STRONG3000

TECHNICAL DATA SHEET

Industry Sheet · Revision: November 2026

INDUSTRIES

Enamel and Epoxy Powder Coating Lines for Valves and Pipes

Inner and outer surface coating for the valves, fittings and pipes used in water, wastewater, oil and seawater lines — wet enamel, powder enamel and epoxy powder coating lines, from pretreatment to firing and curing.

Open online

strong3000.com/en/industries/pipes-valves/



OVERVIEW

Parts That Work in Water, Soil and Salt.

Throughout their service life, valve bodies, fittings and pipes are in contact with water, soil, seawater or chemicals; the coating is the barrier between the metal and its environment. Depending on the service conditions there are two main routes: enamel, an inorganic glass layer fused to the metal, or epoxy powder coating, an organic thermoset film.

STRONG3000 designs and builds the line for either route: washing and pretreatment, application booths, drying, enamel firing or powder curing ovens, conveyors and automation.



APPLICATIONS

Parts We Help Coat.

The choice of coating depends on the part's material, geometry and service conditions. Below are the main parts in the valve and pipe group and the processes used; for other parts, too, the line is configured to the part.



WET ENAMEL · EPOXY POWDER COATING

Valve Bodies & Bonnets

On gate and butterfly valve bodies, bonnets and hydrants the inner flow surface and the outer surface are coated together. For enamel the parts pass through a conveyorised line-type booth; for epoxy powder coating the part is heated and the powder applied.



EPOXY POWDER COATING · WET ENAMEL

Fittings (Elbows, Tees, Flanges)

Elbows, tees and flanged fittings need complete coverage, including inner corners and flange faces. Epoxy powder coating is used for series parts; for heavily corrosive environments there is an enamel option too.



WET ENAMEL

Underground Water Pipes

In buried water lines the pipe works against moisture in the soil on the outside and the water it carries on the inside; the inner and outer surfaces are enamelled on the same line.



WET ENAMEL

Oil & Gas Pipes

In pipes carrying crude oil and produced water, the inner surface is enamelled against corrosion and sand-induced wear.



WET ENAMEL

Seawater Cooling Pipes

Cooling lines in a ship's engine room run directly on seawater; enamel seals the metal surface against salt water.



EPOXY POWDER COATING

Large-Diameter Steel Pipes

Epoxy powder coating for the outer surface and the inner lining: the pipe is heated, the powder is applied electrostatically and melts on the hot surface.

SOLUTIONS

The Right Coating Process for Valves and Pipes.

Wet Enamel Line

A glass layer fused to the metal on the inner and outer surfaces of valves and pipes; conveyorised line-type booth, drying and firing.

Powder Enamel: Pipe Inside & Out

Electrostatic powder enamel on the inner and outer surfaces of pipes; the pipes travel hanging vertically on the conveyor and gun robots do the application.

Epoxy Powder Coating Line

Pretreatment, preheating, powder application and curing in one line for valves, fittings and pipes.

Washing & Pretreatment

Degreasing and surface preparation before coating, for steel and cast iron parts.

Dry-off Oven

Removes the water from wet enamel before firing, and moisture after washing before coating.

Conveyors & Automation

Repeatable production with overhead conveyors, robotic application and line control.

WHY STRONG3000 FOR PIPES & VALVES

Three Processes, One Engineering Partner.

A valve manufacturer may need epoxy powder coating for drinking water fittings and enamel for wastewater and seawater lines in the same plant. STRONG3000 designs wet enamel, powder enamel and epoxy powder coating lines from a single source; pretreatment, ovens, conveyors and controls are planned by the same engineering team.

- ✓ Wet enamel, powder enamel or epoxy powder coating — chosen to suit the part and its service conditions
- ✓ A single line design from pretreatment to the firing and curing ovens
- ✓ Conveyorised line-type booths, automation and turnkey installation



CASE STUDIES

Projects from the Field.

Selected projects from STRONG3000 plants in operation.



Wet Enamel · Automatic Line

Valve & Pipe Wet Enamel Line

Automatic line-type wet enamel plant for the inside and outside of valves and pipes. Filtered, stackless application booths.

Country	**Germany**
Project No.	**0638**



Enamel Furnace · Pretreatment

Enamel Furnace, Washing & Drying Line

Sintering (enamel) furnace, washing and drying line for enameling plants.

Country	**Türkiye**
Project No.	**0851**

See all case studies →

RELATED INDUSTRIES

Other Enamel and Pipe Applications.

Pipes, Profiles & Wire Fencing

Continuous-conveyor powder coating lines for steel pipes, box profiles and panel fencing.

Water Heaters & Boilers

Electrostatic powder enamel inside boiler and water heater tanks.

Cookware & Cast Iron

Wet enamel and powder enamel on cast iron pots, pans and hob grates.

WHY STRONG3000?

The Engineering Difference.

We don't sell equipment and walk away; we stay with your line from design through commissioning and beyond.

Integrated Engineering

Machinery, electrical, automation and software under one roof — not sourced and assembled.

In-House Technology

Smart AI and OWL are original STRONG3000 technologies developed in-house.

Proven Experience

25+ years of engineering; installation, commissioning and service in 40+ countries.

24/7 Support

Phone, remote connection and 24/7 live support via WhatsApp.

Quotes & Technical Consulting

Tell us about your part, capacity and process. A STRONG3000 engineer will get back to you with a tailored proposal.

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FOR A QUOTE, PREPARE

- Product to Be Coated
- Max. Part Dimensions
- Required Capacity
- Number of Colors
- Daily Color Changes
- Coating Process
- Project Timeline

Values are typical ranges; final values are confirmed per project by STRONG3000 engineering. This sheet summarises the product page on our website; scan the QR code for the latest information.