

PROJECT VALIDATION REPORT

Approved & Witnessed By

MR.VENKATESWARLU.N

IGCAR — Kalpakkam

Date: 06/02/2026

01



CUTTING &
PREPARATION

02



FABRICATION

03



HOT DIP
GALVANIZING

04



INSPECTION

05



VERIFICATION

HOT DIP GALVANIZED CABLE TRAYS
Tested & Verified as per IEC
61537 Standards



MSME

ISO 9001 : 2015
Quality Management System



ISO 3834-1:2021

Welding of metallic materials

IEC
61537



GALVANIZED CABLE TRAY TESTS

CONDUCTED AS PER IEC 61537

BY EURFINS LABORATORY



ELECTRICAL CONTINUITY

Testing Laboratory	Eurofins
Coupon Material	Plain Sheet (Raw Material)
Coupon Size	100 X 1000 X 2MM
Purpose	Galvanizing & IEC 61537 Testing (ELECTRICAL CONTINUITY)

✓ TESTS CARRIED OUT AS PER IEC 61537



HUMIDITY TREATMENT

Testing Laboratory	Eurofins
Coupon Material	Plain Sheet (Raw Material)
Coupon Size	100 X 500 X 2MM
Purpose	Galvanizing & IEC 61537 Testing (HUMIDITY TREATMENT)

✓ TESTS CARRIED OUT AS PER IEC 61537



SALT SPRAY

Testing Laboratory	Eurofins
Coupon Material	Plain Sheet (Raw Material)
Coupon Size	150 X 100 X 2MM (3 PCS)
Purpose	Galvanizing & IEC 61537 Testing (SALT SPRAY)

✓ TESTS CARRIED OUT AS PER IEC 61537



TEST REPORT

Test Report Issued To:

MDM ENGINEERING AND TECHNOLOGIES

NO.4 PADASALAI ROAD PKM CROSS STREET,
MELAYANAMBAKKAM,
CHENNAI, TAMIL NADU - 600095,
INDIA

Test Report No: N251118002/N251118002-10

Issue Date: 28-Jan-2026

Sample Booking/Receipt Date: 18-Nov-2025

Test Start Date: 24-Jan-2026

Test Completion Date: 25-Jan-2026



Customer Relationship Number 87516

Sample Description :

CABLE TRAY PRODUCT (Peforated,Ladder)

Customer Reference No :
PO No.: MDM/260/25-26 Date: 31.10.2025

Kind Attention : MR. BASKAR.D

E-Mail: sales@mdmtech.in

Contact No: 9384671858

Sample Condition : Good

Sample Quantity (Approx) : 1 - Nos

Sample Size (Approx) : NA - mm

SAMPLE NOT DRAWN BY OUR LABORATORY. THE RESULTS RELATE ONLY TO THE ITEMS TESTED

ANALYTICAL LABS
Digitally signed by
Surendra Kumar
Date: 2026.01.28
11:53:52 +05:30
GREATER NOIDA

Report Issued By

Authenticity of report can be verified by mail at verification@xoin.eurofinsasia.com

This is a Digitally Signed Report and hence doesn't require Physical Signature.

Legal Entity: Spectro Analytical Labs Private Limited (formerly Spectro Analytical Labs Limited), CIN : U74220DL1998PTC092698
(part of Eurofins Scientific SE)

S-1, GNEPIP, Surajpur Industrial Area, Phase-V, Kasna, Greater Noida-201308 (India)

+91-120-2341252, +91-11-40522000, +91-11-41611000 | www.spectro.in | care@spectro.in

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory

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TEST REPORT

Sr. No.	TEST PARAMETERS	REQUIREMENT	RESULT	TEST METHOD
1.	Continuity Test: - Test Condition: - ➤ Current: 25A	5 mΩ/meter (max)	2.4 mΩ/meter	IEC 61537
2.	Humidity Test: - Test Condition: - Test Temperature: 30°C Humidity: 93±2 % RH Test Duration: 24 Hours	-	No cracks, damage, breakage, discoloration, deformation and no any physical change occurred	IEC 61537

PHOTOGRAPHS (HUMIDITY TEST)



EUROFINS
Test Report
— Attached for Reference —




Surendra Kumar
Reviewed By


Digitally signed by
Surendra Kumar
Date: 2026.01.28
11:53:52 +05:30

Authorised Signatory

Legal Entity: Spectro Analytical Labs Private Limited (formerly Spectro Analytical Labs Limited), CIN : U74220DL1998PTC092698
(part of Eurofins Scientific SE)

S-1, GNEPIP, Surajpur Industrial Area, Phase-V, Kasna, Greater Noida-201308 (India)
+91-120-2341252, +91-11-40522000, +91-11-41611000 | www.spectro.in | care@spectro.in

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Laboratory

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2. FABRICATION

✓ Suitable for all industries
✓ Expert design support
✓ Nationwide projects

✓ In-house manufacturing
✓ Custom sizes & finishes
✓ ISO-certified quality

PERFORATED & RACEWAYS

LADDER



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3. HOT DIP GALVANIZING PROCESS

(As per IEC 61537 Standards)

Sample Cutting, Coupon Preparation & Hot Dip Galvanizing

- After completion of fabrication, **sample coupons of the required size** were cut from the fabricated material as per **IEC 61537 requirements**.
- The cut samples and finished fabricated materials were then **hot dip galvanized**.
- The galvanizing process was carried out under proper inspection and monitoring.

Photographic evidence has been attached showing:

- Material during **hot dip galvanizing (while dipping)**
- Material during **inspection after galvanizing**

These images clearly demonstrate the galvanizing process, coating condition, and compliance with IEC 61537

PROCESS OVERVIEW



Sample Preparation

Coupons cut from fabricated cable trays as per **IEC 61537** requirements



Fabrication Completion

Final products prepared before galvanizing



Hot Dip Galvanizing

Samples and trays immersed in molten zinc



Inspection & Monitoring

Continuous supervision during dipping process



Post-Galvanizing Verification

Surface coating, thickness, & finish checked

VISUAL EVIDENCE



Pre-Galvanizing Stage



Inspection During Process



Final Galvanized Output

COMPLIANCE

- ✓ Process executed as per **IEC 61537**
- ✓ Ensures uniform coating & corrosion resistance
- ✓ Verified through visual and physical inspection

This process validates the **durability, coating integrity, and compliance of MDM cable trays** for high-performance industrial applications.



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LADCO GALVANIZERS PRIVATE LIMITED



(QMS,EMS & OHSAS CERTIFIED COMPANY)

R-17,Sipcot Indl.Estate,Gummdipoondi-601201

Email: ladco2013@yahoo.com

Contact No : 9944080956,7299987431

TEST REPORT

: M/sMDMENGINEERING AND TECHNOLOGIES

Date : 06.02.2026

Material Receivedfrom

Std : IS 2629 - 1985

Description : Ladder Tray(450X100X2mm-28nos,150X100X2mm-26nos),Race ways (150X100X2-30nos), Cover-30nos, Perforated Tray(300X100X2mm-21nos, 150X100X2-28nos),Coneecting Plate-326nos, Ladder Tray(400X100X2mm-64nos,150X100X2mm-59nos,Race ways (150X100X2-70nos), cover-70nos, Perforated Tray(300X100X2mm-49nos, 150X100X2-64nos),Coneecting Plate-752nos.

Zinc Purity : 99.99 %

Consignee DC No. :387, 416

Required Microns : **85Microns**

Batch No : **LGPL/QC/ IR-1849/2025-2026**

1.PRECE TEST (IS2633-1986)

Type of Sample	No of one min DIP	Remarks
Test sample 1	One min.Dip.for 4 Times (4 mins)	No Copper Deposit Observed

2.STRIPPING TEST (IS 6745-1972)

Sample size					Length	Width	Thick
					100.08	32.06	2.08
Type of Sample	Thickness Galvanized mm	Black wt. gms	Coating wt.gms	Coatings gms/m ²	Remarks		
Test sample 2	2.08	52.39	47.17	5.22	749.26	105	OK

3.HAMMER TEST & KNIFE TEST (IS 2629-1985)

Type of Sample	Location			Remarks
Test sample 3	OK	OK	OK	No peel off observed

4.ELCOMETER TEST

Type of Sample	Readings in Microns at Location						Remarks
	A	B	C	D	E	Avg	
On the job	90	98	106	115	122	106	OK

5.INFERENCE

Quantity offered for inspection	Quantity Accepted	Quantity to be reworked	Remarks
1617nos	1617nos		Visual Inspection Satisfactory free from solidified drop and sharp edges

For LADCO GALVANIZERS PRIVATE LIMITED

In charge of Testing Galvanizers



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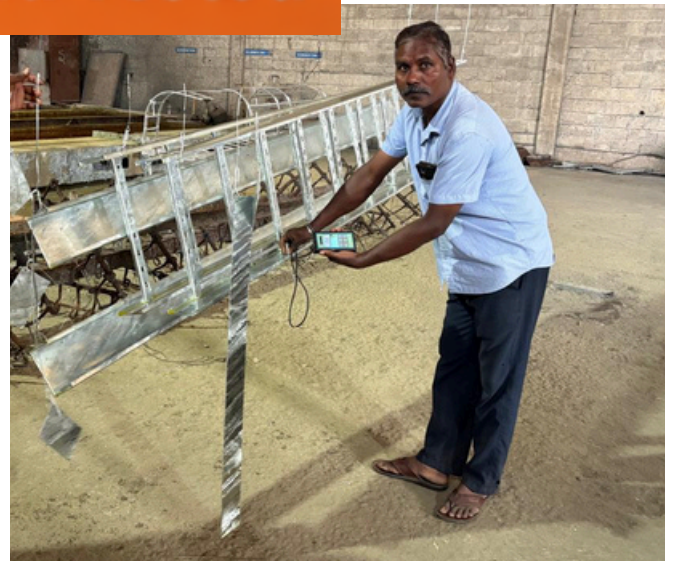
4. INSPECTION AFTER GALVANIZING

(As per IEC 61537 Standards)

Sample Galvanized and Tested



Fabricated Material Galvanized and Tested



These images clearly demonstrate the galvanizing process, coating condition, and compliance with IEC 61537

Post Galvanizing Inspection & Photographic Evidence

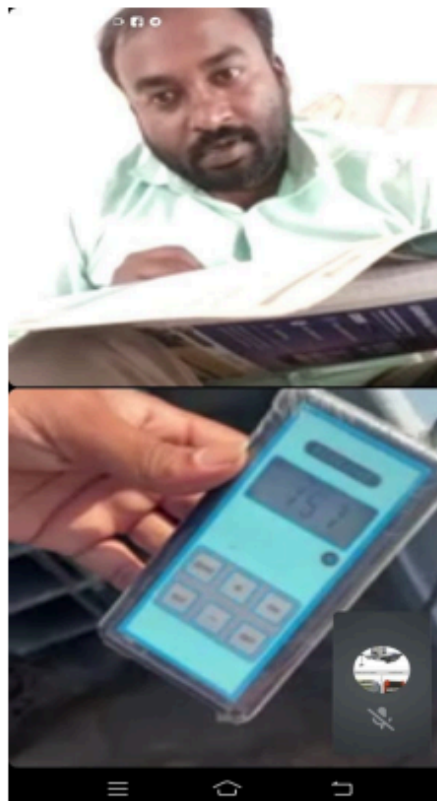
The post galvanizing inspection was carried out after completion of the hot dip galvanizing process.

Mr. Prabakaran (TMR) witnessed the inspection **online**.

Photographic evidence captured during the inspection, including **witness photos**, is attached for reference.

The inspection confirms that the galvanizing process and coating condition are in compliance with **IEC 61537** requirements.

Witnessed Inspection Online



Post Galvanizing Inspection & Photographic Evidence

 Witnessed Inspection Online



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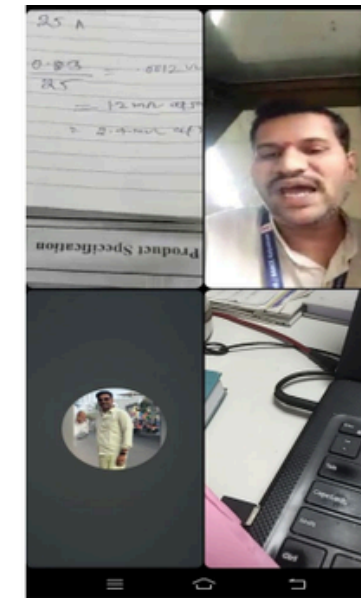
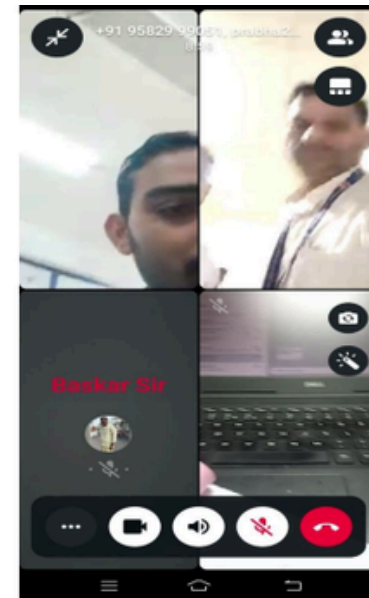
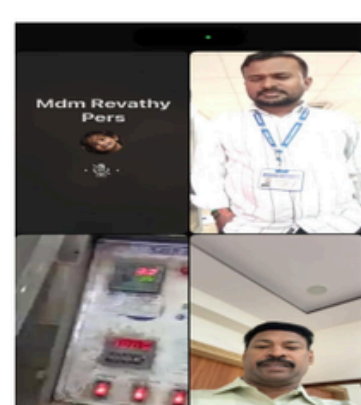
Salt Spray, Electrical Continuity & Humidity Test — • IEC 61537 •

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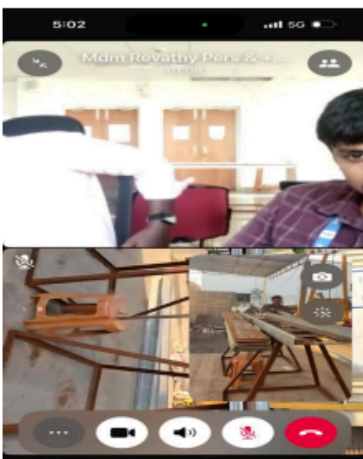
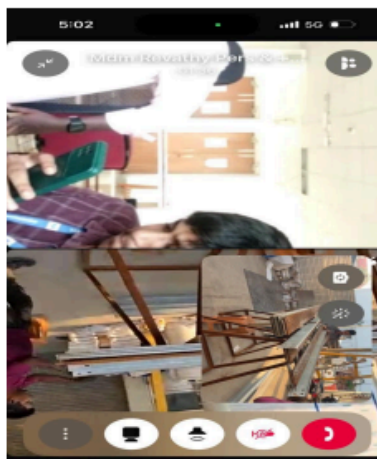
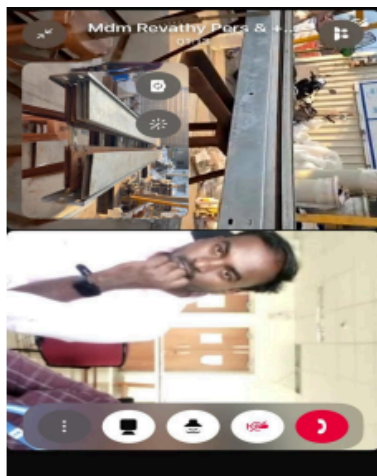
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LOAD TEST



Contact person		Inspection of HOT DIP GI CABLE TRAYS				Client :- M/A, RR Enterprises			
		Date :							
PROJECT:- BARC NRB, FRFCF, Kalpakkam									
DEFLECTION TEST REPORT									
DEFLECTION TEST AS PER SPECIFICATIONS APPLIED ON 300 & ABOVE WIDTH CABLE TRAYS. SO DEFLECTION TEST AS PER THE SPECIFICATIONS DONE ON 300 & 600 MM PERFORATED TYPE CABLE TRAY AND 300, 450 & 600 MM NON PERFORATED TYPE CABLE TRAY OF LENGTH 2500 MM. CABLE TRAY SUPPORTED AT BOTH END AND LOADED WITH UNIFORM DISTRIBUTED LOAD OF 100 KG PER METRE (250 KG IN FULL LENGTH). TOTAL APPLIED WT - 250 KG. THE MAXIMUM DEFLECTION OBSERVED AT MID POINT AS FOLLOWS:									
Sample no	Description	Quantities nos		UCL Applied on 2.5 mtr - Long Trays (100Kg/Mtrs)	Vertical reading from Centre point of deflection Table to the floor Level before Applying Load	Vertical reading from Centre point of deflection Table to the floor Level After Applying Load	Deflection at mid point (In mm)	Acceptable Limit of deflection Test Result	Remarks
		Tested qty (Nos)	Inspected Qty(Nos)						
		Accept	Reject		Read - 1(mm)	Read - 2(mm)	Reading	(mm)	
1) Perforated Type Cable tray of the Following Size :-									
a)	300mm x 100mm x 2mm	1	1	Nil	250	784	781	3	<7mm Result found satisfactory
b)	150mm x 100mm x 2mm	1	1	Nil	250	784	780	4	<7mm Result found satisfactory
2) Non- Perforated Type Cable tray of the Following Size :-									
a)	150mm x 100mm x 2mm Tray	1	1	Nil	250	784	781	3	<7mm Result found satisfactory
3) Ladder type cable tray of the Following Size :-									
a)	450mm x 100mm x 2mm	1	1	Nil	250	784	780	4	<7mm Result found satisfactory
b)	150mm x 100mm x 2mm	1	1	Nil	250	784	781	3	<7mm Result found satisfactory
Note :- Nos cable tray (closeup after Applied Bove Load									



Note :- Non cable tray collapse after Applied Above Load



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MS-2062 Hot Dip Galvanised Ladder tray Without Cover Model No: LCT01 As Per IS-2629 85 -90 microns 610gsm (2.5mtrs Length)										DIMENSIONS ((in mm) LOT QTY-132			
NOS SAMPLE QTY-10 NOS													
Sl.No	Parameter	Specified Dimensions	Observed										Remarks
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	
1	Length	2500±4	2500	2501	2500	2499	2500	2500	2501	2500	2499	2500	
2	Width	□□□□□□	450	450	451	450	450	2500	2501	2500	2499	2500	
3	Height	□□□□□□	100	100.2	100	100	100	450	450	451	450	450	
4	Thick	2±0.08	1.99	1.99	2	2.01	1.99	100	100.2	100	100	100	
MS-2062 Hot DipGalvanised LaddertrayWithout Cover Model No: LCT01 As PerIS-262985 -90 microns 610gsm (2.5mtrs Length)													
DIMENSIONS ((in mm) LOT QTY-122 NOS SAMPLE QTY-10 NOS													
Sl.No	Parameter	Specified Dimensions	Observed										Remarks
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	
1	Length	2500±4	2500	2501	2500	2499	2500	2500	2501	2500	2499	2500	
2	Width	□□□□□□	150	151	150	150	149.5	150	150	150	150	150	
3	Height	□□□□□□	100	100.2	100	100	100	450	450	451	450	450	
4	Thick	2±0.08	1.99	1.99	2	2.01	1.99	100	100.2	100	100	100	
MS-2062 Hot Dip Galvanised Raceways with cover Model No: RW01 As Per IS-277 (2.5 Mtr Length) DIMENSIONS ((in mm) LOT QTY-148 NOS SAMPLE QTY-10 NOS													
Sl.No	Parameter	Specified Dimensions	Observed										Remarks
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	
1	Length	2500±4	2500	2501	2500	2499	2500	2500	2501	2500	2499	2500	
2	Width	□□□□□□	150	151	150	150	149.5	150	150	150	150	150	
3	Height	□□□□□□	100	100.2	100	100	100	450	450	451	450	450	
4	Thick	2±0.08	1.99	1.99	2	2.01	1.99	100	100.2	100	100	100	
MS-2062 Hot Dip Galvanised cover Model No: PCC01 As Per IS-277 (2.5 Mtr Length) DIMENSIONS ((in mm) LOT QTY-148 NOS SAMPLE QTY-10 NOS													
Sl.No	Parameter	Specified Dimensions	Observed										Re mar k s
			S 1	S 2	S3	S4	S5	S6	S 7	S8	S9	S10	
1	Length	2500±4	2500	2501	2500	2499	2500	2500	2501	2500	2499	2500	
2	Width	□□□□□□	158	158	158.5	158.5	158.5	158	158	158.5	158.5	158.5	
3	Height	□□□□□ □	100	100.2	100	100	100	450	450	451	450	450	
4	Thick	2±0.08	1.99	1.99	2	2.01	1.99	100	100.2	100	100	100	

MS-2062 Hot Dip Galvanised Perforated without cover Model No: PCT01 As Per IS-277 (2.5 Mtrs Length) DIMENSIONS ((in mm) LOT QTY-102 NOS SAMPLE QTY-10 NOS													
Sl.No	Parameter	Specified Dimensions	Observed										Remarks
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	
1	Length	2500±4	2500	2501	2500	2499	2500	2500	2501	2500	2499	2500	
2	Width	□□□□□□	300	301	299.8	300	301	299	300	300	300	300	
3	Height	□□□□□□	100	100.2	100	100	100	450	450	451	450	450	
4	Thick	2±0.08	1.99	1.99	2	2.01	1.99	100	100.2	100	100	100	
MS-2062 Hot Dip Galvanised Perforated without cover Model No: PCT01 As Per IS-277 (2.5 Mtrs Length) DIMENSIONS ((in mm) LOT QTY-224 NOS SAMPLE QTY-10 NOS													
Sl.No	Parameter	Specified Dimensions	Observed										Remarks
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	
1	Length	2500±4	2500	2501	2500	2499	2500	2500	2501	2500	2499	2500	
2	Width	□□□□□□	151	150	150	150	150	150	150	150	149.5	149.8	
3	Height	□□□□□□	100	100.2	100	100	100	450	450	451	450	450	
4	Thick	2±0.08	1.99	1.99	2	2.01	1.99	100	100.2	100	100	100	



Dispatch Clearance – As per IEC 61537

Request for Dispatch Clearance – As per IEC 61537 External > Inbox x MARKETING - REVATHY x

AI Overview

- MDM Technology requested dispatch clearance after completing IEC 61537 tests.
- MDM Technology followed up by attaching the required documents and test reports.
- Venkateswarlu granted dispatch clearance, requesting hard copies of test reports with the material.

By Gemini; there may be mistakes. Learn more



MDM Technology <sales@mdmtech.in>
to venkateswarlu, A.RAVI ▾

Tue, Feb 10, 9:31 AM



Dear Sir,

As per our discussion, we have completed all the required tests **as per IEC 61537** during the online inspection.We are now ready to dispatch the material to **RR Enterprises**. Hence, we kindly request you to provide the **dispatch clearance from your side** at the earliest, so that we can place the vehicle and proceed with dispatch without delay.

Regards

Revathy.R

9384671858

V

Venkateswaralu <nvenki@igcar.gov.in>
to me, A.RAVI ▾

Sir,

Refer to trailing mail,

Material may be dispatched.

Note :- send the hard copies of test reports and calibration certificates along with materials.

Regards,

Venkateswarlu.N



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MR.VENKATESWARLU.N

IGCAR — Kalpakkam

Date: 06/02/2026



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