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## SPECIFICATION FOR DUCTING ASSLY. FOR WAG-9, WAP-7 LOCOS.

**SPECIFICATION No.CLW/MS/3/099 ALT.8**  
**ISSUE DATE: 10.07.1998.**

ISSUED BY:  
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<b>SSE/DRG&amp;DGN (M)</b>	<b>SSE/DRG</b>	<b>DY. CEE/D-III</b>

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**ALTERATION RECORD SHEET**

ALT. No.	DATE	DESCRIPTION	REASON	SIGNATURE
1		CLW/MS/3/099 ALT.1 IS APPLICABLE FOR WAP-5 LOCO.		S/d-
2	26.07.1999	DRG. No. 1209-11.144-037, DRG. MODIFIED & DIMENSION CHANGED ACCORDINGLY SECTION-XX SECTION-YY & NOTE-9 ADDED, DIMENSION 135 WAS 35 AND ALONG WITH DRG. NO. 1209-11.344-040 ALT1 FOR WAG-9	DRG. MODIFIED TO ARREST SEEPAGE OF WATER THROUGH OIL COOLER DUCT IN THE MACHINE ROOM.	S/d- 27.07.1999
3	24.03.2002	CLAUSE 5.5 ADDED	AS DECIDED BY COMPETENT AUTHORITY.	S/d- 24.03.2002
4	22.08.2005	SL. NO. 13 ANNEXURE-A DELETED DRG. NO. OF SL. NO. 14 INCORPORATED. SL. NO. 14 WITHDRAWN FROM THIS SPEC. FOR ALLOTMENT OF SEPARATE CATEGORY	SL. NO. 13 DELETED BY ABB TRANS.	S/d- 22.08.2005
5	01.02.2006	SL. NO. 14 RESINSTATED	FOR EASIER PROCUREMENT.	S/d- 01.02.2006
6	30.01.2010	SHEET FOR DUCTING ASSY. FOR WAP-5 LOCO DETACHED FROM THIS SPEC. AND NEW SPEC. NO. ALLOTTED FOR WAP-5 LOCO i.e. CLW/MS/10/048	FOR EASIER AND CONCRETE PROCUREMENT OF WAP-5 LOCC.	S/d- 03.02.2010
7	12.08.2022	ALT. NO. OF DRG. NO. 1209-11.139-022 IS CHANGED TO 4 ALT. NO. OF DRG. NO. 1209-11.139-020 IS CHANGED TO 2 IN ANNEXURE-A.	TO AVOID THE INFRINGEMENT THE FLANGE OF TM SCAVENGE DUCT ASSY. WITH THE FLANGE OF TM BLOWER LOUVRE/FILTER ASSY.	S/d- 12.08.2022
8		QTY/LOCO COLUMN DELETED FROM ANNEXURE-A AND NOTE ADDED BELOW ANNEXURE-A ITEM NO-13 ADDED AT ANNEXURE-A	TO AVOID CONFUSION OF QTY/LOCO FOR PROCUREMENT.	AMIT AGGARWAL Digitally signed by AMIT AGGARWAL Date: 2025.06.23 16:39:43 +05'30'

Specification have been digitized and all alterations have been incorporated

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**TECHNICAL SPECIFICATION FOR DUCTING ASSLY- FINISHED PRODUCT OF STEEL FOR USED ON WAG-9, WAP-7, 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, WAP-7 thyristor 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, WAP-7 Locos / Ref category number as mentioned in note below Annexure-A.

**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 machine room, equipments, Traction motors, oil coolers, cables etc and protect from damage.

**3. TECHNICAL REQUIREMNT:**

**3.1** Corrosion Resistant steel conforming to IRS – M-41 Gr.-1 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.

**3.5** 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-M:41 Gr.I sheet & plates to IRS-M:41 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.

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

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

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 Polyamid 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 AND TESTING:

5.1 Inspection shall be done by the authorized 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.

5.5 i) Prior to prototype inspection CLW'S representative will be deputed to seal the sample piece of the material specified for test in the government approved/ RDSO approved test lab. The lab test report should be produced at the time of prototype inspection.

ii) Standard Fasteners of M/S.TVS/M/S.LPS and M/S.UNBREAKO & M/S.KUNDUN only shall be used in the assembly.

iii) The spring washers of M/S.FORBES make only to be used.

## 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 therein by manufacturer.

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## 7. LABELING:

7.1 Manufacturer shall provide follows particular on the product:

7.1.1 Description of item with specification & grade.

7.1.2 Date, Month & Year of manufacture.

7.1.3 Manufacturer's Name with Trade mark, Batch number & Code number.

## 8. PACKAGING & DELIVERY:

8.1 Ducting of assembly 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 the transport and storage under the climatic and environmental conditions mentioned in Para 3 & prevent from damage. Storage period of 24 months shall be considered.

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## ANNEXURE-‘A’ OF TECHNICAL SPECIFICATION NO.CLW/MS/3/099

DUCTING ASSEMBLY

SN.	DESCRIPTION	DRG.NO.
1.	Filter Duct Assly (T.M)	1209-11.139-033
2.	Scavenge Duct Assly-Lower T.M ventilation	1209-11.139-022
3.	Lower Duct Assly-M Room Ventilation	1209-11.144.036
4.	Plenum Assly- T.M Ventilation	1209-11.139.020
5.	Scavenger Duct Assly-01L Cooler Ventilation	1209-11.144-037
6.	Scavenger Pipe Work Assly-M Room Ventilation	1209-11.244-038
7.	Duct Bend Assembly-M Room Ventilation	1209-11.244-035
8.	Slip Joint Ring Assembly-M Room	1209-11.344-043
9.	Slip Duct Assly Oil Cooler Ventilation	1209-11.344-040
10.	Scavenger Duct Assly- T.M Ventilation	1209-11.339-034
11.	Duct Support-01L Cooler Ventilation	1209-11.444-041
12.	Duct Support-01L Cooler	1209-11.444-044
13.	Seal Plate Assembly T.M Blower	1210-11.339-016

**NOTE:** QTY/LOCO & LATEST ALT. NO. OF DRAWINGS TO BE FOLLOWED AS MENTIONED IN RELATED CATEGORY NO.R/9/0061 FOR WAG-9HC AND WAP-7 LOCOS.

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