

_THERMAL SPRAY

w-CER Wear Protection Coatings

Purpose of Coatings

Protection of machine parts from sliding wear, abrasion, erosion and corrosion

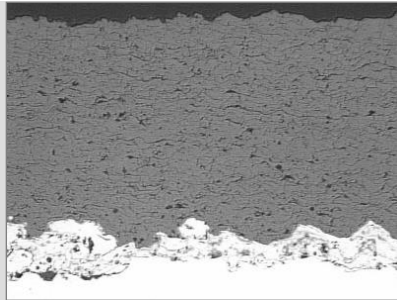
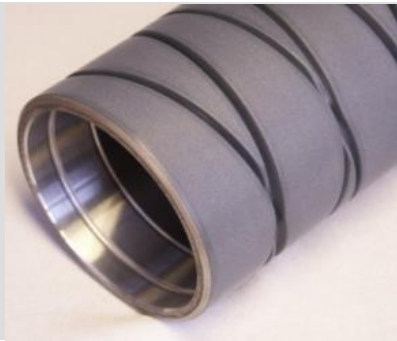
Applications

- Plungers, piston rods
- Sealing parts, slide ring seals, shaft protection sleeves
- Guides, rope and wire pulleys, extruders, stirrers
- Ductor rollers, thread guide rollers, galettes, guide rollers
- Electrically isolating rolling bearing, shafts, clutches

Features

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|---|---|
| <ul style="list-style-type: none"> ▪ Technologies: | Plasma spraying, HVOF |
| <ul style="list-style-type: none"> ▪ Coating materials: | Al ₂ O ₃ , Cr ₂ O ₃ and their modifications with other ceramics |
| <ul style="list-style-type: none"> ▪ Base body materials: | Steel, cast iron, metals and alloys, plastics and composite materials |
| <ul style="list-style-type: none"> ▪ Coating thickness: | 0.1...> 1 mm |
| <ul style="list-style-type: none"> ▪ Hardness: | up to 1400 HV0.3 |
| <ul style="list-style-type: none"> ▪ Surface roughness Ra (as sprayed): | ~ 5 µm |
| <ul style="list-style-type: none"> ▪ Surface roughness Ra (polished): | 0.2 µm |
| <ul style="list-style-type: none"> ▪ Thermal shock resistance: | 1000 °C |
| <ul style="list-style-type: none"> ▪ Oil pressure tightness (sealed): | > 700 MPa |
| <ul style="list-style-type: none"> ▪ Very good chemical resistance in both acid and alkaline media | |





Benefits

- Coated surface can be engraved with laser
- Excellent sliding behaviour (Chromium oxide)
- Sealing of microporosity and mechanical post-treatment (smoothing, brushing, grinding, finishing) enables variation of surface roughness and structure
- Optimal ink receptivity for water-based dye in printing industry
- Variable hardness and ductility by changing the composition of oxides
- Very good combination of corrosion protection, wear protection and sliding behaviour
- Good dielectric strength for aluminium oxide coating
- Cost-efficient coating material

Our Service Offering

- Coating of sample and prototype parts, including fixture construction
- Advisory service, design optimisation, selection of coating material
- Development of specifications for serial technologies
- Serial production
- Pre-treatment, coating and post-treatment of parts (sealing, grinding, polishing) or complete fabrication according drawing
- Cleaning, testing, quality control, packaging according specifications



Who we are

With more than 100 years of experience, GfE is one of the world's leading manufacturers and suppliers of high-performance metals and materials. Based on our comprehensive materials science know-how, we develop high-quality tailor-made solutions for a wide range of industrial applications. We offer our customers fast service and qualified technical advice.



Certification in accordance with DIN EN ISO 9001, DIN EN ISO 14001, DIN EN ISO 50001, DIN ISO 45001 and DIN EN ISO/IEC 17025 support our claim to the highest quality and safety. We can thus guarantee products that meet the specific requirements of our customers. Your trust and satisfaction are the cornerstone of our business.

GfE is a subsidiary of AMG Advanced Metallurgical Group N.V., Netherlands, a global leader in the production of specialty metals and metallurgical vacuum furnace systems.

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