
GLOBUS
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WELCOME TO GLOBUS

The continuous painting of metal coils has been our initial, and still is our current core business.

Our experienced and dynamic Team – after more than 20 years of engineering, supplying, installing and commissioning of complete Coil Coating Lines around the World – is ready to meet your production requirements.

OUR PHILOSOPHY

Globus engineers in-house all the main equipment in a Coil Coating Line: Cleaning Section, Chemical Coater, Prime and Finish Coaters, Curing Ovens, Terminal Equipment are the result of over 20 years' experience in the market.

This offers our Customers several advantages:

- a complete integration between the different technological processes;
- a uniform design concept and the standardization of components;
- one team of field engineers for erection and commissioning;
- a unified project coordination and management.

PRIME AND FINISH COATERS

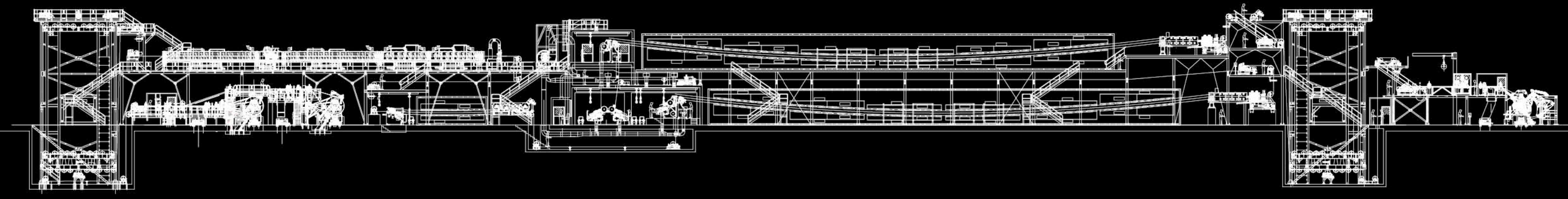
The Coaters can be equipped with two or three rolls coating heads in either straight line or "V" configuration.

Most Coaters are equipped with load cells to measure roll pressure and send a feedback signal to the control system which acts on the stepper motors to maintain the desired nip pressure and control the paint thickness.

CURING OVENS

Most Ovens are Convection Type (Catenary or Flotation) although GLOBUS also offers other types such as Infrared, Induction and Near IR.

The strip pass line is defined by the bridle roll at the oven exit in the catenary type ovens and by the air speed from nozzles in the floatation type ovens.



CLEANING SECTION

This section can be located both at floor level and at upper level, depending on the desired layout. The type of material used to fabricate the units is chosen according to the chemical product in use. The spray bars in the process chambers are equipped with a quick disconnect feature to minimize cleaning and maintenance time.

CHEMICAL COATER

The Chemical Coater has Top Side and Bottom Side Coating Heads, both of them typically in a two-roll configuration.

Additional features on the coaters can incorporate side shifting heads to permit roll changing, maintenance and off line cleaning.

STRIP HANDLING

Strip speed and tension control is essential in transporting the material without causing damage to the metal substrate.

This can be achieved by selecting the appropriate number and configuration of Tension Bridles and Strip Guiding Units.

Flatness is guaranteed by in-line leveling units.

ANCILLARY PROCESSES

Our lines can do more than just "plain" coil coating. Additional processes can be included to increase the range of products: embossing, printing and laminating are the most common examples.

STRIP HANDLING

TAKING CARE OF THE STRIP FROM END TO END

Achieving the correct strip handling and the proper tension control from the Payoff to the Rewind Reel is very important to the coil coating line process. GLOBUS designs in house all the necessary equipment to achieve this result.

STRIP CLEANING AND PRETREATMENT

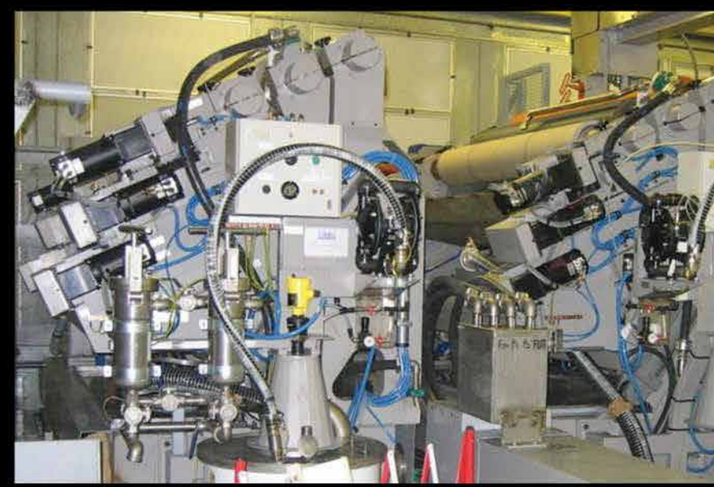
A properly cleaned and chemically pretreated strip is a prerequisite for corrosion protection and good paint adhesion. These requirements are satisfied by applying, in various stages, chemical and mechanical treatments followed by rinsing or sealing the chemicals on the strip.

Process solution temperature and concentration are continuously controlled to achieve the best results based on the product application methodology, utilizing either a spray or a submersion type process.

DRY-IN-PLACE PRETREATMENT

The chemicals for paint adhesion and/or corrosion protection are applied with a Chemical Coater. Based on the line layout, GLOBUS offers Chemical Coaters in either a horizontal or a vertical configuration. The water-based applied coatings are then dried in an infrared or in a convection type Oven. Water-cooled rolls reduce the strip temperature prior to applying the prime coating layer.

The coating thickness can be controlled either manually by hand wheels or automatically by stepper motors, with the rolls contact pressure being monitored by load cells. Where available, a feedback signal from an in-line coating thickness gage can be integrated in the system for an even more accurate control of the application process.



PRIME AND FINISH COATERS

ACCURATE AND UNIFORM PAINT APPLICATION

Some applications require only a single coat of paint on the top and bottom side of the strip while most require a prime coat followed by a finish coat on both sides of the strip.

Our Paint Coaters, designed to achieve the best paint application process on the market, optimize paint thickness and uniform distribution on the strip width, therefore reducing the line operating costs.

"Quick Color Change" is available on GLOBUS Coaters. This feature allows changing the applied paint without stopping the line, thereby saving time, increasing productivity and reducing scrap.

CURING OVENS

COST-EFFECTIVE, EFFICIENT CURING EQUIPMENT

The paint must be dried and cured after application on the strip. Therefore, an Oven is required after any coating section and prior to the strip coming in contact with any roll. According to the paint specification and to the supplier requirements the strip must reach a Peak Metal Temperature in the range of 220 °C to 260 °C (430 °F to 500 °F).

GLOBUS designs their Ovens to reach the required PMT typically in 16-24 seconds. The heat is generated in each Oven Section by a burner or by clean air flowing from a heat exchanger. The afterburner exhaust is the most common heat source for the process.

Beisdes the traditional Catenary Ovens, GLOBUS offers a more recent and advanced curing technology: Flotation Ovens, offering a superior heat transfer efficiency and better strip guidance, if compared to the Catenary design. Flotation Ovens are ideal for lines dedicated to coat aluminium strips.

INCINERATOR FOR SOLVENT DESTRUCTION

The volatile part of the solvent in the paint must be captured and destroyed before the Ovens exhaust air is discharged into the atmosphere.

During the strip painting process, Exhaust Fans draw the solvent laden air from the Coater Rooms and Ovens into a gas fired burner system operating at a temperature of 800 °C (1470 °F), achieving the solvent destruction efficiency required by the most stringent environmental regulations.

Depending on the amount of solvent, energy consumption and operating efficiency, either a Recuperative Afterburner or a Regenerative Thermal Oxidizer (RTO) system can be installed.

On the basis of the expected operating conditions, the Recuperative Systems can be designed to have up to three Heat Exchangers: one to preheat the air coming from the Ovens; one to heat the air from the Coater Rooms to the Ovens and one to heat the water used in the Cleaning Section.

PRINTING, EMBOSSING, LAMINATING

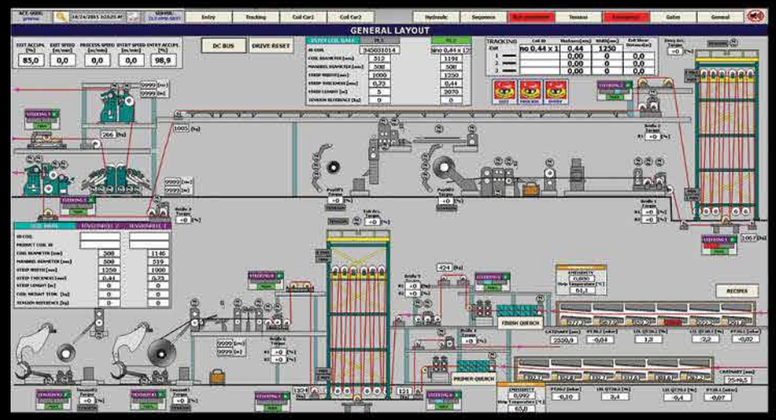
BEYOND SOLID COLORS

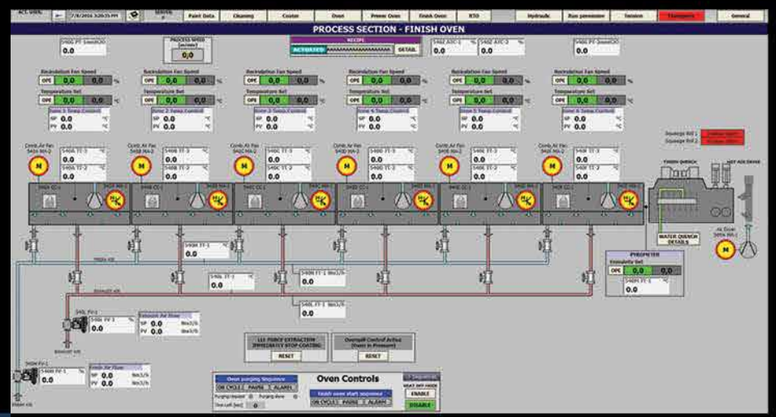
As an additional feature, GLOBUS can integrate in their Coil Coating Lines equipment designed to achieve decorative finishes on the coated strip.

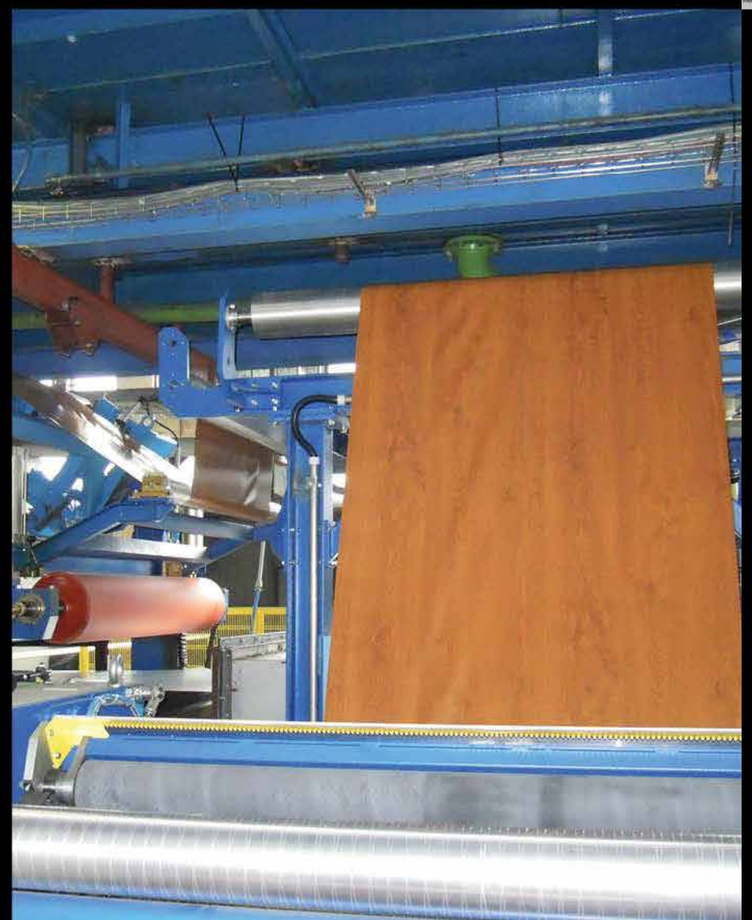
This includes decorative paint finishes, such as Wood Grain, obtained with a combination of patterns applied as consecutive coating layers with the different coating machines.

Embossing either the finish paint or the metal itself with various decorative patterns, such as Leather Grain or Stucco, is also possible after the strip exits the Finish Oven.

The application of a permanent decorative film on the strip is another popular finishing. Our laminating machines, designed for high quality and production standards, can be equipped with rolls temperature control, web-guiding systems and continuous decorative film feeding.







AUTOMATION

KEEPING IT UNDER CONTROL

Even the line with the best mechanical design would not perform without a reliable and advanced Automation System controlling all the parameters involved in the process.

GLOBUS defines the specifications of the Electrical / Automation System with the same care devoted to the mechanical design: the system design is then transferred to our Partners for implementation on the most common automation platforms.

We also offer our proprietary ARPCO® (Automatic Rolls Pressure/Position Control) System, fully automatic with closed loop control on paint thickness measurement.

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GLOBUS SRL, ITALY
Piazza C.L.N. 255 - 10123 Torino
sales@globus-eng.com

DOUBLE GLOBUS INC., USA
1461 E Cooley Drive, Unit 195 - Colton, CA 92324
salesusa@globus-eng.com

www.globus-eng.com