

TENDER SPECIFICATION

NO. CLW/MS/3/099.

WAG-9	ALT	①	②	③	④	⑤	⑥			
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ENCLOSURES :

DRG. NOS. : ~~12~~¹³ Nos. DRGS INDICATED IN ANNEXURE 'A'
~~DRG. NOS. INDICATED IN ANNEXURE 'B'~~

WAG-9	ALT.								
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TOTAL NO. OF SHEETS : 5+

ALT							
SHEETS							

SPECIFICATION
FOR
Ducting Assly for WAG-9 Locos

Issued by
Dy. CEE/CON/TU -I
C-D&D /CLW/CRJ

PREPD. BY	CHKD BY	REVIEWED BY	APPROVED BY	WAG-9 (CO-CO)	CENTRE for D & D CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-713331
<i>[Signature]</i>	<i>[Signature]</i> 10/7/98	<i>[Signature]</i> 11/7/98	<i>[Signature]</i> DY. CEE/ CON/TU	SPECIFICATION FOR DUCTING ASSLY FOR WAG/9-3PHASE ELECTRIC LOCOS.	NO. CLW/MS/3/099 DATE 10-7-98

TECH SPECIFICATION

No. CLW/MS/3/099 ALT. ~~1~~ ~~2~~ ~~3~~ ~~4~~ 5

SHEET-2

Technical specification for Ducting Assly- finished product of steel for used on WAG/9 - 3 phase Electric Locomotive of Indian Railways.

1. SCOPE:

This specification covers the minimum requirement of manufacturing Assly, Inspection & supply condition of complete Ducting Assemblies to be used for WAG/9 thyrestor based 3 phase Electric Locomotives.

- 1.1 Ducting Assly to be supplied in a set per Loco as per attached annexure 'A' the quantity of a set will be equal to the quantity of each item per loco indicated in the individual drg, meant for WAG/9 Locos.
- 1.2 Scope of supply for WAP/5 (Bo-Bo) Locos, refer sheet 2/A of Annexure 'B' of this specn.

2. GENERAL

Ducting Assemblies are manufactured from Anticorrosion steel and designed for streaming the air flow of filtered air received from strata Inertial filters to cool the mehine room, equipments, Traction motors, oil coolers, cables etc and protect from damage.

3. TECHNICAL REQUIREMENT

3.1 Corrosion resistant steel conforming to IRS-M41 Gr1 to be used in fabricating the Ducting Assly.

3.2 Edge preparation for Weld Joints, wherever required, shall be made properly to the requirement.

3.3 All the hardware items shall be conformed to specific standards given on the drg and be zinc passivated .

3.4 Anti corrosion treatment, abrasive blasting to be done before painting the assemblies.

3.4 Metal shall not be effected/Corroded when exposed ⁱⁿ 100% relative humidity or max ambient temperature & heavy rainfall.

4. MANUFACTURE

4.1 Anti corrosion steel conforming to IRS-M41 Gr1. sheet & plates to IRS-M41 to be used to manufacture Ducting & allied fittings as per drg indicated in Annexure 'A'.

4.2 Welding to be done as per IS:813 with proper & requisite grade of steel electrode.

4.3 Abrasive blasting to be done on metal surfaces prior to application of protective coatings.

4.4 Remove all grease, grime, oil, processing soil and other surface contaminations before painting.

4.5 Remove all sharp edges, conners, burrs, weld spatter and slag.

PREP BY <i>[Signature]</i>	CHD BY <i>[Signature]</i>	REVIEWED <i>[Signature]</i> 11/12/18	APPROVED BY <i>[Signature]</i> DY.CEE/TU-I	SPECIFICATION FOR DUCTING ASSLY FOR WAG/9, 3-PHASE ELECTRIC LOCOS.	CENTRE FOR D.E.D. CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN - 713331 NO. CLW/MS/3/099 DATE - 10-7-18
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4.6 Painting to be done as follows -

- 4.6.1 Apply two coats of primer sigma cover CM primer. Dry film thickness of two coats to be 150 microns min.
(CM Primer is a Polyamide cured epoxy primer)
- 4.6.2 Apply two coats of paint POLYU400 polyurethane based to min dry film thickness 30 microns of each coat. Colour of finish paint shall be as per the drg. Thus total thickness of coating system equal to 210 microns.
- 4.7 Jig & Fixtures to be used to maintain the geometry of the fabricated Assly. slots to be made die punched.
- 4.8 Total weight of each Ductig Assly after fabrication, shall not exceed, as indicated in the drg.

5. INSPECTION & TESTING

- 5.1 Inspection shall be done by the authorised representative of CLW at manufacturer's works premises. Any defect noticed during inspection shall immediately be rectified or replaced.
- 5.2 Warranty of the subject items shall be given by the supplier at least 10 years.
- 5.3 Leakage test to be done to ascertain the seal weld etc.
- 5.4 Single bend test & tensile test to be conducted.

③ 5.5 SEE SHEET NO. 4.

6. MANUFACTURER'S CERTIFICATE

- 6.1 The manufacturer shall furnish the certificate for the material used with Indian specification, Grade.
- 6.2 Test Certificate as mentioned in para 5.3 & 5.4.
- 6.3 Manufacturer will give guarantee of its internal quality control regulation and give the quality assurance of the product.
- 6.4 All aspects of design, workmanship & material will be covered under guarantee certificate furnished therefor by manufacturer.

7. LABELLING

- 7.1 Manufacturer shall provide follows particular on the product.
- 7.1.1 Description of the item with specn & grade.
- 7.1.2 Date, month and year of manufacture.
- 7.1.3 Manufacturer's name with Trade mark, batch number & Code number.

8. DELIVERY & PACKAGING

- 8.1 Ducting of Assly to be supplied as a complete unit and in a set as specified in the annexure along with hardware item indicated there in.
- 8.2 Protective packaging to be done which is suitable for transport & storage under the climatic & environment conditions in Para 3 & prevent from damage. Storage period of 24 months shall be considered.

PREP'D BY	CHD BY	REVIEWED	APPROVED BY	SPECIFICATION FOR DUCTING ASSLY FOR WAG/9-3 PHASE ELECTRIC LOCOS.	CENTRE FOR D & D. CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-71331 NO. CLW/MS/3/099 ALT. 4 DATE-10-7-98 ALT-276
<i>[Signature]</i>	<i>[Signature]</i> 10/7	<i>[Signature]</i> 10/7/98	<i>[Signature]</i> DY.CEE/TU-I		

ANNEXURE-'A' OF TECHNICAL SPECIFICATION NO. CLW/MS/3/099 WAG-9

DUCTING ASSEMBLY

SN	DESCRIPTION	QTY/ LOCO	DRG.No,	REMARKS
1.	FILTER DUCT ASSLY (T.M.)	2	1209-11.139-033	④
2.	SCAVENGE DUCT ASSLY-LOWER T.M. VENTILATION.	2	1209-11.139-022	②
3.	LOWER DUCT ASSLY-M, ROOM VENTILATION.	2	1209-11.144-036	ALT ①
4.	PLENUM ASSLY-T.M. VENTILATION.	2	1209-11.139.020	ALT ①
5.	SCAVENGER DUCT ASSLY-01L COOLER VENTILATION.	2	1209-11.144-037 Alt-(1)	
6.	SCAVENGER PIPE WORK ASSLY-M ROOM VENTILATION.	2	1209-11.244-038	ALT ①
7.	DUCT BEND ASSLY-M ROOM VENTILATION.	2	1209-11.244-035	ALT ①
8.	SLIP JOINT RING ASSLY-M ROOM.	2	1209-11.344-043	ALT ①
9.	SLIP DUCT ASSLY.OIL COOLER VENTILATION.	2	1209-11.344-040 ALT ①	
10.	SCAVENGER DUCT ASSLY-T.M. VENTILATION.	2	1209-11.339-034	ALT ①
11.	DUCT SUPPORT-01L COOLER VENTILATION	12	1209-11-444-041	ALT ①
12.	DUCT SUPPORT-01L COOLER	4	1209-11.444-044	ALT ①
13.	UPPER DUCT ASSLY (T.M. VENTILATION)	2	1209-11.139.035	ALT ①
14.	SEAL PLATE ASSLY. (T.M. Blower)	2	1210-11-339-016 IA-111-00095	ALT ① ⑤

- 5.5 1) PRIOR TO PROTOTYPE INSPECTION CLW'S REPRESENTATIVE WILL BE DEPUTED TO SEAL THE SMPLE PIECE OF THE MATERIAL SPECIFIED FOR TEST IN THE GOVT. APPROVED RDSO APPROVED TEST LAB. THE LAB. TEST REPORT SHOULD BE PRODUCED AT THE TIME OF PROTOTYPE INSPECTION.
 11) STANDARD PASTNERS OF M/S. TVS/M/S. LPS AND M/S. UNBREAKO & M/S. KUNDUN ONLY SHALL BE USED IN THE ASSEMBLY.
 111) THE SPRING WASHERS OF M/S. FORBES MAKE ONLY TO BE USED.

PREPD BY. <i>[Signature]</i>	CHD BY <i>[Signature]</i> 23.08.98	REVIEWED <i>[Signature]</i>	APPROVED BY. <i>[Signature]</i> Dy. CEE/ CON/TU-I	SPECIFICATION FOR DUCTING ASSLY FOR WAG-9- 3 -PHASE ELECTRIC LOCOS.	CENTRE FOR D&D CHITTARANJAN LOCOMOTIVE, CHITTARANJAN-713331. FIG NO: CLW/MS/3/099 ALT. ④ DATED: 10-7-98.
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RE-TYPED ④ ⑤ ⑥

CHITTARANJAN LOCOMOTIVE WORKS - CENTRE FOR DED

ALTERATION RECORD SHEET

ALT NO	DATE	DESCRIPTION	REASON	INITIAL DY CEE/CON/TOT
①		CLW/MS/3/099 ALT-① IS APPLICABLE FOR WAP-5 LOCO ONLY.		hul
②	26.07.99	DRG. NO 1209-11-144-037 DRG MODIFIED & DIMENSION CHANGED ACCORDINGLY. SEC. XX & SEC. YY & NOTE 9 ADDED. DIM. 135 WAS 35 AND ALONG WITH DRG. NO. 1209-11-344-040AUGMENT FOR WAG-9	DRG. MODIFIED TO ARREST THE SEEPAGE OF WATER THROUGH OIL COOLER DUCT IN THE MACHINE ROOM.	hul 27/7/99
③	24-03-02	CLAUSE 5.5 OF SHEET NO-3 ADDED.	AS DECIDED BY COMPETENT AUTHORITY.	Chinn
④	22-8-05	SL. NO. 13 OF ANNEX 'A' DELETED. DRG. NO. OF SL. NO. 14 INCORPORATED. SHEET 4 RETYPED SL. NO. 14 WITHDRAWN FROM THIS SPEC. FOR ALOTMENT OF SEPARATE CATEGORY.	SL. NO. 13 DELETED BY ABB TRANS. SHEET 4 WAS ILLEGIBLE	A. N. S.
⑤	01.02.06	SL. No 14 REINSTATED.	FOR EASIER PROCURE- MENT.	A. S.
⑥	30.1.2010.	SHEET 2 TO 5 FOR DUCTING ASSLY FOR WAP-5 LOCO - DETACHED FROM THIS SPECIFICATION AND NEW SPECIFICATION NO ALLOTTED FOR WAP-5 LOCO. L & CLW/MS/10/048	FOR EASIER AND CONCRETE - PROCUREMENT FOR WAP-5 LOCO.	S. K. S. 7/2/10

PREP'D BY L. S.	CHD S. S.	DRG. REF. CLW/SPCN NO - CLW/MS/3/099	REVIEWED 1	APPROVED
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