

Built for performance



At Axalta Coating Systems we put our customers first. Our focus on providing exceptional coatings sets us apart. We are the leading global company dedicated to the development, manufacture and sale of coatings with over 145 years of experience. Our established leadership means we understand our customers' needs, and respond to them quickly. We deliver in-depth coatings experience and cutting-edge, sustainable, integrated offerings that ensure efficiency, productivity and growth.

This Service Package shows our determination to build partnerships with our customers and help them succeed today, and meet the challenges of tomorrow.

Content

Introduction	4
Commissioning the paint line facilities	5
Commissioning the electrocoat deposition paint line	6
Electro-deposition training	7
Production start-up	8
Process optimisation study	9
Reducing paint line costs	10
Maintenance	11
Other services	12

Attachment: [Catalogue testing and validation](#)



Introduction

The Axalta Coating Systems Service Package allows for the optimised use of our products in production processes.

Its key aspects are:

- Securing a high level of quality for production output
- Continuous monitoring of the plant, controls and system documentation
- Achieving an optimum ecological and economic product-plant interface
- On-going communication with plant operators to achieve continuous quality improvement

Commissioning the paint line facilities

The paint line facilities are commissioned in the following order:

- Current status overview and planning of operation sequencing
- Cleaning of individual items of plant equipment
- Checking for contamination
- Functional testing and inspection
- Performance preparation and adjustment
- Loading and commissioning of system components
- Test run and optimisation
- Transfer of the system to production start-up

Commissioning the electrocoat deposition paint line

After the paint line has been assessed, there are a variety of steps that need to be taken to commission the electrocoat deposition line. Axalta works closely with your production line operators to ensure each step in the process is carried out correctly and efficiently.

- Emptying and cleaning of the ecoat tanks on the paint line
- Time required: 1-3 days

- Checking for contamination
- Time required: 0.5 day

- Performance testing and inspection
- This step includes leak testing, checking the function and reliability of fittings, inspection of structures and displays
- Time required: 1 day

- Filling and commissioning of the individual plant systems (barrier liquid, dialysis, electrocoat tanks, ultra filtration (demi water) rinsing areas, dryers)
- Time required: 1-2 days

- Commissioning of ultra filtration plant
- Time required: 0.5 day

- Test run and optimisation of the paint line
- Time required: 1 day

Electro-deposition training

The operating staff on the paint line is crucial to the quality of the painted products. It is vital they are fully trained to run the paint line in the most efficient way. They also need to understand the impact of the paint process on the environment.

Our training – in the form of introductory and advanced courses – focuses on practical advice.

The topics covered include:

- Operation of the plant, and the precise process steps
- Clarifying the interdependence of different steps on the paint line
- Optimising the paint line, influencing quality and efficiency
- Trouble-shooting and fault rectification
- Environmental relevance and ecology

Production start-up

In order to ensure high-quality results in an efficient way, every step of the paint line must be in good functioning order. Before the line starts, it is vital to carry out the following checks:

- Optical inspection of pre-treated parts

- Adjustment of:
 - Electrocoat bath current (bottom current, surface current)
 - Electrocoat bath volume adjustment (minimum, maximum)
 - Refill dosage
 - Rinsing areas (spray pattern, spray nozzles, operating pressure, tank recirculation, cascade control)
 - Dialysis cycle (current, conductance control)
 - Ultra filtration cycle (pressures, sprayer output)

- Optimising layer thickness by:
 - Adjusting the temperature
 - Specifying the rectifier level
 - Specifying the level of current density control

- Adjusting the dryer



Process optimisation study

The first step in the study is to gather information about the paint line. This information is usually already compiled as the first step in the commissioning process. The current status of various aspects of the paint line are recorded, including paint line functions such as the pre-treatment, electrocoat tank process, drying, auxiliaries, logistics, and capacity. This is followed by an analysis of weak points.

The next step is a comparison of the current status of the plant with:


- best practice processes, energy, water and chemical consumption and logistics
 - the process engineering requirements of the paint system
 - environmentally-relevant requirements
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Lastly, the study examines options for eliminating weak points:

- Plant optimisation
- Refitting
- Retooling of plant components (list of priorities)

Reducing paint line costs

The objective of the process optimisation study is to identify weak points and ascertain the overall savings potential of the paint line's operating costs. The basis of the study is the current status of the paint line, its auxiliaries and accessories, specifically, the costs for:

- Energy – such as electricity, heating
 - Materials – such as chemicals, water, wastewater, coagulation agents, pre-treatment chemicals, wastewater treatment chemicals
 - Waste disposal, cleaning
 - Maintenance
 - Staffing
 - Logistics – including hanger assembly, infeed and discharge, delivery system, interfaces, line functions, capacity
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- A large, abstract graphic at the bottom of the page consisting of several overlapping, curved shapes in various shades of blue, creating a sense of depth and movement.

Maintenance

Maintenance is critical to keeping a paint line running smoothly and efficiently. Areas we cover include:

- Rinsing and passivation of the dialysis cycle
- Rinsing and impregnation of the ultra-filtration plant
- Performance testing and adjustment of flow conditions of:
 - Electro-deposition paint tanks
 - Heat exchanger circulation loop
 - Ultra-filtration rinsing areas
 - Filter system
- Performance testing of the rectifier through:
 - Current and voltage measurements
 - Current density test
- Disinfecting and cleaning of the water cycles and rinsing areas
- Functional testing of the dryer system
- Testing the temperature distribution on the object being coated
- Measuring emissions from the entire plant, including incinerators

Other services

In addition to the comprehensive topics covered in our standard service package, we can support you in many other areas including:

- Drawing up general and specific maintenance schedules
- Production of plant floor plans and diagrams to help improve quality and increase the reliability of the plant
- Environmental and safety engineering consultation
- Environmental experts' reports
- Preparation of approval and licensing documents
- Evaluation of test results and submission of an advisory opinion on regulatory requirements

Other process engineering services can be found in the Appendix under the heading “Catalogue of additional services”.





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