



## COURSE FEES

The fees are reasonably priced & are highly subsidized at Rs. 4,130/- (Incl. of GST) for MFAI members and Rs. 7,670/- for non-members.

**Course fee includes :** The delegate kit with course material, lunches, tea, refreshments and industrial visits.

## DATES & TIMINGS

# 06<sup>th</sup> July to 11<sup>th</sup> July 2026

Timing : 10 am to 5 pm | Lunch : 1 pm to 1.45 pm

Tea / Coffee breaks between Lecture Sessions.

## REGISTRATION

Please send the registration form duly filled to the MFAI office along with a Cheque / D.D. payable at Mumbai, in favour of Metal Finishers' Association of India. As the course is limited to **50 participants** only, seats will be allotted on First come first serve basis. We would appreciate if the Registration is confirmed preferably latest by 15th June 2026. The registration, confirmation & any other clarification can also be done by phone (Mr. Babu - 49240693 / 98924 96942 / 85911 37274).

### Bank Details :

A/c Name : Metal Finishers' Association of India  
Bank Name : Canara Bank  
Address of Bank : Plot No. 3 & 4, Samant Estate, Goregaon (East), Mumbai - 400 063.  
Bank A/C No. : 50172010011451  
Account Type : Saving  
IFSC Code : CNRB0015017  
MICR Code : 400015208

## DISCLAIMER / NOTE

Safety of the participant during the certificate course or outdoor visit is the sole responsibility of the participant and MFAI is not responsible for any untoward accident.



# 31st Certificate Course in

# ELECTROPLATING & METAL FINISHING

A comprehensive course designed specially for the benefits of those who wish to enter the profession as entrepreneurs or want to improve METAL FINISHING SKILLS in their existing plants

## 06<sup>th</sup> July to 11<sup>th</sup> July 2026



EXPERT LECTURES



INDUSTRIAL VISIT



DELEGATE KIT



TEA / COFFEE BREAKS



LUNCH INCLUDED



## Metal Finishers' Association of India

Society Regn No. : MAH/Bom/259/74 - G.B.B.S. Dt. 13.9.1974

Charity Commissioner Greater Bombay Region

Maharashtra State No. F/3465 Bombay Dt. 11-12-1974

📍 203, Atlanta Estate, Vitbhatti, Goregaon - Mulund Link Road, Goregaon (East), Mumbai - 400 063.

☎ Mr. Babu 022-49240693 / 98924 96942 / 85911 37274

✉ mfaihq@gmail.com 🌐 www.mfai.org

## COURSE OBJECTIVES

To impart technical skills for productivity, quality control, cost control and trouble shooting as well as effective supervision of the shop-floor. The course content has been devised by experts keeping in view the requirements of Electroplating and Metal Finishing Industry. The lectures will be delivered by well known experts and consultants in the field and will be fully practice oriented. This course aims at giving extensive coverage to all aspects of SURFACE FINISHING.

## COURSE CONTENTS

**BASIC ELECTROCHEMISTRY:** pH, Faraday's Laws, Electrode, Potentials, EMF Series, Current Density, Current and Energy Efficiencies and Significance of Throwing Power.

**MASS FINISHING :** Abrasive Blasting, Shot Peening, Buffing and Mechanical Polishing.

**PRE-TREATMENT AND CLEANING :** Principles and Applications of Solvent Cleaning, Soak and Electrocleaning Ultrasonic Cleaning, Acid Pickling, Alkaline de-rusting.

**ZINC AND CADMIUM PLATING :** Cyanide Processes, Acid Zinc Processes, Alkaline (cyanide free) Processes, Chromate Passivation (tri-valent and hexa-valent chromium). Zn-Co, Zn-Ni and Zn-Fe alloy coatings.

**COPPER PLATING :** Cyanide Process, Acid Copper, Fluoborate and Pyrophosphate Baths, Alkaline non-cyanide Process, Specifications of Electrodeposits.

**NICKEL PLATING :** Watts and Sulphamate Baths, Chemistry of Processes such as Dull - Nickel, Bright Nickel, Duplex Nickel and Satin Nickel, Quality parameters for testing Nickel electrodeposits, Nickel stripping.

**CHROME PLATING :** Hard Chrome, Bright Chrome, High Speed Chrome, Chrome from trivalent baths, self regulating baths (SRHS), low-etch baths, Specifications for testing electrodeposits.

**TIN PLATING :** Alkaline and Acid Processes, Fluoborate Baths, Tin/Lead Alloy Plating, Tin / Lead stripping -High speed Tin Plating

**SILVER PLATING :** Different Plating Baths, Anti-tarnish treatment. New Developments.

**GOLD PLATING :** All types of Gold Plating Baths (acidic, neutral and cyanide) Hardening & Brightening of Gold / Gold alloy coatings.

**ELECTROLESS NICKEL PLATING :** Low, Medium and High Ni-P coatings, Explanation of Chemistry involving reducing agents such as Hypophosphites and Boron compounds.

**OTHER ELECTROLESS PLATING PROCESSES :** Process flow charts and chemistry of deposition of nickel alloys, copper, gold and other metals.

**Electrodeposited Composite Coatings :** Ni-Al<sub>2</sub>O<sub>3</sub>, Ni-Teflon, Ni-Diamond etc. (Mechanism & experimental)

**Pulse Plating and Current Reversal Techniques.**

**Plating on Aluminum and other difficult to plate substrates.**

**Cleaner Plating Technologies:** Newer Baths.

**Anodising :** Introduction to Anodising, Grades of Aluminum and their influence on process condition, Dyeing & Testing of Anodised films, **Hard Anodising.**

Phosphating and Blackodising : Chemistry of Phosphating, Iron, Zinc, Manganese and tri-cation phosphate coatings, hot and cold blackening processes for steel and its alloys. The concept of Nano-technology pretreatment.

**Aluminum Pretreatment (Chrome and Chrome free)**

**Painting and Powder Coating.**

**Electrophoretic Lacquering and Electropainting (Gold & other Metallic colours)**

**Effluent Treatment:** Treatment of cyanides & hexavalent chrome. Removal of heavy metals. Low cost methods & the concept of common Effluent Treatment plant (CETP). Plant & Equipment. The concept of zero discharge & cleaner technologies.

**Testing and Quality Control :** NSS test, Humidity test, Copper Accelerated Acetic Acid (CASS) TEST, Thickness testing, Adhesion, Wear testing.

**The Role of HULL CELL in Electroplating (Practical Demonstration)**

**Equipment for Metal Finishing :** Filters, Polishing barrels, Rectifiers, Heaters/ Coolers, Plating Barrels, Vats, Anode Baskets, Auxiliary anodes and jigs, Centrifuges.

**Alternate Coating Techniques :** PVD, CVD, Thermal Spraying and Mechanical Plating.

**Safety Measures in Metal Finishing Industry.**

**Management :** Management Principles & their application to plating shops.

## INDUSTRIAL VISIT & OPEN FORUM

**The participants will also be taken for an industrial visit to get maximum first hand experience of production & plant management.**

In addition, an OPEN FORUM of one hour duration will be devoted to providing solutions to shop floor problems and other related topics by **a panel of experts.**

All participants will be awarded certificates after completion of the course. This certificate is recognized by the Supply Houses & Electroplating Shops & helps in getting suitable placements for the participants. On the basis of feedback, one deserving participant will be awarded a prize (GRAHAM'S Electroplating Engineering-Handbook). All lectures will be delivered at the conference hall of **MFAI** which is fully air-conditioned with good sealing & projection arrangement. **MFAI** has a well-stocked library with books on almost all topics of Electroplating & Metal Finishing.

## PARTICIPANT : REGISTRATION FORM

Date : \_\_\_\_\_

The Course Convener,  
Metal Finishers' Association of India,  
203, Atlanta Estate, Vitbhatti,  
Goregaon - Mulund Link Road,  
Goregaon (E), Mumbai - 400 063.  
**Email : mfaihq@gmail.com**  
**GST: 27AAATM0092J1ZK**

Photo

CONTACT: **Mr. Jayesh Shah ( Course Convener ) 9820180724**  
**Mr. Babu (10 am to 5 pm)** Tel : 022-49240693 / 98924 96942 / 8591137274. I wish to register as a participant for the 31st Certificate course on 'METAL FINISHING.'

I am / am not a member of MFAI ( My membership number is \_\_\_\_\_ ) Enclosed find a cheque for Rs. \_\_\_\_\_

Cheque / D.D. No. \_\_\_\_\_ drawn on \_\_\_\_\_ (Bank's Name)

**ALL CHEQUES / D.D. SHOULD BE DRAWN IN FAVOUR OF METAL FINISHERS' ASSOCIATION OF INDIA. (Payable at Mumbai)**

**Please mention your Name, Mobile No. & Membership No. behind the Cheque.**

Participant's Name: \_\_\_\_\_

Company / Organisation: \_\_\_\_\_

Postal Address: \_\_\_\_\_

STD Code Phone No.: \_\_\_\_\_

Mobile No.: \_\_\_\_\_

E-mail ID : \_\_\_\_\_

Members GST No.: \_\_\_\_\_

Signature (with rubber stamp of the company)  
(Please use marker pen to fill the form & use capital letters wherever possible)

The Registration Fees are as follows :

**Members of MFAI** ▶ Rs. 3,500/- + Rs. 630/- (18% GST) = Rs. 4,130/-  
**Non-Members** ▶ Rs. 6,500/- + Rs. 1170/- (18% GST) = Rs. 7,670/-



# Metal Finishers' Association of India

CERTIFICATE COURSE ON ELECTROPLATING & METAL FINISHING

PERIOD : 06th July to 11th July 2026

Timing : 10:00 a.m. to 5:00 p.m.

## PARTICIPANT : REGISTRATION FORM

(Please take a print to fill the form & use capital letters wherever possible, Scan the same & email it to association)

### REGISTRATION

Please send the registration form duly filled with sign and stamp to the MFAI office along with a Cheque / D.D. payable at Mumbai, in favour of **Metal Finishers' Association of India**. As the course is limited to 50 participants only, seats will be allotted on **First come first serve basis**. We would appreciate if the FEE of Registration is confirmed preferably latest by **BANK TRANSFER** latest by **15th June 2026**. The registration, confirmation & any other clarification can also be done by phone ( Mr. Babu-Tel : 022-49240693 / 98924 96942 / 8591137274 ).

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**Metal Finishers' Association of India**,  
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Goregaon (E), Mumbai - 400 063.

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Cheque / D.D. No. \_\_\_\_\_ drawn on (bank's name) \_\_\_\_\_ (branch)

**ALL CHEQUES / D.D. SHOULD BE DRAWN IN FAVOUR OF METAL FINISHERS' ASSOCIATION OF INDIA. (Payable at Mumbai)**

**Please mention your Name, Mobile no. and Membership no. behind the Cheque.**

Participants Name: \_\_\_\_\_

Company/ Organisation: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Mobile No.: \_\_\_\_\_ E-mail ID : \_\_\_\_\_

STD Code Phone No.: \_\_\_\_\_ Members GST No.: \_\_\_\_\_

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\_\_\_\_\_  
Signature (with rubber stamp of the company)

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