

CHEMICAL & METALLURGICAL DEPARTMENT

1.0 PARTICULARS OF CHEMICAL & METALLURGICAL ORGANIZATION, FUNCTION & DUTIES

ORGANISATIONAL STRUCTURE

Dy. CCMT/CMT

↓
ACMT

↓
CMS

↓
CMA

AT A GLANCE

The CMT Organization has its Central Laboratory at Ajmer with its 09 Field Laboratories situated in different Workshops, Diesel sheds, RDI and ROH/Sickline Depots of North Western Railway. This Organization is playing a pivotal role towards quality and reliability of goods and passenger trains by way of conducting quality assurance & quality control tests and rendering advisory services on chemical & metallurgical aspects related to production activities in the shops of WR & NWR and metallurgical investigations of failed components.

ADDRESS : Dy. CCMT Office,
Central Laboratory, Carriage Workshop,
Johns Ganj, Ajmer

TELECOMMUNICATION Telephone: 0145-2663746 (P&T)
096-47104 (Rly)

NABL Accredited Chemical and Metallurgical Laboratory

C&M laboratory of North western Railway located at Carriage Workshop, Ajmer has been accredited in the field of testing of carbon estimation in steel and Rockwell Hardness Testing for both ferrous as well as Non-Ferrous material by National Accreditation Board for Testing and Calibration Laboratories (NABL). The Central Laboratory, Ajmer is accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) in the field of testing since 12/09/2019.

NABL certification is an assurance of the technical competence of the staff, authenticity and suitability of testing methods, confidentiality of testing, suitability of test equipment, calibration and maintenance, testing environment, handling and testing figures. With the above recognition, the test report issued by this laboratory will be valid at the national as well as international level.

Very few laboratories in Indian Railways are NABL accredited and this laboratory of carriage workshop, Ajmer is the first workshop's laboratory of Indian Railway to get accredited with the latest specification ISO / IEC 17025: 2017.

C&M laboratory of North Western Railway can provide the testing facility to industries, Government and Non Government organization for above said scope with suitable testing charges as applicable.

NABL Certificate No: TC-8652

Issue Date of NABL Certificate: 12/09/2019

Validity of NABL Certificate: 11/09/2021

FUNCTIONS & DUTIES

- a) Failure investigation laboratory to carry out chemical and metallurgical investigation of the failed component of the rolling stock and suggesting remedial measures.
- b) Fuel & Lubricant oil laboratory for carrying out quality assurance and quality control checks on fuel oils, axle oil, furnace oils and other lubricants.
- c) Water testing laboratory for testing of drinking water.
- d) Chemical & Mechanical test laboratory for testing of physical, chemical and metallurgical properties of ferrous, non-ferrous and non-metallic materials.
- e) Ultrasonic testing of axles and wheels and other non-destructive testing i.e. MPT, DPT of various coach, wagon and loco components facilities in field laboratories.
- f) Bio toilet's effluent testing lab for testing of pH, Total Dissolved Solids, Total Solids and Total Volatile Solids in the samples of bio toilet effluent of various coaches.

2.0 POWER AND DUTIES OF OFFICERS AND EMPLOYEES

1) Dy. CCMT/CMT:

- a) Overall responsibility of chemical and metallurgical organization and liaison with outside bodies etc.
- b) He has been delegated powers as per SOP Part 'A' to 'E' by GM of the North Western Railway.
- c) Any other duties/work assigned from time to time

2) ACMT:

- a) Overall responsibility of Field Lab under his control.
- b) Overall monitoring of metallurgical and chemical checks carried out in field lab under his control.
- c) Supervision of quality assurance checks carried out in lab under his control.
- d) Any other duties/work assigned from time to time.

3) CMS:

- a) Testing of materials for chemical, metallurgical physical, thermal, tribological and other properties required for railway use such as metals, alloys, paints, grease, water, fuel oil, lube oil, electrical cables, transformer oil, etc.
- b) To conduct non-destructive examination of materials by magnaflux, zyglol, dye-penetrant, radiography, UST and other available methods.
- c) To maintain the testing equipments and machines in satisfactory working order and initiate prompt action for repair and servicing as and when required.
- d) To ensure availability of consumables for testing purposes.
- e) To ensure availability of latest specifications, metal hand book, periodical and

technical books in the library and maintain it in a proper manner for technical use by the readers.

- f) To compile technical data and submit to his Sr. Staff/Controlling Officer in prescribed formats.
- g) To study technical literature on M&C aspects and give technical assistance to shop/shed officers whenever required.
- h) To undertake quality improvement projects, prepare reports, disseminate the same through group discussion, seminar and technical talks.
- i) To prepare code of procedure on UST and other M&C related aspects and apply the same for actual application.
- j) To monitor quality at the shop floor and advice remedial measures based on tests conducted in the lab, and knowledge on M&C aspects.
- k) To conduct investigation of failed components and submit reports.
- l) To guide and motivate the field M&C staff to carry out M&C related work satisfactorily.
- m) To prepare work instructions and specifications on products and process where knowledge of M&C aspects is involved under the guidance of Sr. Staff/Controlling Officer.
- n) To prepare proposals for purchase of new test equipments and initiate action for disposal of unserviceable T&P items under the guidance of Sr. Staff/Controlling Officer.
- o) To assist ACMT/CMT/Dy.CCMT in discharge of M&C related work in his office.

4) CMA:

- a) Testing of materials for chemical, metallurgical physical, thermal, tribological and other properties required for railway use such as metals, alloys, paints, grease, water, fuel oil, lube oil, electrical cables, transformer oil, etc.
- b) To conduct non-destructive examination of materials by magnaflux, zyglo, die-penetrant, UST and other available methods.
- c) To maintain the testing equipments and machines in satisfactory working order and initiate prompt action for repair and servicing as and when required.
- d) To ensure availability of consumables for testing purposes.
- e) To compile technical data and submit to his Senior Staff/Controlling Officer in prescribed formats.
- f) To prepare work instructions and specifications on products and process where knowledge of M&C aspects is involved under the guidance of Sr. Staff/Controlling Officer.
- g) To prepare proposals for purchase of new test equipments and initiate action for disposal of unserviceable T&P items under the guidance of Sr. Staff/Controlling Officer.
- h) To assist ACMT/CMT/Dy.CCMT in discharge of M&C related work in his office.

3.0 THE PROCEDURE FOLLOWED IN THE DECISION MAKING PROCESS, INCLUDING CHANNELS OF SUPERVISION AND ACCOUNTABILITY

The decision making process, channel of supervision and accountability is as below:

i) Dy. CCMT/CMT: He is responsible for implementing the policy guidelines received from HQ/ Railway Board/RDSO for all the works under him. He exercises all control over the system and staff under him within powers delegated and overall accountable for the system.

ii) ACMT: He works under the technical direction of Dy. CCMT/CMT and ensure compliance the directives issued. Being incharge of Field Lab., he issues necessary instructions, guidelines and activities prescribed under their duties. He is authorized to exercise all powers given to them and they are fully responsible and accountable for the same.

iii) Supervisors: They work under guidance of concerned Incharge, Officers/Supervisors and carry out various test and analysis in the Lab. The Incharge Supervisor is fully responsible and accountable for the work allotted to his unit.

4.0 NORMS SET BY ORGANISATION FOR THE DISCHARGE OF ITS FUNCTIONS: –

The quantum output per month of M&C Lab, Ajmer is given below on monthly basis.

No.	Activities	Average Monthly Output
1.	UST of Axles	1400–1800
2.	Failure Investigation	20–25
3.	Drinking Water Checks	05–10
4.	Quality Assurance Checks on Incoming Materials	20–30
5.	Quality Control Checks in Diesel POH Shop	2000–3000
6.	Quality Control Checks in Carriage Workshop	9000–10000
7.	Quality Control Checks on Fuel & Lubricants	10–20
8.	Quality Control Checks in Power House	100–150
9.	Bio-Toilet's Effluent Checks	20–30
10.	Testing of test piece for Welder Categorization	90–100

** Work activity and their targets may change subject to the requirement of the railways as decided from time to time.*

5.0 THE RULES, REGULATIONS, INSTRUCTIONS, MANUALS AND RECORDS, HELD BY IT OR UNDER ITS CONTROL OR USED BY IT'S EMPLOYEES FOR DISCHARGING ITS FUNCTIONS

Following documents/Manuals are kept by Carriage Shop, Diesel & Wagon Shop, Electrical Shops, Personnel Branch, Supervisors Training Centres, CMT organization & Accounts for necessary guidance for discharging their duties.

- i) Indian Railway Establishment Code I & II
- ii) Indian Railway Mechanical Code
- iii) Works Manual
- iv) Indian Railway engineering Code
- v) Indian Railway Finance code I & II
- vi) Schedule of Powers A to E issued by General Manager
- vii) Indian Railway Accident Manual
- viii) Factory Act 1948
- ix) Workman compensation Act
- x) Payment of wages Act
- xi) Service conduct Rules 1966
- xii) Pass and Pension Manual
- xiii) Accounts Code - Part-I,
- xiv) Provident Fund Manual
- xv) Finance Manual
- xvi) Engineering Code
- xvii) Store Code I & II
- xviii) Inspection Manual
- xix) An Introduction Railway
- xx) Administration & Finance
- xxi) Manual of Railway Pension Rules.

In addition manual/codes in above documents/Manuals, the following are also kept by **Electrical Workshops** for necessary guidance for discharging the duties

- a. Indian Electricity Act 1956
- b. Indian Electricity Rules 1959
- c. Electricity supply Act 1948
- d. Regulation of track crossing 1987

6.0 STATEMENT OF THE CATEGORIES OF DOCUMENTS WHETHER HELD BY IT OR ITS CONTROL:

Following documents/Manuals are kept by Carriage Shop, Diesel & Wagon Shop, Electrical Shops, Personnel Branch, Supervisors Training Centers, CMT organization & Accounts for necessary guidance for discharging their duties.

- i) Indian Railway Establishment Code I & II
- ii) Indian Railway Mechanical Code
- iii) Works Manual
- iv) Indian Railway engineering Code
- v) Indian Railway Finance code I & II
- vi) Schedule of Powers A to E issued by General Manager
- vii) Indian Railway Accident Manual
- viii) Factory Act 1948
- ix) Workman compensation Act
- x) Payment of wages Act

- xi) Service conduct Rules 1966
- xii) Pass and Pension Manual
- xiii) Accounts Code-Part-I
- xiv) Provident Fund Manual
- xv) Finance Manual
- xvi) Engineering Code
- xvii) Store Code I & II
- xviii) Inspection Manual
- xix) An Introduction Railway
- xx) Administration & Finance
- xxi) Manual of Railway Pension Rules

7.0 THE PARTICULARS OF ANY ARRANGEMENT THAT EXIST FOR CONSULTATION WITH , OR REPRESENTATION BY, THE MEMBERS OF THE PUBLIC IN RELATION TO THE FORMULATION OF ITS POLICY OR IMPLEMENTATION THEREOF.

For Chemical& Metallurgical Laboratory
 -----Nil-----

8.0 A STATEMENT OF THE BOARD COUNCIL COMMITTEES AND OTHER BODIES CONSIST OF TWO OR MORE PERSONS CONSTITUTED AS IT'S PART OR FOR THE PURPOSE OF ITS ADVISE AND AS TO WHETHER MEETINGS OF THOSE BOARDS COUNCIL COMMITTEE'S AND OTHER BODIES ARE OPEN TO THE PUBLIC, OR THE MINUTES OF SUCH MEETINGS ARE ACCESSIBLE FOR THE PUBLIC.

A Committee of Officers formed to deal with public representation related to Carriage Workshop, Diesel Loco & Wagon Workshop, Electrical Workshop, Personnel Branch, Accounts Office, Supervisors Training Centre, Electronic Data Processing Centre & Chemical & Metallurgical Laboratory

i)	Appellate Authority	Shri R. K. Moondra Chief Works Manager, Ajmer Office Tele. Phone No.[Rly] [Rly] 096 - 47000 [P & T] 2663731 Mob.No +919001196450
ii)	Public Information Officer	Shri Rajendra Kumar Saroya Workshop Personnel Officer Loco Workshop, Ajmer. Office Tele. Phone No. [Rly] 096 - 47004 [P & T] 2663730 Mob. No +919001196458

iii)	Asstt. Public Information Officer	Shri Ramesh Chand Meena AWM (L) Loco Workshop, Ajmer. [Rly] 096-47016, [P & T] 2663734 Mob. No +919001196460
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9.0 DIRECTORY OF OFFICERS OF CHEMICAL AND METALLURGICAL LAB, AJMER

Name of Officer	Designation	Post held	Telephone No.				Mobile	Fax	
			Railway		BSNL			Rly.	BSNL
			Off.	Res	Off.	Res.			
CHEMICAL & METALLURGICAL LABORATORY									
Suraj Singh	Dy.CCMT	Ajmer	47104	-	26637 46	-	90011964 55	47104	26637 46

10.0 THE MONTHLY REMUNERATION RECEIVED BY EACH OF ITS OFFICERS AND EMPLOYEES INCLUDING THE SYSTEM OF COMPENSATION AS PROVIDED IN ITS REGULATIONS

Designation	Scale (Pay band + Grade Pay) Level	No. of Employee	Average monthly salary including applicable allowances	Average productivity incentive per employee	Average total emoluments per employee
<u>OFFICERS</u>					
Dy.CCMT	15600-39100 + 6600 Level 11	01	133539	00	133539
<u>SUPERVISORS</u>					
CMS	9300-34800 + 5400 Level 9	05	124417	00	124417
CMS	9300-34800 + 4800 Level 8	10	102747	00	102747
CMS	9300-34800 + 4600 Level 7	10	58677	00	58677
CMA	9300-34800 + 4600 Level 8	01	100925	00	100925

CMA	9300-34800 + 4200 Level 7	00	-	-	-
CMA	9300-34800 + 4200 Level 6	01	67276	00	67276
OS	9300-34800 + 4200 Level 6	01	59436	00	59436

11.0 THE BUDGET ALLOCATED TO EACH OF ITS AGENCY INDICATING THE PARTICULARS OF ALL PLANS, PROPOSED EXPENDITURES & REPORTS ON DISBURSEMENT MADE

There is no separate budget allotted for M&C Organization. The budget of M&C Organization is merged with Carriage Workshop, Ajmer.

12.0 THE MANNER OF EXECUTION OF SUBSIDY PROGRAMME INCLUDING THE AMOUNTS ALLOCATED AND THE DETAILS OF BENEFICIARIES OF SUCH PROGRAMME

For Chemical & Metallurgical Laboratory
-----Nil-----

13.0 PARTICULAR OF RECIPIENTS OF CONCESSION PERMITS OR AUTHORIZATION GRANTED BY HIM.

For Chemical & Metallurgical Laboratory
-----Nil-----

14.0 DETAILS IN RESPECT OF THE INFORMATION, AVAILABLE TO OR HELD BY IT, REDUCED IN AN ELECTRONIC FORM.

For Carriage Workshop, Diesel Loco & Wagon Workshop, Electrical Workshop, Personnel Branch, Accounts Office, Supervisors Training Center, Electronic Data Processing Center & Chemical & Metallurgical Laboratory

- a. Notice inviting tender
- b. Tender schedule and specification
- c. Terms and conditions of the works contract
- d. General condition of contract
- e. Contract agreement

15.0 THE PARTICULARS OF FACILITIES AVAILABLE TO CITIZENS FOR OBTAINING THE INFORMATION, INCLUDING THE WORKING HOURS OF A LIBRARY OR READING ROOM, IF MAINTAINED FOR PUBLIC USE

For Chemical & Metallurgical Laboratory
-----Nil-----

16.0 NAMES, DESIGNATION AND OTHER PARTICULARS OF THE

PUBLIC INFORMATION OFFICERS

For Chemical & Metallurgical Laboratory

Name of Officer (Shri)	Designation	Telephone No.				Mobile	Fax	
		Railway (096)		BSNL (0145)			Rly.	BSNL
		Off.	Res	Off.	Res.			
R. K. Mundra	CWM & Appellate Authority	47000	44561	2663731	2422005	9001196450	-	2663731
Rajendra Kumar Saroya	WPO & P. I. O	47004	-	2663730	-	9001196458	-	-
Ramesh Chand Meena	AWM (L) & APIO	47016	-	2663734	-	9001196460	-	-