



# Aluminum Surfaces & Coatings Training Course

This 2 x half-day live online training course from Innoval Technology includes the following topics:

## Surface Generation and Lubrication

- Introduction to surfaces
- Ground surfaces
- Roll / sheet contact / lubrication
- Near-surface deformed layers
- Product defects
- Inspection and Measurement

## Cleaning

- Introduction to aluminum surface cleaning
- Removal of near-surface deformed layers
- Types of cleaning and cleaners and relative performance
- Reaction mechanisms
- Critical control parameters

## Pretreatment

- General characteristics
- Historical developments
- Automotive pretreatments
- Coil line application technologies
- Pretreatment chemistry

## Coating

- Adhesion of coatings and adhesives
  - Thermodynamics and surface energy
- Polymer chemistry
  - Permeability
  - Curing
- Coating types and characteristics
- Coating equipment
- Coating developments
  - Lamination
  - NIR

## Measurements

- Requirements for finishing operations
- Cleaning
  - Oxide film analysis
  - Surface wettability measurement
  - Microscopic characterisation
  - Optical cleanliness measurement
- Pretreatment
  - Ellipsometry
  - Infra-red spectroscopy
  - X-Ray fluorescence
  - Electron microscopic characterisation
- Coating
  - Performance testing
  - Online NIR

## Defects

- Cleaning
  - Insufficient, or too much causing pretreatment issues
- Pretreatment
  - Patchy
  - Thickness control
- Coating
  - Inhomogeneous materials in coatings
  - Curing issues
  - Rheological effects in roll coating

An example of the course timetable is shown below.

Start and finish times will be confirmed upon registration.

## ALUMINUM SURFACES & COATINGS from Innoval Technology

DAY 1	DAY 2
Welcome and brief introduction to Innoval Technology	Coating
Surface Generation and Lubrication	BREAK
BREAK	Measurements
Cleaning	BREAK
BREAK	Defects
Pretreatment	Q&A and Wrap-up

For more information please contact:

**Helen Forrest**

Tel: +44 (0) 1295 702844

Mobile: +44 (0) 7793 632986

[helen.forrest@innovaltec.com](mailto:helen.forrest@innovaltec.com)