Reasoned Document for Item Specific Guidelines & Schedule of Technical Requirements for Vendor Approval for manufacture and supply of Cast Manganese Steel (CMS) Crossings / Weldable Cast Manganese Steel (WCMS) Crossings:

S	Provisions of Existing Document	Provisions of Document uploaded on	Comments of stakeholders	RDSO's remark
N		RDSO's website for comments of		
		stakeholders		
1.	Document No.: TDG 0021	Document No.: TDG 0021	Comments/ Suggestions during 30	
			days of uploading:	
			No comments received.	
2.	Document Title:	Document Title:	Comments/ Suggestions during 30	
۷.	Item Specific Guidelines & Schedule of	Item Specific Guidelines & Schedule of	days of uploading:	
	Technical Requirements for Vendor	Technical Requirements for Vendor	days of uploaunig.	
	Approval for manufacture and supply of	Approval for manufacture and supply of	No comments received.	
	Cast Manganese Steel (CMS) Crossings /	Cast Manganese Steel (CMS) Crossings /	The comments received.	
	Weldable Cast Manganese Steel (WCMS)	Weldable Cast Manganese Steel (WCMS)		
	Crossings.	Crossings.		
3.	1.0 Amendment History:	1.0 Amendment History:	Comments/ Suggestions during 30	In light of suggestions
	S. Amend Ver- Reasons for Amendment	S. Amend Ver- Reasons for Amendment	days of uploading:	given by Track Dte.
	No -ment sion	No -ment sion	S S S S S S S S S S S S S S S S S S S	,
	. Date	. Date	No comments received.	(Inspection Unit) in
	1. 26.11.2 1.0 First issue under new	1. 26.11.2 1.0 First issue under new		subsequent Paras,
	011 Documentation System.	011 Documentation System.		Amendment History at SN
	2. 25.04.2 2.0 STR Document No. QC- 023 G-7.1-21 Ver.1.0,	2. 25.04.2 2.0 STR Document No. QC- 023 G-7.1-21 Ver.1.0,		3 of is modified as under:
	023 G-7.1-21 Ver.1.0, effective from 26.11.2011	023 G-7.1-21 Ver.1.0, effective from 26.11.2011		(4T) M: . E :1:4:
	(OLD DOC. TDG 0021,	(OLD DOC. TDG 0021,		"The Minimum Facilities
	Rev.1 effective from	Rev.1 effective from		& Machineries Required has been modified to
	26.11.2002) & STR	26.11.2002) & STR		has been modified to include the "Electronic
	Document No. TDG 0036,	Document No. TDG 0036,		
	Rev.1 (effective from	Rev.1 (effective from		dimensional measurements with auto
	24.04.2012) has been	24.04.2012) has been		recording facility". Para
	merged in a single	merged in a single		2.0 is also modified
	Document No. TDG 0021, Version 2.0 with Title:	Document No. TDG 0021, Version 2.0 with Title:		accordingly.
	'Item Specific Guidelines	'Item Specific Guidelines		
	& Schedule of Technical	& Schedule of Technical		Section-A Clause (iv) &
	Requirement for Vendor	Requirement for Vendor		(vii) modified for better

Approval for manufacture	Approval for manufacture	clarity. Section-B modified
and supply of Cast	and supply of Cast	to incorporate minimum
Manganese Steel (CMS)	Manganese Steel (CMS)	·
Crossings / Weldable Cast	Crossings / Weldable Cast	capacity of some
Manganese Steel (WCMS)	Manganese Steel (WCMS)	machinery, also, some
Crossings.'	Crossings.'	machinery added. Quality
Following replacements	Following replacements	·
have been made:	have been made:	Assurance Plan Clause 9
1. Initial Capability	1. Initial Capability	modified."
Assessment by Fresh	Assessment by Fresh	
Vendor Registration.	Vendor Registration.	
2. General Guidelines for	2. General Guidelines for	
Vendor Approval by	Vendor Approval by	
relevant ISO Apex	relevant ISO Apex	
Documents of RDSO-	Documents of RDSO-	
Latest Version.	Latest Version.	
3. Re-assessment by	3. Re-assessment by	
Quality audit.	Quality audit.	
4. Part-II by	4. Part-II by	
Developmental	Developmental	
Vendors;	Vendors;	
5. Part-I by Approved	5. Part-I by Approved	
Vendor;	Vendor;	
6. Renewal by Quality	6. Renewal by Quality	
Audit;	Audit;	
Para (vii) of TDG 0036,	Para (vii) of TDG 0036,	
Rev.1 modified to add	Rev.1 modified to add	
that status of vendor	that status of vendor	
available in Item Master	available in Item Master	
uploaded on RDSO/	uploaded on RDSO/	
IREPS/ UVAM Portal &	IREPS/ UVAM Portal &	
on RDSO Vendor	on RDSO Vendor	
Registration IREPS	Registration IREPS	
Portal-	Portal-	
http://www.rdso.indianrai	http://www.rdso.indianrai	
lways.gov.in	lways.gov.in	
Assessment Proforma	Assessment Proforma	
Clause No. 3, revised for	Clause No. 3, revised for	
adding Mobile no. &	adding Mobile no. &	
WhatsApp no. and Clause	WhatsApp no. and Clause	}
No. 5 is added for GST	No. 5 is added for GST	

	No. Document formatted	No. Document formatted	
	for as per ISO Norms in	for as per ISO Norms in	
	Page No. 2.	Page No. 2.	
	Inclusion of drawings no.	Inclusion of drawings no.	
	RDSO/T-6412 for	RDSO/T-6412 for	
	1:12/60kg & RDSO/T-	1:12/60kg & RDSO/T-	
	6441 for 1:8.5/60kg	6441 for 1:8.5/60kg	
	Weldable CMS Crossings	Weldable CMS Crossings	
	under heading (A) (i).	under heading (A) (i).	
	Flash Butt Welding Plant	Flash Butt Welding Plant	
	(FBWP) with all facilities	(FBWP) with all facilities	
	required for WCMS	required for WCMS	
	crossings added in Plant	crossings added in Plant	
	& Machineries and	& Machineries and	
	Assessment Proforma.	Assessment Proforma.	
	UVAM Portal on IREPS	UVAM Portal on IREPS	
	is added in clause vii) of	is added in clause vii) of	
	Part (A). Clause 5. & 6.	Part (A). Clause 5. & 6.	
	of Declaration has been	of Declaration has been	
	modified.	modified.	
		3. 00.00.2 3.0 The Minimum Facilities	
		023 & Machineries Required	
		has been modified to	
		include the "Electronic	
		dimensional	
		measurements with auto	
		recording facility". Para	
		2.0 is also modified	
		accordingly.	
4.	2.0 Purpose:	2.0 Purpose: Comments/ Sugge	
	This Item Specific Guidelines covers all	This Item Specific Guidelines covers all days of uploading:	
	technical requirements for manufacture and	technical requirements for manufacture and	
	supply of Cast Manganese Steel (CMS)	supply of Cast Manganese Steel (CMS) No comments received	ed.
	Crossings / Weldable Cast Manganese Steel	Crossings / Weldable Cast Manganese Steel	
	(WCMS) Crossings used for Fresh Vendor	(WCMS) Crossings used for Fresh Vendor	
	Registration/ Quality Audit of Vendors.	Registration/ Quality Audit of Vendors.	
	These Guidelines replaces the provisions of	These Guidelines replaces the provisions of	
	earlier guidelines issued on the similar	earlier guidelines issued on the similar	
	subject title i.e. QC-G-7.1-21 Ver. 1.0,	subject title i.e. QC-G-7.1-21 Ver. 1.0,	
	effective from 26.11.2011 (Old Document	effective from 26.11.2011 (Old Document	
	checuve nom 20.11.2011 (Old Document	CITCUIVE ITOIN 20.11.2011 (Old DOCUMCIII	

5.	No. TDG 0021, Rev.1, effect 26.11.2002) & TDG 0036, Rev.1 from 24.04.2012) and have been in a single Document. 3.0 Scope of Application:	1 (effective a combined	No. TDG 0021, Rev.1, e 26.11.2002) & TDG 0036, Refrom 24.04.2012) and have be in a single Document. The replace the provisions of ear issued vide Document No. Version No. 2.0, effective from 3.0 Scope of Application:	ev.1 (effective een combined ese guidelines lier guidelines TDG 0021, m 25.04.2023.	Comments/ Suggestions during 30	
	This shall be applicable for Fre registration, Quality Audit, up-gr Vendors and maintaining their application of vendors. In case of any between the procedure /provision the work instructions and that in a Specific Guidelines', the later shall the competent authority wherever to in this document shall mean Director Track-II / Principal Director, Infra-1.	radation of oproved list variation on given in this 'Item-tall prevail. ver referred Executive	This shall be applicable for registration, Quality Audit, u Vendors and maintaining their of vendors. In case of between the procedure /provide work instructions and that Specific Guidelines', the later The competent authority when to in this document shall me Director Track-II / Princip Director, Infra-1.	p-gradation of r approved list any variation ision given in t in this 'Item- r shall prevail. erever referred ean Executive	days of uploading: No comments received.	
6.	4.0 Procedure / Details: Procedurare annexed.	ure/ details	4.0 Procedure / Details: Procare annexed.	edure/ details	Comments/ Suggestions during 30 days of uploading: No comments received.	
7.	5.0 Referred Document:		5.0 Referred Document:		Comments/ Suggestions during 30	
	Document Name Do	ocumen	Document Name	Documen	days of uploading:	
	Indian Railway Standard Specification for Cast (la Manganese Steel (CMS) Crossings and Weldable Cast Manganese Steel (WCMS) Crossings	No. RS: T–29 atest evision)	Indian Railway Standard Specification for Cast Manganese Steel (CMS) Crossings and Weldable Cast Manganese Steel (WCMS) Crossings	(latest revision)	No comments received.	
8.	5.0 Referred Documents of Exte Origin: None	ernal	5.0 Referred Documents of I Origin: None	External	Comments/ Suggestions during 30 days of uploading: No comments received.	

9.	7.0 Ass	ociated	Recor	ds:			7.0 Ass	ociated	Recor	ds:			Comments/ Suggestions during 30
	Nil						Nil						days of uploading:
10	0.0 D	•1	•1• /	1 4 41	•,		0.0 D	•1	•1•4	1 4 41	•,		No comments received.
10.	8.0 Res	Respo			ority: Consul	Infor	8.0 Res	Ponsib Respo				Infor	Comments/ Suggestions during 30
	ty	nsible		orting		med	ty	nsible		Supp orting	Consul ted	med	days of uploading:
	Creati	ED/Tr		DD/A		All	Creati	ED/Tr		DD/A	M&C	All	No comments received.
	on,	ack-II/	nfra-I	IE/	Dte.	vendo	on,	ack-II/		IE/	Dte.	vendo	The comments reserved.
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	liance of	IE/AD E	or/Tra ck				liance	IE/AD E	or/Tra ck				
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	remen	ack-II/	nfra-1	IE/	Dte.		remen	ack-II/	nfra-1	IE/	Dte.		
	t of	Direct		ADE			t of	Direct		ADE			
	deviat	or/Tra					deviat	or/Tra ck					
	from	Desig					from	Desig					
	this	n-III					this	n-III					
	directi						directi						
	ve						ve						
11.	9.0 Abb						9.0 Abb						Comments/ Suggestions during 30
	PED/	Infra-1			Execut	ive	PED/	Infra-1			Execut	ive	days of uploading:
				irector /					- 1	irector /			No comments received.
			In	frastruc	ture-I				In	frastruc	ture-I		NO comments received.

ED/Track	Executive Director/
Design-II	Track Design-II
RDSO	Research Designs &
	Standards Organization
DD	Deputy Director
AIE	Assistant Inspecting
	Engineer
ADE	Assistant Design
	Engineer
M&C Dte.	Metallurgical &
	Chemical Directorate

ED/Track	Executive Director/
Design-II	Track Design-II
RDSO	Research Designs &
	Standards Organization
DD	Deputy Director
AIE	Assistant Inspecting
	Engineer
ADE	Assistant Design
	Engineer
M&C Dte.	Metallurgical &
	Chemical Directorate

A. ITEM SPECIFIC GUIDELINES FOR FRESH **VENDOR REGISTRATION / QUALITY AUDIT** OF FIRMS FOR MANUFACTURING OF CMS / WELDABLE CMS CROSSINGS:

In addition to the "ISO Apex Documents of RDSO (Latest version)" the following shall also be applicable for fresh Vendor Registration/Quality Audit of the firms for manufacturing CMS/WCMS Crossings.

CMS/WCMS CROSSINGS:

Crossings with variants of Acute CMS crossings RDSO/T-4867 viz. (1:8.5/52kg), RDSO/T-4967 (1:8.5/60 kg),RDSO/T-4734 (1:12/52kg), RDSO/T-4220 (1:12/60kg), RDSO/T-5693 (1:16/60 kg)RDSO/T-6093 (1:8.5)(1:8.5)LH/60kg), RDSO/T-6096 RH/60kg), RDSO/T-6099 (1:4.25/60kg), RDSO/T-8113 (1:12 LH/60kg), RDSO/T-8110 (1:12)RH/60kg) & RDSO/T-8116 (1:6/60kg) A. ITEM SPECIFIC GUIDELINES FOR FRESH **VENDOR REGISTRATION / QUALITY AUDIT** OF FIRMS FOR MANUFACTURING OF CMS / WELDABLE CMS CROSSINGS:

In addition to the "ISO Apex Documents of RDSO (Latest version)" the following shall also be applicable for fresh Vendor Registration/Quality Audit of the firms for manufacturing CMS/WCMS Crossings.

CMS/WCMS CROSSINGS:

i) The list shall be common for CMS i) The list shall be common for CMS Crossings with variants of Acute CMS crossings viz. RDSO/T-4867 (1:8.5/52kg), RDSO/T-4967 (1:8.5/60kg), RDSO/T-4734 (1:12/52kg), RDSO/T-4220 (1:12/60kg), RDSO/T-5693 (1:16/60 kg)RDSO/T-6093 (1:8.5)LH/60kg), RDSO/T-6096 (1:8.5)RH/60kg), RDSO/T-6099 (1:4.25/60kg), RDSO/T-8113 (1:12 RDSO/T-8110 LH/60kg), (1:12)RH/60kg) & RDSO/T-8116 (1:6/60kg)

- and Obtuse CMS crossings viz. RDSO/T-5265 (1:8.5/52kg), RDSO/T-6495 (1:8.5/60kg), RDSO/T-6102 (1:4.25/60kg) & RDSO/T-8119 (1:6/60kg) and the list shall be separate for WCMS Crossings with variants e.g. RDSO/T-6412 (1:12/60kg), RDSO/T-6441 (1:8.5/60kg). The firm should be in possession of all the requisites of Class 'A' foundry, as per Bureau of Indian Standards at the time of initial approval.
- ii) The firm shall be required to manufacture two sets of each design of CMS/WCMS Crossings for Internal Development (including one set for solidity test) and both should pass the tests. During Internal Development, all types of tests as mentioned in the relevant specifications shall be carried out by the firm. Seven stage inspections shall be required to be carried out during internal development /Prototype inspection.
- iii) After successful completion and approval of Internal Development (ID), the firm shall be asked to produce Eleven sets of Prototypes of the design under consideration (including one set of each design for solidity test). The initial approval as developmental vendor shall be given to the firm by the competent authority after the approval of all the above offered Prototypes and fulfilling other requirements as per ISO Apex Documents of RDSO-Latest Version.

- and Obtuse CMS crossings viz. RDSO/T-5265 (1:8.5/52kg), RDSO/T-6495 (1:8.5/60kg), RDSO/T-6102 (1:4.25/60kg) & RDSO/T-8119 (1:6/60kg) and the list shall be separate for WCMS Crossings with variants e.g. RDSO/T-6412 (1:12/60kg), RDSO/T-6441 (1:8.5/60kg). The firm should be in possession of all the requisites of Class 'A' foundry, as per Bureau of Indian Standards at the time of initial approval.
- ii) The firm shall be required to manufacture two sets of each design of CMS/WCMS Crossings for Internal Development (including one set for solidity test) and both should pass the tests. During Internal Development, all types of tests as mentioned in the relevant specifications shall be carried out by the firm. Seven stage inspections shall be required to be carried out during internal development /Prototype inspection.
- iii) After successful completion and approval of Internal Development (ID), the firm shall be asked to produce Eleven sets of Prototypes of the design under consideration (including one set of each design for solidity test). The initial approval as developmental vendor shall be given to the firm by the competent authority after the approval of all the above offered Prototypes and fulfilling other requirements as per ISO Apex Documents of RDSO-Latest Version.

Comments/ Suggestions during 30 days of uploading:

Track Design Dte. (Inspection Unit) of RDSO, suggested following modification in the existing clause:

Agreed to.

iv) For the purpose of Quality Audit the firm shall be required to produce two samples of CMS/WCMS Crossings of

- iv) For the purpose of Quality Audit the firm shall be required to produce two samples of CMS/WCMS Crossings for inspection by RDSO officials (including one sample for solidity test) and both should pass the tests.
- v) The gauges shall be approved/ revalidated at the time of inspection of infrastructural facilities during fresh Vendor Registration/Quality Audit of the firm.
- vi) The inspection gauges, internal development (ID) and Prototypes shall be approved by RDSO for each design of CMS/WCMS Crossings on order before start of regular production.
- vii)Up-gradation of Vendors from Developmental Vendors to Approved Vendors shall be done as per "ISO Apex Document of RDSO (Latest Version) and status of the Vendor in Item Master shall be uploaded on IREPS /UVAM Portal. Vendor should have supplied minimum 100 CMS/WCMS Crossings of that particular design for being eligible for up-gradation. In addition, desired consistent quality in the finished product should have been achieved, measured in terms of rejection rate which should be less than 5% (combining internal and external inspection) before consideration for up gradation. The rejection rate shall be measured with respect to the last 100 crossings CMS/WCMS of that particular design manufactured and supplied by the vendor.

- iv) For the purpose of Quality Audit the firm shall be required to produce two samples of CMS/WCMS Crossings for inspection by RDSO officials (including one sample for solidity test) and both should pass the tests.
- v) The gauges shall be approved/ revalidated at the time of inspection of infrastructural facilities during fresh Vendor Registration/Quality Audit of the firm.
- vi) The inspection gauges, internal development (ID) and Prototypes shall be approved by RDSO for each design of CMS/WCMS Crossings on order before start of regular production.
- vii)Up-gradation of Vendors Developmental Vendors to Approved Vendors shall be done as per "ISO Apex Document of RDSO (Latest Version) and status of the Vendor in Item Master shall be uploaded on IREPS /UVAM Portal. Vendor should have supplied minimum 100 CMS/WCMS Crossings of that particular design for being eligible for up-gradation. In addition, desired consistent quality in the finished product should have been achieved, measured in terms of rejection rate which should be less than 5% (combining internal and external inspection) before consideration for up gradation. The rejection rate shall be measured with respect to the last 100 crossings CMS/WCMS of that particular design manufactured and supplied by the vendor.

each drawing for inspection by RDSO officials (including one sample for solidity test) and both should pass the tests.

Agreed to.

vii) Up-gradation of Vendors from Developmental Vendors to Approved Vendors shall be done for sub item CMS/Sub item WCMS separately and provisions of as per "ISO Apex Document of RDSO (Latest Version) and status of the Vendor in Item Master shall be uploaded updated in vendor directory on IREPS /UVAM Portal. Vendor should have supplied minimum 100 CMS/WCMS Crossings of that particular design combining all variants of sub item CMS/Sub-item WCMS (as the case may be) for being eligible for upgradation. In addition, desired consistent quality in the finished product should have been achieved, measured in terms of rejection rate which should be less than 5% (combining internal and external inspection) before consideration for up gradation. The rejection rate shall be measured with respect to the last 100 CMS/WCMS crossings of that particular design manufactured and

B. N	IINIMUM FACILI	TIES & MA	CHINERIES	B.	. MII	NIMUM FACILI	TIES & MA	ACHINERIES	(upplied by the variation upplied by the variation upper the variat		luring 30	Agreed to.
•	UIRED FOR M /WCMS CROSSIN		JRING OF			IRED FOR M WCMS CROSSIN	IG:		•	lays	of uploading	;	, and the second	
S. No.	Description	Minimum Capacity	Minimum Quantity		S. No.	Description	Minimum Capacity	Minimum Quantity	1		k Design Dte.	•	-	
1.	Covered Area: i) For CMS		2000 sq. m		j	Covered Area: i) For CMS		2000 sq. m			D, suggested for e existing claus	_	odification	
	crossings ii) For WCMS crossings manufacturers only		3200 sq. m		i (crossings ii) For WCMS crossings manufacturers only		3200 sq. m	-	S. No. 1.	Description Covered Area: i) For CMS	Capacity 	2000 sq.	
2.	Sand Mullers	500 kg. 300 kg.	One No. One No.			Sand Mullers	500 kg. 300 kg.	One No. One No.			crossings ii) For WCMS crossings		m 3200 sq. m	
3.	Sand Testing laboratory (With standard Equipment's)		One Complete Set			Sand Testing laboratory (With standard Equipment's)		One Complete Set	-	2.	manufacturers only Sand Mullers	500 kg. 300 kg.	One No. One No.	
4.	Patterns/Core making facilities	As required	One set.			Patterns/Core making facilities	As required	One set.	-	3.	Sand Testing laboratory		One Complete	
5.	Mould/Core Drying facilities & mould boxes	As required	One set]	Mould/Core Drying facilities & mould boxes	As required	One set			(With standard Equipment's)		Set	
6.	Electric Arc Furnace (with	5T (approx.)	One No.		6.	Electric Arc Furnace (with	5T (approx.)	One No.		4.	Patterns/Core making facilities	As required	One set.	
	other refining & alloying facilities) and temperature measuring				i 1	other refining & alloying facilities) and temperature measuring				5.	Mould/Core Drying facilities & mould boxes	As required	One set	
7.	equipment Ladle for molten metal	5 T	One No.		7.	equipment Ladle for molten metal	5 T	One No.		6.	Electric Arc Furnace (with other refining	(approx.)	One No.	
8.	Heat treatment furnace: For 1:4.25/60kg, 1:6/60kg,	6m long with matching	One No.		8. 1 1	Heat treatment furnace: For 1:4.25/60kg, 1:6/60kg,	6m long with matching	One No.			& alloying facilities) and temperature measuring equipment			
	1:8.5/52kg,	width x		L		1:8.5/52kg,	width x			7.	Ladle for	5 T	One No.	

S.	Description	Minimum	Minimum	S.	Description	Minimum	Minimum
No.		Capacity	Quantity	No.		Capacity	Quantity
	1:8.5/60kg,	Height			1:8.5/60kg,	Height	
.	1:12/52kg,				1:12/52kg,		
.	1:12/60kg &				1:12/60kg &		
	1:16/60kg CMS				1:16/60kg CMS		
	crossings				crossings		
9.	Shot Blasting		One No.	9.	Shot Blasting		One No.
	Arrangement				Arrangement		
	(complete)				(complete)		
10.	Quenching			10.			
	tank (with				tank (with		
	water				water		
	circulating &	6m x 2.5m	One No.		circulating &	6m x 2.5m	One No.
	agitating	x 2.5m			agitating	x 2.5m	
	facility with				facility with		
	digital				digital		
	temperature				temperature		
	measuring				measuring		
	equipment):				equipment):		
	For 1:4.25/60kg,				For 1:4.25/60kg,	,	
	1:6/60kg,				1:6/60kg,		
	1:8.5/52kg,				1:8.5/52kg,		
	1:8.5/60kg,				1:8.5/60kg,		
	1:12/52kg,				1:12/52kg,		
	1:12/60kg &				1:12/60kg &		
	1:16/60kg CMS				1:16/60kg CMS		
	crossings				crossings		
11.				11.			
	Equipment	As	One No.		Equipment	As	One No.
	a) Oxy-cut	required	Five Nos.		c) Oxy-cut	required	Five Nos.
	b) Grinders	As			d) Grinders	As	
		required				required	
12.	Hydraulic Press	400 T	One No.	12.		400 T	One No.
13.	Welding		One set	13.			One set
	facility for				facility for		
	Austenitic				Austenitic		
	manganese				manganese		
	steel with				steel with		
	proper cooling				proper cooling		
	arrangements				arrangements		

S.	Description	Minimum	Minimum	S.	Description	Minimum	Minimum
No.	-	Capacity	Quantity	No.	_	Capacity	Quantity
14.	Finishing	· ·		14.	Finishing		
1	Equipment		Five Nos.		Equipment		Five Nos.
l	a) Pneumatic or				a) Pneumatic or		
l	rotary				rotary		
	grinder				grinder		
	b) Fettle Arc		One No.		b) Fettle Arc		One No.
	machine/				machine/		
	Gouging				Gouging		
	machine				machine		
		6 m stroke	One No.		c) Heavy duty	6 m stroke	One No.
1	planers or				planers or		
	Plano				Plano		
	millers:				millers:		
	For				For		
	1:4.25/60kg,				1:4.25/60kg,		
	1:6/60kg,				1:6/60kg,		
	1:8.5/52kg,				1:8.5/52kg,		
	1:8.5/60kg,				1:8.5/60kg,		
	1:12/52kg,				1:12/52kg,		
	1:12/60kg &				1:12/60kg &		
	1:16/60kg				1:16/60kg		
	CMS _.				CMS _.		
	crossings				crossings		
	d) Marking	6 m x 1m	One No		d) Marking	6 m x 1m	One No
	Table (with				Table (with		
	measuring				measuring		
	instruments				instruments		
):):		
	For				For		
	1:4.25/60kg,				1:4.25/60kg,		
	1:6/60kg,				1:6/60kg,		
	1:8.5/52kg,				1:8.5/52kg,		
	1:8.5/60kg,				1:8.5/60kg,		
	1:12/52kg,				1:12/52kg,		
	1:12/60kg &				1:12/60kg &		
	1:16/60kg CMS				1:16/60kg CMS		
1.5	crossings			1.5	crossings		
15.	Testing			15.	Testing		

S.	Description		1 1	S.	Description		Minimum
No.		Capacity	Quantity	No.		Capacity	Quantity
	Machines/Facilit				Machines/Facilit		
	ies:				ies:		
	a) Vacuum		One No.		a) Vacuum		One No.
	Spectrometer				Spectrometer		
	b) Universal	40 T	One No.		b) Universal	40 T	One No.
	Testing Machine				Testing Machine		
	c) Brinell		One No.		c) Brinell		One No.
	Hardness				Hardness		
	Testing Machine				Testing Machine		
	d) Poldi		One No.		d) Poldi		One No.
	Hardness				Hardness		
	Testing Kit				Testing Kit		
	e) DP Testing		One No.		e) DP Testing		One No.
	Equipment				Equipment		
	f) Polishing		One No.		f) Polishing		One No.
	Machine				Machine		
	g) Metallurgical		One No.		g) Metallurgical		One No.
	Microscope				Microscope		
	h) Radiograph		One No.		h) Radiograph		One No.
	Check-up				Check-up		
	Arrangement				Arrangement		
	i) *USFD		One No.		i) *USFD		One No.
	Machine				Machine		
	(For				(For		
	WCMSC				WCMSC		
	manufacture				manufacture		
	rs only)				rs only)		
16.	0	5 T	One No.	16.		5 T	One No.
	Equipment				Equipment		
17.	EOT Cranes	10 T	Two Nos.	17.	EOT Cranes	10 T	Two Nos.
			in each				in each
			bay				bay
18.	Inspection Bay		Separate	18.	Inspection Bay		Separate
			leveled				leveled
			area				area
			should be				should be
			dedicated				dedicated
			for				for

S.	Description	Minimum	Minimum	S.	Description	Minimum	Minimum
No.	*	Capacity	Quantity	No.	•	Capacity	Quantity
			proper				proper
			inspectio				inspectio
			n of				n of
			finished				finished
			crossings				crossings
			with				with
			Suitable				Suitable
			Nos. of Stands				Nos. of Stands
			and their				and their
			End				End
i			Fittings.				Fittings.
19.	Dedicated area		11011155.	19.	Dedicated area		- 10011150.
	with all above				with all above		
	machineries	1800-sq.m			machineries	1800-sq.m	
	installed in a	3000-sq.m			installed in a	3000-sq.m	approx.
	proper flow		(In case		proper flow		(In case
	line.		of FBW		line.		of FBW
	i) For CMS		Plant for		i) For CMS		Plant for
	crossings		WCMS .		crossings		WCMS
	manufacturers		crossings		manufacturers		crossings
	ii) For WCMS		manufact		ii) For WCMS crossings		manufact urers
	crossings manufacturers		urers		manufacturers		
	only		only)		only		only)
1	Office				Omy		
20.	Flash-Butt	One-Unit (Complete)	20.	Flash-Butt	One-Unit (Complete)
20.	Welding Plant	One-enit (With tri-	20.	Welding Plant	One-enit (With tri-
	with all		metallic		with all		metallic
	facilities.		welding		facilities.		welding
	(For WCMS		facilities.		(For WCMS		facilities.
	Crossings only)		1001110100.		Crossings only)		1401110105.
ĺ	= ===================================						
21	Straight Edge.	1.0 m		21.	Straight Edge.	1.0 m	
	(For WCMS	10 cm			(For WCMS	10 cm	
	Crossings only).				Crossings only).		
. D.	•	manufaat	ing WCMC	22.	Electronic	Adequate	
	or Rails used for 1				dimensional	to measure	
<u>C1</u>	ossings: - The h	ead, web a	and foot of				

each rail shall be ultrasonically tested by the manufacturers deploying a competent person before using the rails for manufacturing WCMS Crossing. A person possessing a competency certificate issued by Director General (M&C) RDSO shall be deemed to be a competent person.

Note: - It is preferable to have all the manufacturing and testing facilities covered under STR located at one premises. However, firm can be permitted to have facilities spread in more than one place provided they are under the same ownership with same name. The activities including testing and inspection carried out at these premises shall be clearly spelt out in the Quality Assurance Programme (QAP). These locations shall be termed as Ancillary units. The place where the material shall be offered for final inspection shall also be indicated in the QAP.

S	1	Minimum Capacity	Minimum Quantity
	measurements with auto recording facility	complete CMS/WC MS Crossing at critical locations as per relevant drawings	

* For Rails used for manufacturing WCMS Crossings: - The head, web and foot of each rail shall be ultrasonically tested by the manufacturers deploying a competent person before using the rails for manufacturing WCMS Crossing. A person possessing a competency certificate issued by Director General (M&C) RDSO shall be deemed to be a competent person.

Note: - It is preferable to have all the manufacturing and testing facilities covered under STR located at one premises. However, firm can be permitted to have facilities spread in more than one place provided they are under the same ownership with same name. The activities including testing and inspection carried out at these premises shall be clearly spelt out in the Quality Assurance Programme (QAP). These locations shall be termed as Ancillary units. The

place where the material shall be
offered for final inspection shall also
be indicated in the QAP.

S.	Description	Minimum	
No.		Capacity	Quantity
	molten metal		
8.	Heat treatment		
	furnace:	6m long	One No.
	For	with	
	1:4.25/60kg,	matching	
	1:6/60kg,	width x	
	1:8.5/52kg,	Height	
	1:8.5/60kg,		
	1:12/52kg,		
	1:12/60kg &		
	1:16/60kg		
	CMS crossings		
9.	Shot Blasting		One No.
	Arrangement		
	(complete)		
10.	Quenching		
	tank (with		
	water		
	circulating &	6m x 2.5m	One No.
	agitating	x 2.5m	
	facility with		
	digital		
	temperature		
	measuring		
	equipment):		
	For		
	1:4.25/60kg,		
	1:6/60kg,		
	1:8.5/52kg,		
	1:8.5/60kg,		
	1:12/52kg,		
	1:12/60kg &		
	1:16/60kg		
	CMS crossings		
11.	Fettling		
	Equipment	As	One No.
	a) Oxy-	required	Five Nos.
	cut	As	
	b) Grinders	required	
12.	Hydraulic Press		One No.

14.	C. ASSESSMENT PROFORMA FOR	C. ASSESSMENT PROFORMA FOR	Comments/ Suggestions during 30	
	APPROVAL OF MANUFACTURER FOR FRESH	APPROVAL OF MANUFACTURER FOR FRESH	days of uploading:	
	VENDOR REGISTRATION / QUALITY AUDIT	VENDOR REGISTRATION / QUALITY AUDIT	No comments received.	
	OF CMS / WCMS CROSSINGS	OF CMS / WCMS CROSSINGS	No comments received.	
	(To be prepared by the firm in duplicate –	(To be prepared by the firm in duplicate –		
	Attach extra sheets wherever necessary)	Attach extra sheets wherever necessary)		
	SECTION - I GENERAL	SECTION - I GENERAL		
	INFORMATION (FOR RECORD	INFORMATION (FOR RECORD		
	PURPOSE ONLY)	PURPOSE ONLY)		
	1. Name of the firm:	11. Name of the firm:		
	2. Postal Address of –	12. Postal Address of –		
	2.1 Head Office:	2.1 Head Office:		
	2.2 Works:	2.2 Works:		
	3. Telephone No. (with STD Code)/	13. Telephone No. (with STD Code)/		
	Mobile No. cum WhatsApp number –	Mobile No. cum WhatsApp number –		
	3.1 Head office:	3.1 Head office:		
	3.2 Works:	3.2 Works:		
	4. Fax & E-mail Address of –	14. Fax & E-mail Address of –		
	4.1 Head Office:	4.1 Head Office:		
	4.2 Works:	4.2 Works:		
	5. GST Identification Number of Firm:	15. GST Identification Number of Firm:		
	6. Description of Works	16. Description of Works		
	6.1 Total Land area (in sq. meters)	6.1 Total Land area (in sq. meters)		
	6.2 Total Covered area (in sq.	6.2 Total Covered area (in sq.		
	meters)	meters)		
	6.3 Different sub-units	6.3 Different sub-units		
	6.4 A fully dimensioned plan of the	6.4 A fully dimensioned plan of the		
	works showing covered area and	works showing covered area and		
	different shops shall be enclosed:	different shops shall be enclosed:		
	6.5 Special features, if any	6.5 Special features, if any		
	7. Number of personnel employed	17. Number of personnel employed		
	(category-wise)	(category-wise)		
	7.1 Managerial	7.1 Managerial		
	7.2 Supervisory (Enclose list of	7.2 Supervisory (Enclose list of		

	8. 9.	Managers/Technical Supervisors) 7.3 Skilled/Artisans 7.4 Unskilled Hours of working State whether the firm is already in		Managers/Technical Supervisors) 7.3 Skilled/Artisans 7.4 Unskilled Hours of working State whether the firm is already in		
		the Approved list of Vendors with RDSO for supply of CMS/ WCMSC Crossings. If so, please give details of last approval: 9.1 Letter date and issued by -		the Approved list of Vendors with RDSO for supply of CMS/ WCMSC Crossings. If so, please give details of last approval: 9.1 Letter date and issued by -		
		9.2 Date of expiry of validity of approval -		9.2 Date of expiry of validity of approval -		
	10.	If this application is an application for Quality Audit, have inclusion of any additional items in the approved list also been requested?	20.	If this application is an application for Quality Audit, have inclusion of any additional items in the approved list also been requested?		
15.	1	TION-II	1	TION-II	Comments/ Suggestions during 30	
	TEC	CHNICAL INFORMATION	TEC	HNICAL INFORMATION	days of uploading:	
	1. 1.1 1.2	Production Capacity Per month Per year	7. 1.1 1.2	HNICAL INFORMATION Production Capacity Per month Per year		
	1. 1.1	Production Capacity Per month	7. 1.1	Production Capacity Per month	days of uploading:	
	1. 1.1 1.2	Production Capacity Per month Per year Type of Stores / Items which the firm	7. 1.1 1.2	Production Capacity Per month Per year Type of Stores / Items which the firm	days of uploading:	

4.1 From State Electricity Board or other regular source (Enclose a copy of current Electricity Bill)
current Electricity Bill) 4.2 From own stand-by Power Generating sets (also give make, capacity & other details of each generating set). 5. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Current Electricity Bill) 4.2 From own stand-by Power Generating sets (also give make, capacity & other details of each generating set). 11. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
 4.2 From own stand-by Power Generating sets (also give make, capacity & other details of each generating set). 5. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity 4.2 From own stand-by Power Generating sets (also give make, capacity & other details of each generating set). 11. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
Generating sets (also give make, capacity & other details of each generating set). 5. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Generating sets (also give make, capacity & other details of each generating set). 11. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
capacity & other details of each generating set). 5. Crane facility Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Capacity & other details of each generating set). 11. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
generating set). 5. Crane facility Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Steel making 6.1.5 Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
5. Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity No. of Crane facility No. of Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Cranes Make Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity
Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity 5.1 EOT Crane 5.2 Mobile Crane 5.3 Jib Crane 5.3 Jib Crane 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
5.3 Jib Crane 6. Manufacturing facilities 12. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity 5.3 Jib Crane 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
6. Manufacturing facilities 6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity 12. Manufacturing facilities 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
6.1 Steel making 6.1.1 Type of furnace 6.1.2 Capacity 6.1 Steel making 6.1.4 Type of furnace 6.1.5 Capacity
6.1.1 Type of furnace 6.1.2 Capacity 6.1.5 Capacity
6.1.2 Capacity 6.1.5 Capacity
1.6.1.3 Stages of checking bath samples 1.6.1.6 Stages of checking bath samples
6.1.4 Bath homogenization arrangement 6.1.5 Carbon boil to be maintained 6.1.9 Carbon boil to be maintained
6.1.6 Steel killing practice. If Aluminum 6.1.10 Steel killing practice. If Aluminum
killing is followed please specify killing is followed please specify
maintaining of the residual maintaining of the residual
Aluminum content of the product Aluminum content of the product
6.1.7 Whether facilities for secondary refining of molten steel exist? If so, refining of molten steel exist? If so,
please give details. refining of motion steer exist: 11 so, please give details.
6.2 Proposed Raw Material to be used: 6.2 Proposed Raw Material to be used: 6.2.1 Proposed charge mix for CMS 6.2.1 Proposed charge mix for CMS
Crossing Crossing
6.2.2 Preventive measures taken to reduce 6.2.2 Preventive measures taken to reduce
tramp elements in the product. tramp elements in the product.

		Ι	
	Please specify.		Please specify.
6.2.3	Weighing facilities for ingredients	6.2.3	Weighing facilities for ingredients
	and additives charged into the		and additives charged into the
	furnace and ladle.		furnace and ladle.
6.2.4	Overhead Crane facility & capacity.	6.2.4	Overhead Crane facility & capacity.
6.3	Pattern making	6.3	Pattern making
6.4	Foundry (Sand Control System)	6.4	Foundry (Sand Control System)
6.4.1	Moulding {Hand /Machine (s) and	6.4.1	Moulding {Hand /Machine (s) and
	Mix Testing facilities}		Mix Testing facilities}
6.4.2	Core making	6.4.2	Core making
6.4.3	Mould and Core drying	6.4.3	Mould and Core drying
6.4.4	Decoring and shake-out	6.4.4	Decoring and shake-out
6.5	Dressing facilities (Mainly before and after heat treatment)	6.5	Dressing facilities (Mainly before and after heat treatment)
6.6	Shot Blasting facilities (Travel type/Discrete loading type).	6.6	Shot Blasting facilities (Travel type/Discrete loading type).
6.7	Heat treatment	6.7	Heat treatment
6.7.1	Size of the furnace	6.7.1	Size of the furnace
6.7.2	Type of furnace	6.7.2	Type of furnace
6.7.3	Size of Quenching tank ($L \times B \times H$):	6.7.3	Size of Quenching tank (L x B x H):
6.7.4	Cooling water system of the	6.7.4	Cooling water system of the
	quenching tank & digital		quenching tank & digital
	temperature measuring devices		temperature measuring devices
6.7.5	Distance of quenching tank from the	6.7.5	Distance of quenching tank from the
	furnace		furnace
6.7.6	Handling facility of crossing from	6.7.6	Handling facility of crossing from
	furnace to quenching tank		furnace to quenching tank
c	Digital temperature indicating and		Digital temperature indicating and

recording	facility	of	furnace
(Pyrometric	control de	evice).	

6.7.8 Heavy duty hydraulic press for straightening CMS/WCMS Crossings (indicating type and capacity)

6.8 Finishing facilities

- 6.8.1 Welding repair & grinding facilities
- 6.8.2 "Fettle Arc" Gouging machine
- 6.8.3 Plano milling machine with vertical cutter
- 6.8.4 Milling/Boring machine with horizontal cutters and rotating table
- 6.8.5 Other machines / facility for finishing fishing plane of fish plated area, flange way, wheel tread, bottom surface etc.
- 6.8.6 Facilities for checking welding defects on the crossings.
- 6.9 Inspection bay facilities (Inspection table with lighting arrangement handling facilities etc.)
- General working conditions i.e. proper lighting, ventilation and cleanliness.
- **6.10** A fully dimensioned plan of the works showing locations of various equipment and facilities for manufacture of CMS crossings/WCMSC, flow line indicating locations of various

- recording facility of furnace (Pyrometric control device).
- 6.7.8 Heavy duty hydraulic press for straightening CMS/WCMS Crossings (indicating type and capacity)

6.8 Finishing facilities

- 6.8.1 Welding repair & grinding facilities
- 6.8.2 "Fettle Arc" Gouging machine
- 6.8.3 Plano milling machine with vertical cutter
- 6.8.4 Milling/Boring machine with horizontal cutters and rotating table
- 6.8.5 Other machines / facility for finishing fishing plane of fish plated area, flange way, wheel tread, bottom surface etc.
- 6.8.6 Facilities for checking welding defects on the crossings.
- **6.9 Inspection bay facilities** (Inspection table with lighting arrangement handling facilities etc.)
- General working conditions i.e. proper lighting, ventilation and cleanliness.
- 6.10 A fully dimensioned plan of the works showing locations of various equipment and facilities for manufacture of CMS crossings/WCMSC, flow line indicating locations of various

	operations during manufacture in	operations during manufacture in		
	proper sequence and storage	proper sequence and storage		
	facilities for finished products may	facilities for finished products may		
	please be enclosed.	please be enclosed.		
	6.11 Flash Butt Welding Plant for WCMS	6.11 Flash Butt Welding Plant for WCMS		
	crossings:	crossings:		
	6.11.1 Flash Butt Welding Plant with all	6.11.1 Flash Butt Welding Plant with all		
	facilities required for WCMS	facilities required for WCMS		
	crossings (indicating Make)	crossings (indicating Make)		
	[For tri-metallic welding with CMS, INOX &	[For tri-metallic welding with CMS, INOX &		
	60E1-880 grade/ R-260 grade rails]	60E1-880 grade/ R-260 grade rails]		
16.	PAST PERFORMANCE	PAST PERFORMANCE	Comments/ Suggestions during 30	
			days of uploading:	
	1. List of important customers of the firm	1. List of important customers of the firm	No comments received.	
	(as relevant to the works for which	(as relevant to the works for which	No comments received.	
	requisition is sought)	requisition is sought)		
	2. Details of important orders executed in	2. Details of important orders executed in		
	past, in reference to the supplies made.	past, in reference to the supplies made.		
	2.1 To other important	2.1 To other important		
	firms/companies/undertakings etc.	firms/companies/undertakings etc.		
	2.2 Directly to the Railways	2.2 Directly to the Railways		
	3. Important Orders in hand:	3. Important Orders in hand:		
17.	QUALITY ASSURANCE PROGRAMME	QUALITY ASSURANCE PROGRAMME		
	1. Does the factory have any established	12. Does the factory have any established		
	Quality Assurance Programme as per	Quality Assurance Programme as per		
	ISO:9001 series? If yes, please enclose	ISO:9001 series? If yes, please enclose		
	a copy of the write-up in sequential	a copy of the write-up in sequential		
	order.	order.		
	2. Details of Quality Assurance	13. Details of Quality Assurance		
	Organization. Name of key personnel,	Organization. Name of key personnel,		
	their qualification, designation sand positions in overall management	their qualification, designation sand positions in overall management		
	structure (Explain with organizational	structure (Explain with organizational		
	Directore (Explain with Organizational	Stractare (Emplain with Organizational		

- chart, if necessary).
- facilities 3. Quality Control testing laboratory equipment available to be listed along with the make, year of procurement and commissioning.
- **4.** Calibration of Laboratory Equipment / Gauges, as indicated in Para 3 above (Enclose copy of Calibration Certificates):
- 4.1 How the calibration is done:
- instrument:
- 5. Source of procurement of raw materials / bought out items and steps taken to ensure their quality.
- **6.** Brief details of manufacturing process as relevant to the items for which registration is sought.
- 7. Details of inspection / checks done on material during various stages of the above manufacturing process (Enclose copy of QAP of CMS /WCMS Crossing).
- Has the acceptable value for the parameters inspected during above stage checks been laid down? If yes, the action taken against values of the parameters inspected does not meet the desired laiddown value
- 8. System for documentation of the results of the above stage check.
- Maintenance of Records: Records in respect of manufacture of CMS/WCMS Crossings should be maintained in proper registers.
- 9. Whether facilities for carrying out the 20. Whether facilities for carrying out the following tests are available, also

- chart, if necessary).
- 14. Quality Control testing facilities laboratory equipment available to be listed along with the make, year of procurement and commissioning.
- Test **15.** Calibration of Laboratory Equipment / Gauges, as indicated in Para 3 above (Enclose copy of Calibration Certificates):
 - 4.1 How the calibration is done:
- 4.2 Frequency of calibration of each 4.2 Frequency of calibration of each instrument:
 - 16. Source of procurement of raw materials / bought out items and steps taken to ensure their quality.
 - 17. Brief details of manufacturing process as relevant to the items for which registration is sought.
 - 18. Details of inspection / checks done on material during various stages of the above manufacturing process (Enclose copy of QAP of CMS /WCMS Crossing).
 - Has the acceptable value for the parameters inspected during above stage checks been laid down? If ves, the action taken against values of the parameters inspected does not meet the desired laiddown value
 - 19. System for documentation of the results of the above stage check.
 - Maintenance of Records: Records in respect of manufacture of CMS/WCMS Crossings should be maintained in proper registers.
 - following tests are available, also

indicate the capacity of each equipment	indicate the capacity of each equipment	
maker's name and calibration details etc.	maker's name and calibration details etc.	
9.1 Chemical Analysis	9.1 Chemical Analysis	
9.2 Spectrometric/Instrumental Analysis	9.2 Spectrometric/Instrumental Analysis	
9.3 Hardness test	9.3 Hardness test	
9.4 Tensile Bend Test	9.4 Tensile Bend Test	
9.5 Impact Bend Test	9.5 Impact Bend Test	
9.6 Izod / Charpy Impact Test	9.6 Izod / Charpy Impact Test	
9.7 Macroscopic test	9.7 Macroscopic test	
9.8 Dye-penetrant test	9.8 Dye-penetrant test	
9.9 Portable tester for checking residual	9.9 Portable tester for checking residual	A
magnetism	magnetism	Agreed to.
9.10 Microscopic test (if microscope	9.10 Microscopic test (if microscope	
with photographic attachment available)	with photographic attachment available)	
9.11 X-Ray	9.11 X-Ray	
9.12 Gamma Ray	9.12 Gamma Ray	Agreed to.
9.13 Any other test	9.13 Any other test	
10. Whether two sample set of CMS/WCMS Crossings of any one design are ready for inspection during Quality Audit (Report to be submitted by Inspecting Officials)?	21. Whether two sample set of CMS/WCMS Crossings of any one design are ready for inspection during Quality Audit (Report to be submitted by Inspecting Officials)?	
11. Whether the firm is possessing officially issued prints of relevant Drawings and Specifications?	22. Whether the firm is possessing officially issued prints of relevant Drawings and Specifications?	
	I .	

			Comments/ Suggestions during 30 days of uploading: Track Design Dte. (Inspection Unit) of RDSO, suggested following modification in the existing clause: 9.10 Microscopic test – Using microscope of magnification up to 500X with digital recording & printing facilities. 9.14 Static Bend Test – (200T min. capacity)	
18.	 DECLARATION: We do hereby declare that the above particulars are correct and no discrepancy shall be found during actual investigation before and during execution of order on our firm. Any change in the Plant & Machinery, change of place of office and of works site shall be brought to the notice of RDSO for clearance and approval. We also declare that our concern has not been black listed by Railway, 	 DECLARATION: We do hereby declare that the above particulars are correct and no discrepancy shall be found during actual investigation before and during execution of order on our firm. Any change in the Plant & Machinery, change of place of office and of works site shall be brought to the notice of RDSO for clearance and approval. We also declare that our concern has not been black listed by Railway, 	Comments/ Suggestions during 30 days of uploading: No comments received.	

	Railway Board/RDSO for business with	Railway Board/RDSO for business with
	the Railways.	the Railways.
4.	. We hereby undertake that all our	4. We hereby undertake that all our
	equipment for manufacturing and	equipment for manufacturing and
	testing as listed above shall be	testing as listed above shall be
	maintained in good working order at all	maintained in good working order at all
	times.	times.
5.	. We hereby declare that the contents	5. We hereby declare that the contents
	and instructions of ISO Apex	and instructions of ISO Apex
	Documents of RDSO have been read by	Documents of RDSO have been read by
	us and our firm shall agree to abide by	us and our firm shall agree to abide by
	all the stipulations laid therein.	all the stipulations laid therein.
6.	. We hereby undertake to maintain the	6. We hereby undertake to maintain the
	record of the procurement of raw	record of the procurement of raw
	material for production of CMS	material for production of CMS
	crossings/WCMSC, supply of CMS	crossings/WCMSC, supply of CMS
	crossings/WCMSC & disposal of scrap	crossings/WCMSC & disposal of scrap of
	of CMS crossings/WCMSC in the proper	CMS crossings/WCMSC in the proper
	format.	format.
Pl	ace:	Place:
	Signature of Manufacturer	Signature of Manufacturer
_	Office Seal	Office Seal

Date:

Date: