

SPECIALIZED ENGINEERING SERVICES

▶ Thermal Spray Coating

- Surface rebuilding
- Protection against mechanical wear/tear
- Corrosion prevention
- Thermal/Electrical resistance
- and more . .

Comprehensive Processes & Materials Applied via Robotics and Automation Aided Coating Systems

Thermal Spray Coating is the R&D focus and key technology of Frontken's Surface Metamorphosis Technology philosophy.

We are the market leader in provision of Thermal Spray Coatings services in the South-East-Asia region, offering the most comprehensive range of coating processes and capabilities customizable for your applications.

Frontken's coating services allow maximum cost-effectiveness, improving the

value and in-service performance of your components and equipment through upgrading and life extension capabilities. We can provide technical consultation for recommendation of material + process combinations, allowing deposition of virtually any type of materials such as Metals, Alloys, Ceramics, Cermets, Polymers, Composites or graded materials for your repair, maintenance & upgrade requirements.



TOTAL INTEGRATED ENGINEERING SOLUTIONS

FROM THE LEADER IN SURFACE METAMORPHOSIS TECHNOLOGY



SPECIALIZED ENGINEERING SERVICES

Thermal Spray Coating

Functions & Benefits

Thermal Spray Coatings can be applied for the most common function of worn surface reclamation, wear resistance or corrosion prevention. It can also reduce frictional energy losses, act as a diffusion barrier, thermal insulation and electrical insulation among countless other purposes.



Application Examples:

Piston Rods, Pipe Spools, Valves, Pulleys & Guides, Rolls, Rotor Shafts, Pump Casings, Crankshaft Journals, Plunger, Screw Shaft, Pressure Vessel, Turbine Casing, Flame Tubes, Transition Piece and many more.

Why Frontken for your TSC applications

- ▶ We operate the largest and most comprehensive TSC facilities in the region
- ▶ Supported by in-house Research & Development specialists and facilities
- ▶ Multiple-axes robotic arms and automation systems
- ▶ Atmosphere-controlled process chambers
- ▶ In-house post-TSC processes such as welding, machining, fabrication, heat treatment and others
- ▶ On-Site Anti-Corrosion TSC Capabilities

General TSC Coating Materials

Thermal spray coatings have been and are used in a very broad range of applications. The main advantage being that thermal spray coating can provide the surface properties for specific requirements such as strength, weight, cost or other surface properties.

- ▶ Pure Metals: Al, Zinc, Mo, Ti . .
- ▶ Carbides: WC/Co & Cr₃C₂-NiCr
- ▶ Ceramic: Al₂O₃, ZrO₂, Cr₂O₃, TiO₂, YSZ
- ▶ Alloys: MCrAlY, NiAl, NiCr, Stellite . .
- ▶ Fused self fluxing alloys (NiCrSiB)
- ▶ Application customized composites and more



Singapore | Malaysia | Indonesia | Philippines | Thailand | China | Taiwan | Qatar
Oil & Gas | Process & Chemicals | Power Generation | Semiconductors | Aerospace | Marine

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