

## CHEMICAL & METALLURGICAL LABORATORY/JAMALPUR.

This is the Central Metallurgical & Chemical ISO approved laboratory monitoring total Eastern & E.C.Railway activities in the following fields –

### 1. Present Activities .

- a) Testing incoming raw material of store items.
- b) Disposable scrap testing.
- c) Effluent water testing.
- d) On line destructive testing
- e) On line ultrasonic testing.
- f) On line Magnetic Particle testing
- g) Zyglo & Dye penetrant testing –
- h) Welder Certification.
- i) Testing of Electrode.



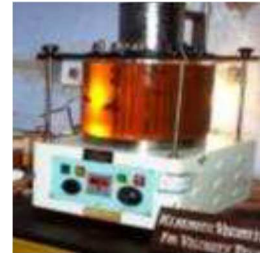
This test is carried out on Diesel and 140T Crane components to ensure freedom from surface crack.

### h) Chemical testing

It is carried out in conventional chemical process for both ferrous & non ferrous. Testing of plastic, rubber and lubricants grease,paint etc. are also being undertaken.



Chemical Testing



Viscosity Testing

### i) Metallographic Examination : -

Both macro & micro examination inclusion rating and case depth measurement . This is also utilized for grain size measurement.



Image Analyzer

### j) Physical testing:

Universal testing machine of 100T capacity is Available alongwith Charpy & Izod Impact testing machine. Various types of hardness testing machines like Brinell, Rockwell & Vickers testing machines are available.



Universal Testing



Impact Testing m/c

k) Non-destructive testing facility:

X-ray machine for testing of internal flaws of welding is available of capacity 300 KV, 5 mA. Internal Flaw of steel plate upto 15mm thickness is detectable. Qualified radiographer for conducting the test is available.



X-Ray Control Panel

l) Ultrasonic testing facility of any metallic components is available along with Magnetic Particle testing for detection of surface defects of metallic components.



Ultrasonic Flaw Detector



Magnetic Particle Testing m/c

**2. Annual Turn over**

Rs. 3.81 Cores

**3. Future planning**

Installation of Spectrometer for chemical testing of metal.  
Up-gradation of metallurgical & chemical

instruments.

**4. Other if any**

Nil

**5. Staff Strength**

Category	Sanctioned Strength	Staff on Roll	No. of vacancy
CMS	19	14	05
CMA	08	13	+5
Lab Asstt.-I	01	01	0
Lab Asstt.-II	01	01	0
Lab Asstt.-III	01	01	0