGHT
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								

NOTE:
- FOR INNER CHORD STRUTS SEE DWG 20c & 20d



BRITAIN STEEL LTD. 401 BALFAR AVENUE, NEW WESTMINSTER, B.C.

BRITAIN

MATERIAL: PLYWOOD CANT STRIPS & INNER CHORD STRUTS

SLURF PREP & PAINT: SEE MEMO # SHOP NOTE

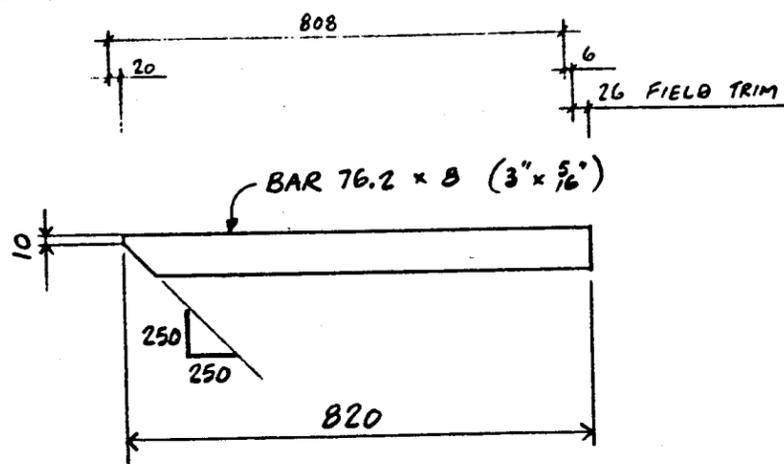
OPEN HOLES: NONE

FOR 9.2 M TELESCOPE DOME LA PALMA

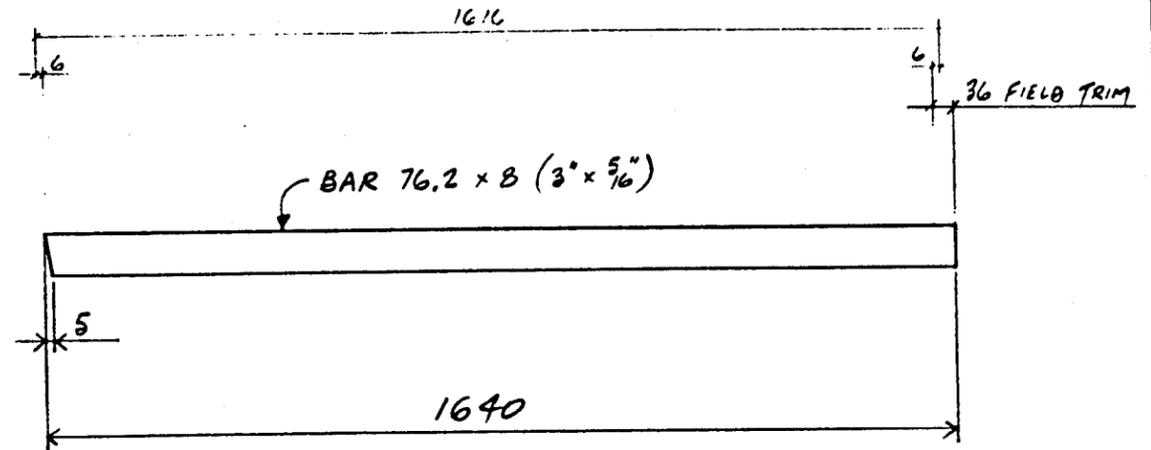
DRAWN: G.V.A. DATE: Aug/83

CHECKED: DATE: DRAWING NO: 1420-20f

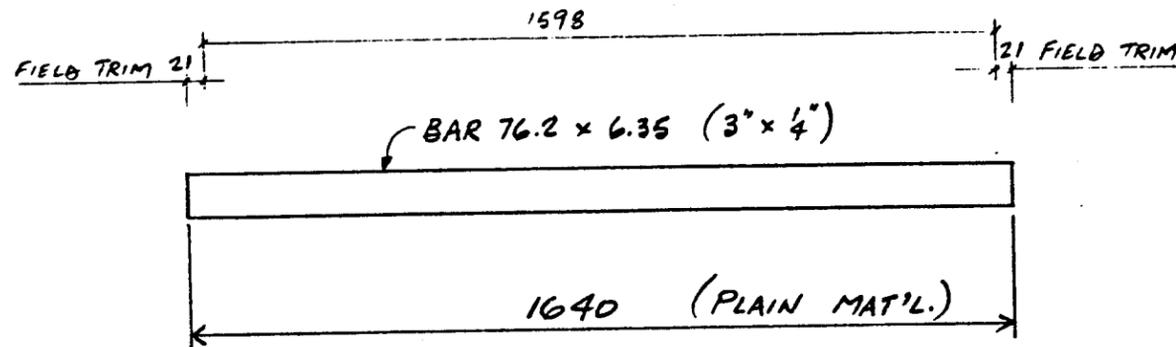
REV: SHOP DEPARTMENT



40 REQ'D. ~ CONN. BAR ~ MK. A29



18 REQ'D. ~ CONN. BAR ~ MK. B29



38 REQ'D. ~ MAIN SHELL & SEAL BAR ~ MK. C29
@ RING GIRDER BTM. FLG.

GENERAL NOTES:

1.) FOR FIELD ASSEMBLY SEE DWG. E1d.

LINE	SHOP	FAB	MARK	DESCRIPTION	MAT'L	LENGTH	REMARKS	CUTTING INSTRUCTIONS	WEIGHT	DIVISIONS
1	No. REQ'D.					m		SP LICING	ALLOWED	
7							PLAIN MAT'L.			
6	38	C29		BAR 76.2 x 6.35	44W	1640	BAR 3" x 1/4"			
5										
4	18	B29		BAR 76.2 x B	44W	1640	BAR 3" x 5/16"			
3										
2	40	A29		BAR 76.2 x B	44W	820	BAR 3" x 5/16"			
1										



MATERIAL G40.21 (44W)

SURF. PREP. & PAINT SEE MEMO

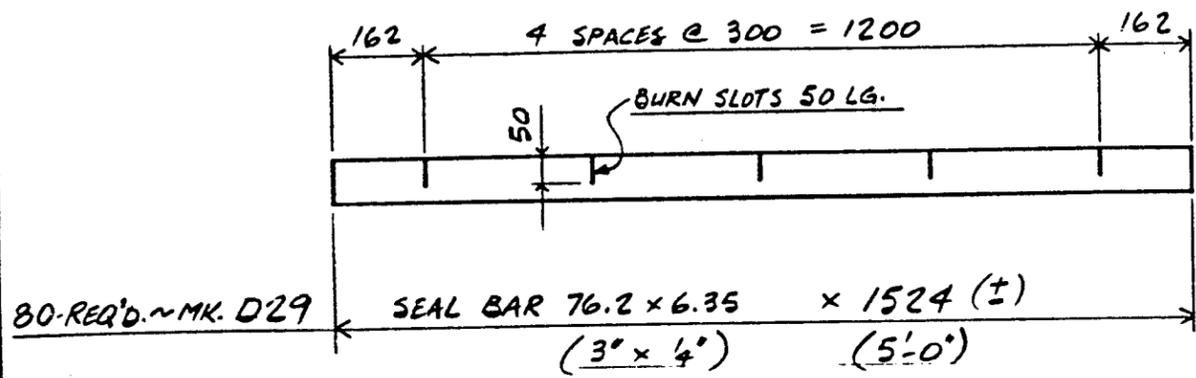
OPEN HOLES

DRAWN G.V.A. DATE DEC. 83 CHECKED DATE

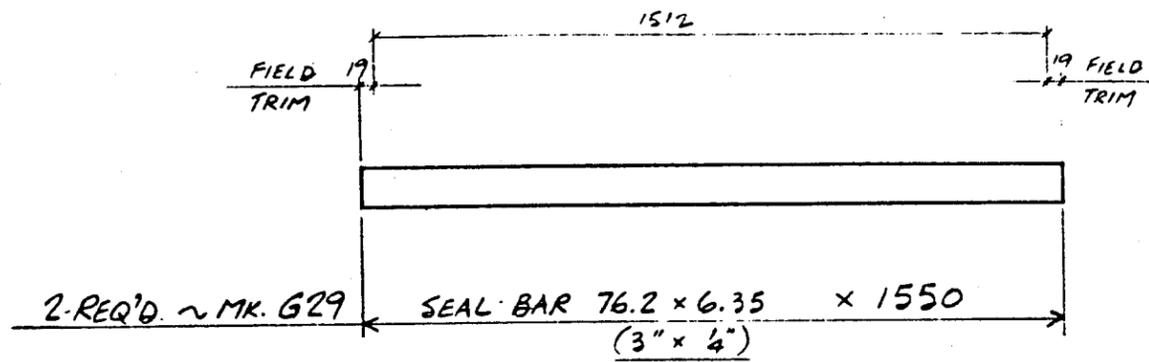
DRAWING No. 1420-29a REV.

BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.

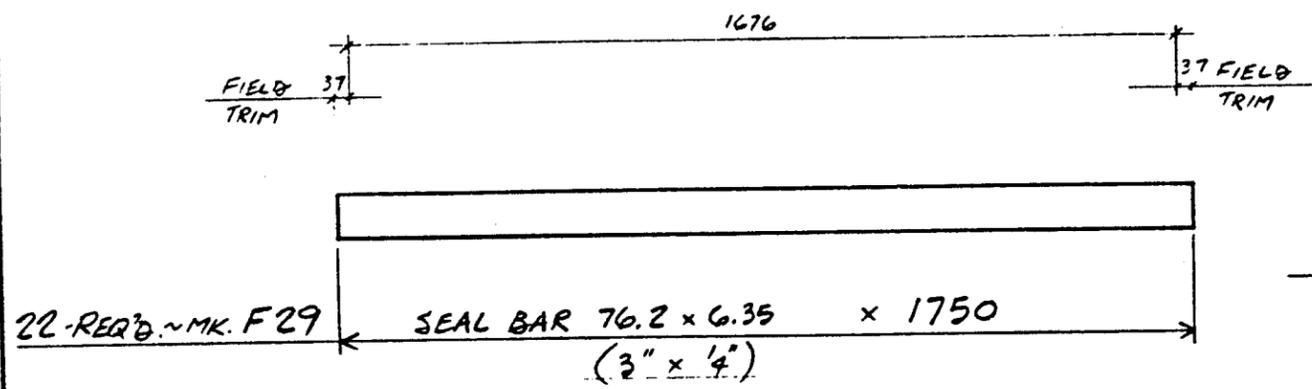




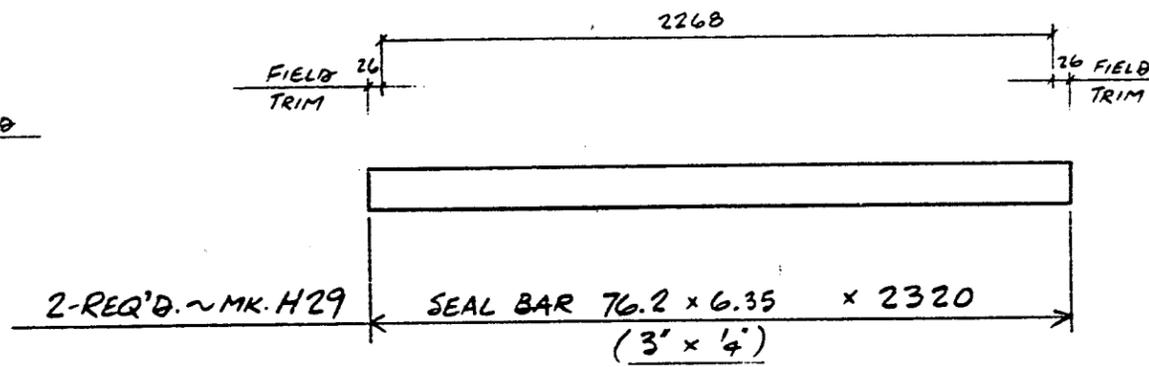
- FOR MAIN SHELL R'S TO ARCH GIRDER (60) } +20%
- FOR BACK SHELL R'S TO TIE BEAM (5)



- FOR BACK SHELL R TO ARCH GIRDER @ TIE BEAM



- FOR BACK SHELL R'S TO ARCH GIRDER



- FOR BACK SHELL R TO ARCH GIRDER @ RING GIRDER

GENERAL NOTES:

- 1) FOR FIELD ASSEMBLY SEE DWG. E3C & E4

LINE	SHIP No. REQ'D.	FAB MARK	DESCRIPTION	MAT'L	LEN	REMARKS	CUTTING INSTRUCTIONS	WEIGHT	DIVISIONS
					LENGTH		SPLICING		
7	2	H29	BAR 76.2 x 6.35 (3" x 4")	44W	2320	PLAIN MAT'L.			
6	2	G29			1550	PLAIN MAT'L.			
4	2	F29			1750	PLAIN MAT'L.			
2	2	F29			1750	PLAIN MAT'L.			
1	30	D29			1524				



MATERIAL G40 21 (44W)
SURF. PREP. & PAINT SEE MEMO
OPEN HOLES

DETAILS OF SEAL BARS
FOR 4.2M TELESCOPE DOME
LA PALMA

DRAWN G.V.A. DATE MAR/84
CHECKED DATE
DRAWING No. 1420-296

BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.

