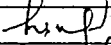
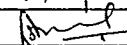
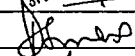
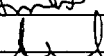
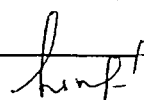



SCHEDULE	SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR STAINLESS STEEL MOULDINGS	MDST: 24 Rev: NIL PAGE 1 OF 3
	1. CHANNEL MOULDING TO DRAWING NO. CC43409 2. ANGLE MOULDING TO DRAWING NO. CC43449 3. FLAT MOULDING TO DRAWING NO. CC43380 4. J-MOULDING TO DRAWINGS NO.CC43396	Dated 26.11.2005

SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR STAINLESS STEEL MOULDINGS

NAME	DESIGNATION	SIGNATURE	DATE	LEVEL
Harish Kumar	SSE/TOT		26/11/05	Prepared
Joginder Singh	ADE/VD		26/11/05	Agreed
Amitabh Sinha	Dy CME/TOT		28/12/05	Reviewed
S K Aggarwal	CDE		6/1/06	Approved

Issue/Rev	Details of Changes	Date


Prepared By


Agreed By

SCHEDULE	SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR STAINLESS STEEL MOULDINGS	MDST: 24 Rev: NIL PAGE 2 OF 3
	<ol style="list-style-type: none"> 1. CHANNEL MOULDING TO DRAWING NO. CC43409 2. ANGLE MOULDING TO DRAWING NO. CC43449 3. FLAT MOULDING TO DRAWING NO. CC43380 4. J-MOULDING TO DRAWINGS NO. CC43396 	Dated 26.11.2005

1.0 REQUIREMENTS

1.1 This schedule is applicable for channel moulding to drawing no. CC43409, angle moulding to drawing no. CC43449, flat moulding to drawing no. CC43380 & J-moulding to drawings no. CC43396. The vendors seeking approval shall comply with all the requirements mentioned below:

2.0 GENERAL & MANUFACTURING FACILITIES

2.1 Covered area with adequate space underneath for storage of raw materials e.g. billets, round corner squares, rounds etc. The covered area should have display board showing different colour shades nominated to different grades of steel to avoid mix up of materials. Arrangement of painting the billets, RCS rounds etc with particular paint shade previously nominated according to the grade of steel should be available.

2.2 Adequate Nos. of hand grinders for removal of fins & burrs shall be available.

2.3 The firm shall have atleast one shearing machine for cutting the sheet of suitable capacity.

2.4 The firm shall have atleast one press brake of suitable capacity along-with punch & die for bending.

2.5 The firm shall have atleast one power press with set of punch & dies

2.6 Separate areas for stainless steel and mild steel should demarcated to avoid contamination.

2.7 The firm shall have suitable facility for buffing of suitable capacities should be available.

2.8 The raw material should be procured from authorized distributor of original manufacturer of steel and firm should procure material with test certificate from primary manufacturer

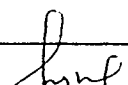
2.9 Adequate Nos. of hand grinders for removal of fins & burrs shall be available.

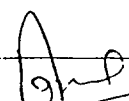
3.0 TESTING FACILITIES

3.1 **Chemical Lab:** The firm should have permanent arrangement with NABL certified Lab or a reputed steel making company for arranging the spectro analysis of the material.

3.2 **Other Testing Facilities:** The firm shall possess the following:

- The firm shall have adequate facilities for preparation of test sample. Facilities like machining, grinding, polishing etc. should be available in house.
- Adequate number of fine punches for stamping marking particulars on finished components.


Prepared By


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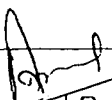
SCHEDULE	SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR STAINLESS STEEL MOULDINGS	MDST: 24 Rev: NIL PAGE 3 OF 3
	<ol style="list-style-type: none"> 1. CHANNEL MOULDING TO DRAWING NO. CC43409 2. ANGLE MOULDING TO DRAWING NO. CC43449 3. FLAT MOULDING TO DRAWING NO. CC43380 4. J-MOULDING TO DRAWINGS NO. CC43396 	Dated 26.11.2005

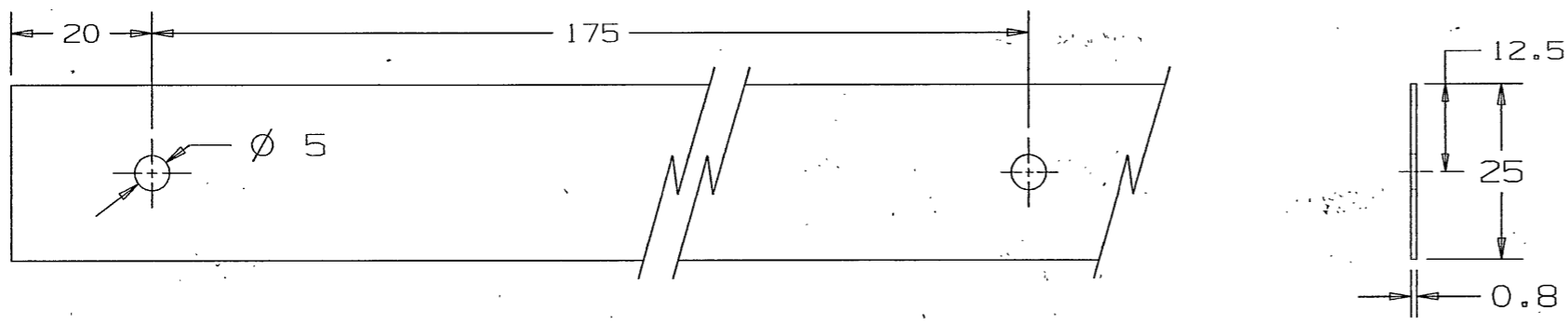
- Adequate numbers of measuring instruments such as:
 - Digital Vernier Calipers - 0 mm to 300 mm
 - Measuring scales – 2 meter
 - Angle protector
 - Set of radius gauge
 - Weighing machine

4.0. QUALITY CONTROL REQUIREMENTS

- 4.1 There should be a system to ensure the traceability of the product from raw material stage to finished product stage. This system should also facilitate to identify the raw material composition from the finish product stage. Identification marks/text should be at such a location that it is not visible to the passenger, after fitment in the coach.
- 4.2 Ensure that there is a QAP for the product detailing various aspects: -
 - QA Organisational Chart
 - Flow Process Chart
 - Stage inspection details
 - Various parameters and to ensure control over them
- 4.3 The firm should have acquired ISO: 9000 series certification and the product for which an approval is sought should be broadly covered in the scope of the certification for manufacture and supply.
- 4.4 The Quality manual of the firm for ISO: 9000 should clearly indicate at any stage the control over manufacturing and testing of the said railway product.
- 4.5 There should be at least one full time technologist having a minimum bachelor's degree in relevant field & 5 years experience or a person with diploma in relevant field with 12 years experience. He should be free from day-to-day production, testing and quality control responsibilities. He should be mainly responsible for development of a product, analysis of products, control over raw material, and corrective action in case of difficulties in achieving the parameters.
- 4.6 The firm shall ensure that proper analysis is being done on monthly basis to study the rejection at various internal stages and it is documented.
- 4.7 The firm shall ensure that all the relevant specifications, IS standards are available with them.


Prepared By


Agreed By



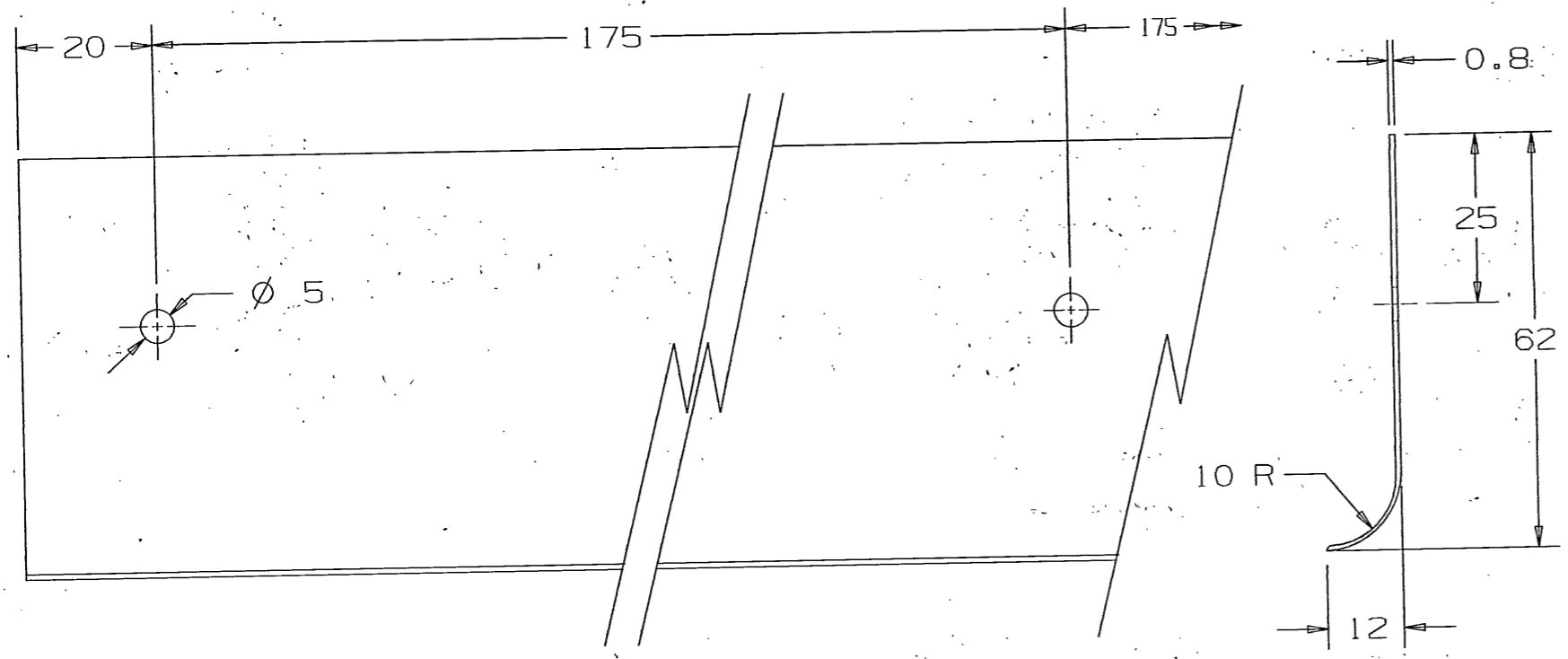
ALT.NO	ALT.DATE	ZONE	ALTERATIONS	AUTHORITY
d	08/10/99	B6 F2	1. DIM. 175 ADDED. 2. NOTE-7 ADDED.	DIC NO. MD990201
e	25/04/2005	F9	1. WEIGHT CORRECTED.	DIC NO. MD050020

- NOTE:-
- *1. IS:6911-92, Gr. X10 Cr18 Mn9 Ni5.
 2. LENGTH OF THE MOULDING SHOULD BE 2000mm MIN.
 3. MOULDING SHOULD BE BUFFED & POLISHED.
 4. SHARP CORNERS TO BE ROUNDED OFF.
 5. MOULDINGS SHOULD BE PROPERLY PACKED.
 6. SUPPLIERS NAME SHOULD BE MARKED IN 6mm HEIGHT AT A DISTANCE OF 500mm ON EACH MOULDING.
 7. HOLES TO BE DRILLED AT A PITCH OF 175mm.

SCANNED

NIL		FLAT MOULDING 0.8X25XL		NIL		NIL		IS:6911-92 X10Cr18Mn9Ni5		NIL		
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS		OPASSLY	DETAIL DRG	MATL. & SPEC.		REMARKS				
NIL	M	GROUP	PARTITION WALLS & MOULDINGS		SUPERSEDES: CC43380 ALT d							
WEIGHT	FILE	\\Nas\ furnish\opal\cc43380e.prt (2D)										
0.157	KG/M	FLAT MOULDING						SCALE	SSE/REC	REMARKS		
NIL	M ²							S.AREA	1:1	CHD	DUGL	
NIL	M							LENGTH / -D+A	DRN	OPAL		
NIL	M							WIDTH / THICK	RAIL COACH FACTORY, KAPURTHALA		REF.DRG.NO.	NIL
DETAIL DRGS STARTING WITH "LI" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE.		0.0008		INDIAN RAILWAYS STANDARD				PL NO.	NIL			
THIS IS A COMPUTER GENERATED DRAWING. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER IT INVALID.		HEIGHT		0.025		M		DRG.NO.	CC43380			
FOR UNTOLERANCED DIMENSIONS REFER MDG0008		DATE OF FIRST ISSUE	01/07/1995	CGM BY	ADE/SME		FDY.CME	N.R	CDE	ALT.	e	SIZE/A3 SHEET 1/1

ALT.NO	ALT.DATE	ZONE	ALTERATIONS	AUTHORITY
c	08/10/99	B6 F3	1. DIM. 175 ADDED. 2. NOTE-7 ADDED.	DIC NO. MD990201
d	28/04/2005	F9	1. WEIGHT CORRECTED.	DIC NO. MD050020



मार्गदर्शक
 Entered
 in
 Into
 मसिफिकेशन
 Date Bar
6 MAY 2005

- NOTE:-
- * IS:6911-92, Gr. X10 Cr18 Mn9 Ni5.
 - LENGTH OF THE MOULDING SHOULD BE 2000mm MIN.
 - MOULDING SHOULD BE BUFFED & POLISHED.
 - SHARP CORNERS TO BE ROUNDED OFF.
 - MOULDINGS SHOULD BE PROPERLY PACKED.
 - SUPPLIERS NAME SHOULD BE MARKED IN 6mm HEIGHT AT A DISTANCE OF 500mm ON EACH MOULDING.
 - HOLES TO BE DRILLED AT A PITCH OF 175mm.

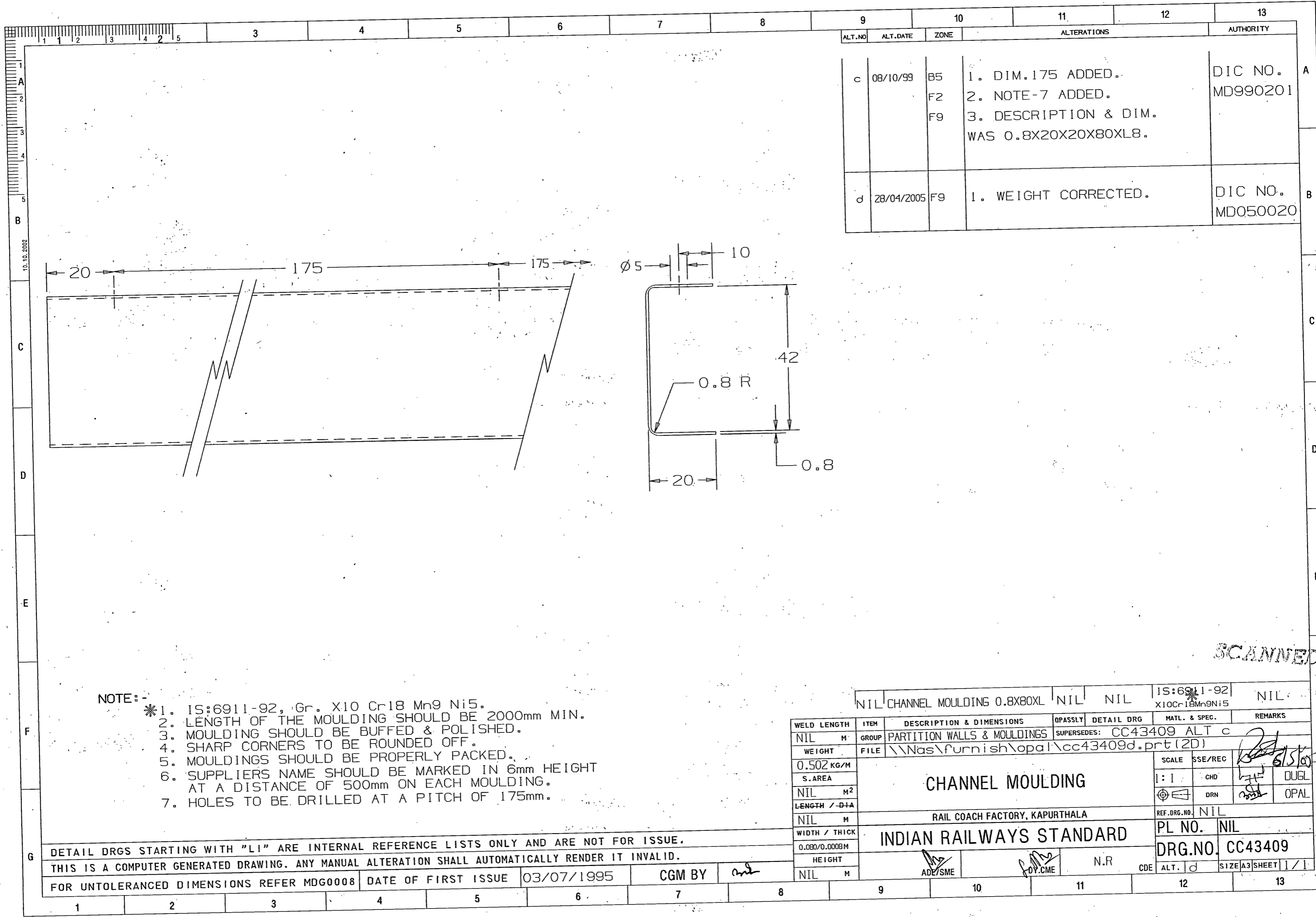
SCANNED

NIL		J-MOULDING 0.8X68XL		NIL	NIL	IS:6911-92	NIL
						X10Cr18Mn9Ni5	
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS		OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	PARTITION WALLS & MOULDINGS		SUPERSEDES: CC43396 ALT c			
WEIGHT	FILE	\\Nas\firmish\opal\cc43396d.prt (2D)					
0.427	KG/M	J-MOULDING		SCALE	SSE/REC	6/1/05	
	S.AREA			1:1	CHD	DUGL	
NIL	M ²			DRN	OPAL		
LENGTH / DIA	RAIL COACH FACTORY, KAPURTHALA		REF.DRG.NO.		NIL		
NIL	M	INDIAN RAILWAYS STANDARD		PL NO.	NIL		
WIDTH / THICK	ADE/SME		TOY.CME		N,R		CDE
0.068/0.0008M					ALT. d	SIZE A3	SHEET 1/1
HEIGHT	NIL	M					

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FOR UNTOLERANCED DIMENSIONS REFER MDG0008 DATE OF FIRST ISSUE 01/07/1995 CGM BY *ms*



ALT. NO.	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
c	08/10/99	B5 F2 F9	1. DIM. 175 ADDED. 2. NOTE-7 ADDED. 3. DESCRIPTION & DIM. WAS 0.8X20X20X80XL8.	DIC NO. MD990201
d	28/04/2005	F9	1. WEIGHT CORRECTED.	DIC NO. MD050020

NOTE:-

- *1. IS:6911-92, Gr. X10 Cr18 Mn9 Ni5.
2. LENGTH OF THE MOULDING SHOULD BE 2000mm MIN.
3. MOULDING SHOULD BE BUFFED & POLISHED.
4. SHARP CORNERS TO BE ROUNDED OFF.
5. MOULDINGS SHOULD BE PROPERLY PACKED.
6. SUPPLIERS NAME SHOULD BE MARKED IN 6mm HEIGHT AT A DISTANCE OF 500mm ON EACH MOULDING.
7. HOLES TO BE DRILLED AT A PITCH OF 175mm.

NIL CHANNEL MOULDING 0.8X80XL NIL NIL IS:6911-92 X10Cr18Mn9Ni5 NIL

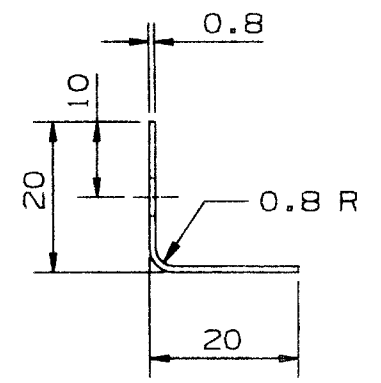
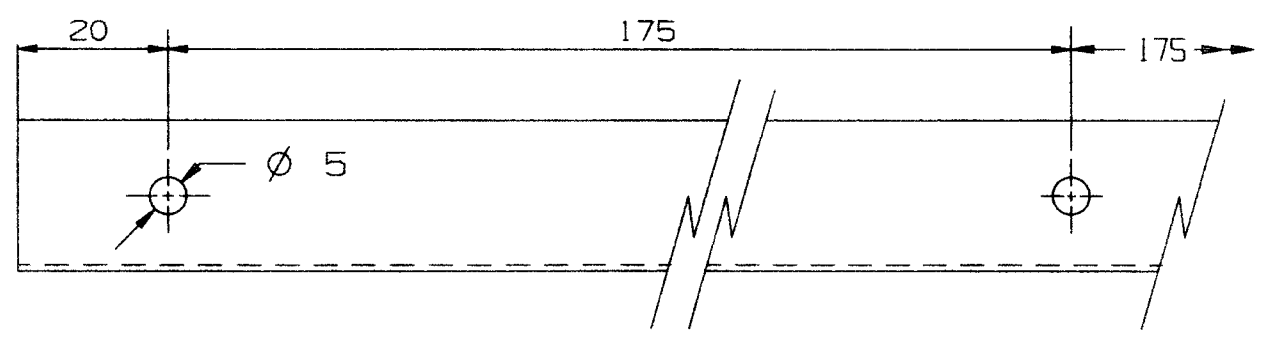
WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP PARTITION WALLS & MOULDINGS	SUPERSEDES:	CC43409 ALT c		
WEIGHT	FILE	\\Nas\ furnish\opal\cc43409d.prt (2D)				
0.502 KG/M			SCALE	SSE/REC		
S. AREA			1:1	CHD		
NIL	M ²			DRN		
LENGTH / DIA					REF. DRG. NO. NIL	
NIL	M	RAIL COACH FACTORY, KAPURTHALA			PL NO.	NIL
WIDTH / THICK		INDIAN RAILWAYS STANDARD			DRG. NO.	CC43409
0.080/0.008M				N.R	ALT.	SIZE A3 SHEET 1/1
HEIGHT						
NIL	M					

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FOR UNTOLERANCED DIMENSIONS REFER MDG0008 DATE OF FIRST ISSUE 03/07/1995 CGM BY *ant*

SCANNED

ALT. NO	ALT. DATE	ZONE	ALTERATIONS	AUTHORITY
a	08/10/98	C6 F3	1. DIM. 175 ADDED. 2. NOTE - 7 ADDED.	DIC NO. MD990201



- NOTE:-
- * 1. IS:6911-92, Gr. X10 Cr18 Mn9 Ni5.
 2. LENGTH OF THE MOULDING SHOULD BE 2000mm MIN.
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 4. SHARP CORNERS TO BE ROUNDED OFF.
 5. MOULDINGS SHOULD BE PROPERLY PACKED.
 6. SUPPLIERS NAME SHOULD BE MARKED IN 6mm HEIGHT AT A DISTANCE OF 500mm ON EACH MOULDING.
 7. HOLES TO BE DRILLED AT A PITCH OF 175mm.

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	GROUP	DETAIL DRG	MAT. & SPEC.	REMARKS
NIL	M	ANGLE MOULDING 0.8X37XL				
NIL	M	PARTITION WALLS & MOULDINGS				
0.232	KG	/users2/furnish/pnlmldg/cc43449a.prt				
NIL	M ²	INDIAN RAILWAYS STANDARD				SCALE
NIL	M					RAIL COACH FACTORY, KAPURTHALA
0.037/0.0008	M	INDIAN RAILWAYS STANDARD				1:1
NIL	M	INDIAN RAILWAYS STANDARD				OPAL
INDIAN RAILWAYS STANDARD						PL NO. 00200165
INDIAN RAILWAYS STANDARD						DRG. NO. CC43449
INDIAN RAILWAYS STANDARD						REF. DRG. NO. NIL
INDIAN RAILWAYS STANDARD						N.R
INDIAN RAILWAYS STANDARD						ALT. a
INDIAN RAILWAYS STANDARD						SHEET 1/1

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 FOR UNTOLERANCED DIMENSIONS REFER MDG0008

REVIEW NO. /PROTOTYPE/FINAL DATE OF FIRST ISSUE 28/12/98