

# **SPECIFICATION FOR SET OF LOOMING BAR FOR WAG-9 (Co-Co) & WAP-5 (Bo-Bo) ELECTRIC LOCOMOTIVES**

**SPECIFICATION No. CLW/ES/3/0119 ALT.-H**

**ISSUE DATE: 31.03.2003**

Enclosure: DRG. Nos. FIG.1 TO FIG. 10

ISSUED BY:

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### ALTERATION RECORD SHEET

ALT. No.	DATE	REASON	AUTHORITY
A	10.02.1998	Wall thickness provided	S/d- 10.02.1998
B	31.03.1998	Development length provided for all the Figs. Width of all the flattened part have also been shown.	S/d- 31.03.1998
C	16.12.1999	Add looming bar included for WAP-5 SL. No. 8 & 9 of Scope of supply has been added to the specification.	S/d- 16.12.1999
D	29.12.2001	Removal of non usable looming bar, some looming bars are procured with the bare cubicle hence those are deleted from the specification.	S/d- 29.12.2001
E	31.03.2003	Spec. has been revised as per Shop requirement Vide Joint Note No: C-D&D/TOT/105 dt 02.01.2003	Sd/- 01.04.2003
F	17.02.2016	Material specification has been revised.	S/d- 17.02.2016
G	19.08.2022	Spec. has been revised for as per ELS-19 Shop requirement of quality for Type-4, 8 looming bar & Looming Bar for SB-1&2 vide letter forwarded by SEE/LOCO (SEE/EL)	S/d- 19.08.2022
H	20-08-2025	Qty/Loco Column Deleted From Para 4 (Scope of Supply) and Note added below Para 4. Material specification is updated.	

**Specification have been digitized and all alterations have been incorporated.**

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### TECHNICAL SPECIFICATION FOR LOOMING BARS FOR WAG-9 & WAP-5 LOCO

#### 1. SCOPE :

This specification covers the manufacture and supplies of SET OF LOOMING BAR of WAG-9 (Co-Co) & WAP-5 (Bo-Bo), 6000 HP, 3-Phase, 25 Hz, AC locomotives.

#### 2. SERVICE CONDITION:-

##### **Climatic and environmental condition:**

Maximum atmospheric temperature	: +70°C (in sun) & +50°C (in shade)
Ambient Temperature (Operating)	: -20 + 70°C
Ambient Temperature (Storage)	: -30... + 80°C
Normal humidity	: 60%
Maximum humidity	: 100% saturation during rainy season.
Altitude	: 160 m.a.s.l.
Rain Fall	: Very heavy in certain areas. The equipment should be designed in such a way as to withstand its running at 10 km/hr in flood water level of 102mm above rail level.
Atmosphere during hot weather	: Extremely dusty and desert terrain in certain areas.
Coastal areas	: Locomotive and equipment will be designed to work even in coastal area in humid and salty laden atmosphere.
Vibration	: The equipment sub-system and their mounting arrangement will be designed to withstand vibration and shock encountered in service as specified in correspondence unless otherwise prescribed.

#### 3. STANDARD:

~~DIN 2462~~ ISO 1127:1992 & ~~DIN 17458~~ DIN EN 10216-5:2021-06 or any other relevant International & Indian Standards IS:17875:2022 / IS:17876:2022 shall apply with respect to all materials used in the manufacture of LOOMING BAR.

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#### 4. SCOPE OF SUPPLY:

Fig. No.	DESCRIPTION OF LOOMING BAR	ABB IDENTIFICATION NO.	Material
1	375 X 80	3EHP431412P0010 (PANEL A)	Stainless Steel Tube DIN EN 10216-5:2021-06 Grade X6CrNiTi18-10 or IS:17875:2022 / IS:17876:2022 Grade X04Cr18Ni10Ti/Gr321 ALT 'H'
2	545 X 50	3EHP431492P0001 (MR Blower)	
3	96 X 60	HBTB410 024 P0002 (PANELC)	
4	136 X 90	HBTB410 025 P0003 (PANEL A & D)	
5	176 X 90	HBTB410 026 P0003 (PANEL A & D)	
6	247 X 120	HBTB410 027 P0004 (PANEL A)	
7	100 X 400	3EHP431370P0001 (Pre-Assly M/c Room HB-1 & 2)	
8	500 X 45	3EHP330303P0001 (DRIVER'S CAB)	
9	30 X 422	3EHP423040P1422	
10		BUFFER 25 x 15 M6 FOR SB-1/2	
11	158 X 50	3EHP431379P0001 (PANEL HB 1/2)	
12	240 X 120	3EHP431425P0001 (CAB 1/2) ONLY FOR WAP-5	
13	286 X 30	HBTB10 028 P0002 (Pre-Assly. HB-1) ONLY FOR WAP-5	
14	456	HBTB410028P0007	
15	456 X 60	HBTB410029P0007	

**NOTE:** Qty/Loco to be followed as mentioned in related category no. P/1/0284 in clubbed category no. P/0/0284, P/0/0284a and P/0/0284b for WAG-9HC, WAP-7 & WAP-5 locos. Also category no.P/0/0010 (for panel section), category no.P/0/0282, category no.P/1/0285 in clubbed category no.P/0/0285 for ELAAU/ DANKUNI.

#### 5. SUBMISSION OF TENDER QUOTATION:

- 5.1. All tender documents including the quotation shall be submitted in duplicate including any correspondence till a contract is finalized.
- 5.2. The tenderer shall give sufficient information to prove that his factory has adequate facilities and capacity to manufacture the Looming Bar to meet fully the technical requirements of the specification and quality of materials and workmanship.
- 5.3. Quotation shall not be considered complete unless all information is furnished and are therefore liable to be rejected.
- 5.4. Detailed drawings of the Looming Bar should be submitted for approval of purchaser.
- 5.5. Full Technical documents and drawings to be furnished by the supplier as part of the contract.

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**6. APPROVAL OF SAMPLE:-**

- 6.1.** The supplied shall make available at least two prototypes of the equipment as per the standards proposed to be supplied by him for inspection and tests at his works and advise the Dy. Chief Electrical Engineer/(D&D), Chittaranjan and Controller of Stores, Calcutta as and when he is ready with the prototype and necessary testing and measuring apparatus and facilities for carrying out the tests.
- 6.2.** After the above tests if it is considered necessary by the Dy.CEE/D/CONV. authorized representative to carry out any further tests or trials of the prototype at Chittaranjan, the Supplier will arrange for the same by the quickest means.
- 6.3.** The supplier shall not offer equipments of series production to the inspector authorized under the contract until the prototype has been finally approved. The supplied shall provide all facilities to the inspecting officer at his works, to inspect and test the equipment.

**7. TESTS:-**

Type test and routine test shall be carried out according to the ~~DIN-2462~~ **ISO 1127:1992** & ~~DIN17458~~ **DIN EN 10216-5:2021-06 or IS:17875:2022 / IS:17876:2022 or latest standard.**

**8. TECHNICAL DOCUMENTS TO BE SUPPLIED BY THE SUPPLIER:-**

- i) Type test reports: 4 Copies
- ii) Routine test reports along with each set: 4 Copies.
- iii) Detailed drawings 4 Copies.

**9. QUANTITY/LOCO:-**

As given in the scope of supply.

**10. LABELLING/MARKING:-**

Products should be marked with the following:-

- i) Type nos. of each product should be punched for identification.
- ii) Month & year of manufacture.
- iii) Name of manufacture with trademark, Code No. & Batch No.

**11. QUALITY ASSURANCE – AS PER ISO 9000.**

The firm should submit documentary evidence that it has either obtained ISO 9000 certification or is in the process of doing so.

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