

## TENDER SPECIFICATION

NO.: CLW/MS/3/065

ALT: ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩  
 20/10/97

## ENCLOSURES :

1. ANNEXURE: DRGS. AS INDICATED  
 AT PARA 2

TOTAL NO. OF SHEETS : 4+1+1

ALT:	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
SHEETS	5	2	2	1	2	2	2	2	2	2

SPECIFICATION  
FOR

POLYPROPELENE COMPONENTS TOBE USED IN  
 FOR WAG-9 A.C.FREIGHT LOCOMOTIVES (COCO)

## ISSUED BY :

CHIEF ELECTRICAL ENGINEER/CON/TU  
 CHITTARANJAN LOCOMOTIVE WORKS  
 P.O.: CHITTARANJAN - 713331  
 DIST: BURDWAN, WEST BENGAL (INDIA)

PREPD. BY	CHKD. BY	REVIEWED BY	APPROVED BY	SPECIFICATION FOR	D&D CENTRE CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN - 713331 DATE: 11.6.97 NO.: CLW/MS/3/065
20/10/97	20/10/97	20/10/97	20/10/97	POLYPROPELENE COMPONENTS	ALT. NO. ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
SUPDT	SME/D&D	DY. CEE/ CON/TU			

ALT-9 ⑩

P-12





**11. MARKING :**

Each component shall have clear readable marking of :-

- i) Manufacturer's name and trade mark if any
- ii) Month and year of manufacture (iii) Size (iv) SL.No. & Batch No.

**12. GURANTEEE**

12.1. Each component shall be guaranteed for satisfactory performance for a period of Six(6) years from the date of delivery or five(5) years from the date of the locomotive entering revenue service whichever is earlier. All aspects of workmanship and material will be covered by the guarantee.

12.2. The material which fails during guarantee period must be replaced by the manufacturer (contractor) free of cost.

**13. PACKING AND DELIVERY**

All components shall be properly packed to avoid damage during transit and storage- A min<sup>m</sup>. storage period of 24 months shall be considered.

**14. REFERENCE**





Polypropelene components used by M/s. ABB Transportation for WAG-9 class (Co-Co) electric locomotive are supplied by :-

(1) M/s. Unistrut Australia Pty.Ltd.  
P.O. Box 366  
15, Lipton drive.  
Thomastown 3074 (Australia )

(2) M/s. Stauff Corporation Pty. Ltd.  
P.O. Box 361  
73A Osborne Avenue  
Spring vale 3171 (Australia )

(3) M/s. Arkana Timber & Hardware Pty Ltd.  
P.O. Box 7030  
157, Lonsdale street  
Dandenong 3175 (Australia)

① (4) M/S INDUSTRIE PLASTICHE LOMBARDE (FOR CORRUGATED FLEXIBLE)  
VARESE, ITALY. DUCTING.  
OR  
M/S PURPLE PIG / AUSTRALIA / PL.

PREPD. BY	CHECKD. BY	REVIEWED BY	APPROVED BY	SPECIFICATION FOR POLY- PROPELENE COMPONENTS FOR 3 PHASE WAG9 LOCO MOTIVE	D&D CENTRE CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN - 713331 DATE: 11.6.97 NO: CLW/MS/34065
 CDM	 SUPDT.	 SME/D&D	 DY.CEE/CON/TU		ALT. NO. ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

## CHITTARANJAN LOCOMOTIVE WORKS CENTRE FOR D&amp;D

AMMENDMENT RECORD  
SHEETVERSION - 0.1.  
DATE OF ISSUE

SHEET - 5

AMMEND. MENT. NO.	DATE OF AMMEND-MENT.	SPECN. SHEET. PAGE NO.	DRAWING. NO.	ALT. NO.	AMMENDMENT DESCRIPTION.	REASON.
1.	15.09.97.	-	1209-11.344-039	NIL	CORRUGATED FLEX. DUCTING DRG. NEWLY MADE & INCORPORATED IN SPECN. NO. CLW/MS/3/05 UNDER ALT. ①.	MISSING ITEM.
		1.		①	NO. OF SHEETS 5 WAS 4.	
		2.		①	AGAINST SCOPE OF SUPPLY. SL. NO. 9 ADDED.	
		4.		①	ORIGINAL SUPPLIER'S ADDRESS ADDED.	15.9.97
2.	22.4.98	2		②	AGAINST SCOPE OF SUPPLY SL. NO. 10 ADDED.	02/4/98
3.	11.1.99	2		③	AGAINST SCOPE OF SUPPLY AT SL. NO. 3 ON PAGE NO. 2	DUE TO OVER LOOK. 11/1/99
4.	14.9.2001	2		④	LATEST ALT. NOS. HAVE BEEN PUT AGAINST DRG. NOS. FOR ITEMS AT SL. NOS. 1, 2, 3, 7, 8, 10 UNDER CLAUSE 2	14/9/01
5.	26.4.2002	2		⑤	OLD SHEET 2 DETACHED AND NEW SHEET 2 (FRESHLY TYPED) INCLUDED, INDICATING LATEST ALT. NOS. OF RELATED DRGS. DRG. NOS. AT ITEM SL. NOS. 4 & 5 IN SCOPE OF SUPPLY WERE 1209-16.417-006 & 1209-12.417-002 RESPECTIVELY.	26.4.02
6.	19.12.02	2		⑥	ITEM SL. NO. 9 UNDER SCOPE OF SUPPLY (CLAMP LIGHT DUTY) DELETED.	19/12/02
7.	26.12.03	2		⑦	QTY. OF ITEM AT SL. NO. 6 (150 NOS) WAS 100.	26/12/03
8.	02.3.04	2		⑧	QTY. OF ITEMS AT SL. NO. 6 WAS 150. LATEST ALT. NO. OF DRG. AT SL. NO. 6.	

PREP BY  
15/9.

CDM/1.

CHKD BY  
15/9/97.

S/1 (cm)

REVIEW BY  
15/9/97.


SME/DR

APPROVED BY  
doDY. CEE/  
CON/ITUSPECIFICATION  
FOR POLYPROPE  
LENE COMPONE  
NTS FOR 3 PHASE  
WAG 9 LOCOMOTIVED&D CENTRE  
CHITTARANJAN LOCOMOTIVE WORKS  
CHITTARANJAN - 713331  
DATE: 15.09.97  
NO. CLW/MS/3/065

ALT. NO. ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

## CHITTARANJAN LOCOMOTIVE WORKS

## AMMENDMENT RECORD SHEET

AMMENDMENT NO.	DATE OF AMMENDMENT.	SPEC. N-SHEET PAGE NO.	DRAWING NO.	ALT. NO.	AMMENDMENT DESCRIPTION.	REASON.
10	24.8.11	2	1209-18.306-116	4	ALT. 4 WAS ALT. 3 DUE TO COMMON DRG. FOR WAG-9 WAP-7 & WAP-5	 24/8/11
PREP.D. BY	CKD. BY.	REV. BY.	APPROVED BY.	SPECIFICATION FOR POLYPROPYLENE COMPONENTS FOR 3 PHASE INAG 9 LOCOMOTIVE D & D CENTRE CHITTARANJAN LOCOMOTIVE WORKS, CHITTARANJAN 713331, NO. CLW/MS/3/65 ALT. NO. 10		



**SPECIFICATION FOR POLY PROPELENE COMPONENTS TO BE USED IN WAG-9 LOCOMOTIVE.**

1. **SCOPE:** This specification covers the manufacture and supply of polypropylene components to be fitted in WAG9 locomotive mainly as supports for pipes of the pneumatic brake system

2. **SCOPE OF SUPPLY:**

1(one) set of Polypropylene components shall consist of

1. 3(three) nos. of clamp assly 'A' to Drg. nos. 1209-18.306-061 Alt-5, (Ref-1) 1209-18.406-062 alt -3 & 1209-18.406-064 alt-3

2. 6(six) nos. of clamp assly. to Drg. nos. 1209-18.306-065 Alt-4 & 1209-18.406-063 Alt-2.

3. 3(three) nos. of Bracket 'E' Assly. to Drg.No.1209-18.306-116 Alt-2 ④

4. 8(eight) nos. of Hose to Drg. no. 1209-16.417-026 Alt-NIL.

5. 8(eight) nos. of 25 NB Hose to Crg.No. 1209-12.417-027 Alt-NIL

151 (one Hundred Fifty one)

③ ⑦ 6. ~~100~~ (one hundred) nos. of Cable tie to Drg.No.1209-18.406-119 Alt-2 ③

④ 7. ~~46~~ (forty six) metres of cushion Unistrut to Drg.No.1209-18.406-117 Alt-2 ④

8. 3(three) nos. of Clamp Assly 'B' to Drg. nos. 1209-18.306-061 Alt-5 (Ref-2); 1209-18.406-062 Alt-3 & 1209-18.406-064 Alt-3

⑥ 9. ~~4~~ (four) nos. of clamp light duty to Drg.no. 1209-18.306-142 Alt-4

3. **CLIMATIC AND ENVIRONMENTAL CONDITIONS:**

(i) Max<sup>m</sup>. atmospheric Temp. Under sun 70°C Under Shade 50°C

(ii) Humidity : 100% saturation during rainy season.

(iii) Reference site conditions

(a) Ambient temp. Max<sup>m</sup>. 47°C Min<sup>m</sup>. 0°C (b) Humidity : 60%

(c) Altitude : 160 m above mean sea level

(iv) Rainfall : Very heavy in certain areas. The locomotive will be designed to permit its running of 10 km/hr. in flood water level of 102 gm above rail level

(v) Atmospher during: Extremely dusty and desert terrain in certain hot weather areas.

(vi) Coastal area: Equipment will be designed to work in coastal areas in humid and salt laden atmosphere.

(vii) Vibration: The equipment will be designed to with stand vibration and shocks encountered in service as specified in corresponding IEC-77 publications unless otherwise prescribed.

4. **STANDARDS:**

Standards used in this specifications

(i) IS:5986 Fe 410 (ii) IS:2062 Gr.C (iii) IS:2269 (iv) IS:1364 PB.8

5. **GENERAL AND TECHNICAL DATA**

(1) All polypropylene components shall work from -10°C to + 90°C

PREPD. BY	CHKD BY	REVIEWED BY	APPROVED BY	SPECIFICATION FOR POLYPROPELENE COMPONENTS FOR 3 PHASE, WAG9 LOCOMOTIVE.	CENTRE for D & D CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-713331
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>		NO: CLW/MS/3/065 DATE: 26.4.02
SE/DRG	SSE/DRG	AME/D&D II	DY.CME/D&D		ALT NO. ③ ⑥ ⑦ ⑧ ⑨ ⑩