



Surface Engineering in Extreme Environments

Experts in repair and maintenance at your SERVICE
Stronger, with Castolin Eutectic

Surface Engineering in Extreme Environments

The advanced Castolin Eutectic workshop in Newcastle, UK, is a leading edge provider of high performance wear and corrosion resistant coatings for aggressive environments. Where cost control and wear prevention through component performance is a key factor, our proven expertise and quality service could be the solution you need!

As a significant proportion of our business is sourced from the international aerospace, steel processing and oil and gas industries, we employ the strictest industry and third-party quality standards to ensure customer product meets and exceeds requirements.

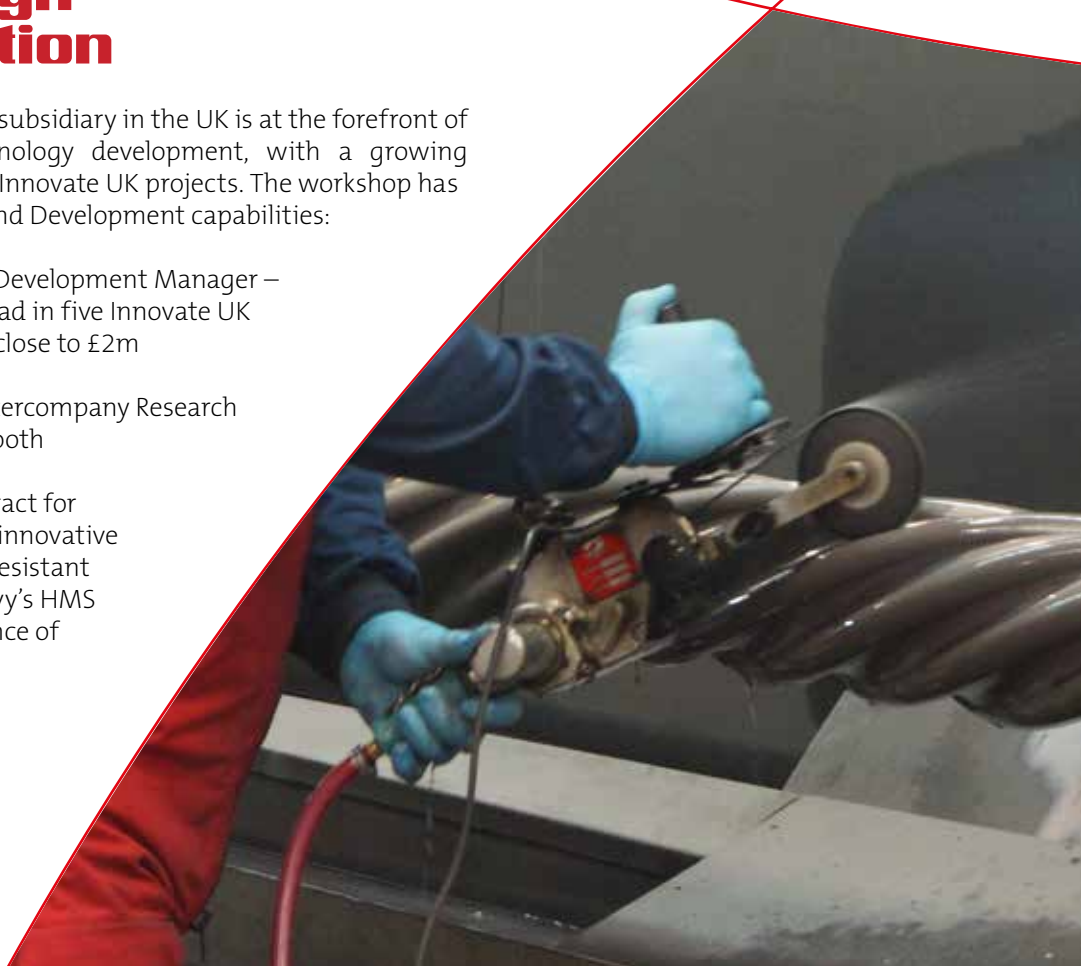
Monitor Coatings has been awarded the aerospace industry standard NADCAP (National Aerospace and Defence Contractors Accreditation Program).



Excellence Through Innovation

The Castolin Eutectic subsidiary in the UK is at the forefront of innovation and technology development, with a growing portfolio of UK funded, Innovate UK projects. The workshop has the following Research and Development capabilities:

- Dedicated Research and Development Manager – currently the Project Lead in five Innovate UK projects, with a budget close to £2m
- A dedicated external and intercompany Research and Development spray booth
- Awarded the prestigious contract for developing and applying an innovative non-skid, thermal gas wash resistant deck coating for the Royal Navy's HMS Queen Elizabeth and HMS Prince of Wales Carrier Decks
- A growing portfolio of patented technology



Our in-house laboratory facilities provides the mechanism to ensure consistency of results through stringent inspection processes.

Castolin Eutectic's workshop in Newcastle, UK is able to provide a complete coating and finishing service, aided by our in-house machine shop.

Based in North Shields, Newcastle upon Tyne, we are ideally situated to provide a quick turnaround service to the entire UK market and beyond. As part of Castolin Eutectic group of companies, our reach goes far beyond our own shores, with sister facilities in Europe, Dubai, the USA, Mexico and Russia.

Quality System

Every stage of our production process is controlled by our AS9100 and NADCAP-approved quality system. From incoming inspection to final dispatch, our processing is subject to stringent controls to deliver the highest level of quality to our customers.



Core Competencies

- Compact High Velocity Oxy Fuel (CHVOF) (Internal)
- High Velocity Oxy Fuel (HVOF) (External)
- Air Plasma Spray (APS)
- Low Pressure Plasma Spray (LPPS)
- Thermally cured chemical Slurry Coatings (MoniPlex/SealPlex)
- Heat Treatment
- CNC turning, milling and grinding service
- Arc Spray – including on-site operations

International Customer Approvals

- Rolls-Royce, Halliburton, TATA, Siemens, BAE Systems, Babcock, Thales, Ministry of Defence, British Royal Navy, Weatherford, Danieli, British Steel, Esterline, Total Steel Production, McMenon, Outokumpu, National Oilwell Varco.



Coating Evaluation

Dedicated laboratory conducting coating evaluation. The laboratory's facilities include:

- Visual inspection, Dimensional inspection, Non Destructive Inspection, Dye penetrant, Surface Roughness Testing, Sample preparation, Mounting – cold cure and vacuum, Grinding, Polishing
- Micrographic analysis
 - Porosity, Interfacial contamination
 - Micro cracks/cracking, Oxides, Un-melts, Carbide content
- Hardness Testing
 - Macro Hardness Rockwell, Micro Vickers Hardness
- Adhesion Testing Pull Test, Bend Test, Salt spray (fog) testing

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Shop Floor Equipment

- Vapour Degreaser
- Abrasive Blasting
- 2 x Euro 7» blast cabinets
- 2 x Euro 10» blast cabinets
- 1 blast room with maximum component size of 7m in length
- Flame Spray
- Twin Arc Spray
- 1.6mm and 2.3mm wires
- Offsite and Onsite capability available
- Plasma – 2 x booths
- Controlled by ABB
- 1 x booth operating Metco 7m gun
- 1 x booth operating Metco 3m gun
- High Velocity Oxygen Fuel – 2 x booths
- Booth 1 controlled JP5000 gun and 8000 console.
Maximum component size of 1.5m height and 2.9m in length
- Booth 2 robotically controlled by ABB Robot with 30kg capacity, with a JP5000 gun and Metco console. Maximum component length of 7m
- Low Pressure Vacuum Plasma
- Turntable capable of spraying rings
 - Box Oven and Kiln
 - 320 Degrees Celsius Maximum
 - Diamond polishing of Mud Rotors
 - LPPS Chamber

Machine Shop

Small machine shop approved to complete aerospace critical parts. The machine shop's facilities include:

- External CNC lathe
- External CNC grinder
- Complex parts 5 axis machining
- Inner diameter and outer diameter surfaces
- TIG/MIG welding
- Including Plasma Transferred TIG/MIG
- Pillar drill
- Colchester lathe

- **Slurry Coatings – MoniPlex®**
 - MoniPlex® ceramic and metallic coatings are applied as liquid slurry which naturally flows over the surface of almost any shape, including internal diameters as small as 0.5 mm. They are totally dense, pore free and the coating exhibits a spinel-like bond layer with the component

- **Slurry Coatings – SealPlex®**
 - The SealPlex® ranges of coatings are used to surface seal and fill the porosity in other materials. SealPlex® densification process, a single phase ceramic layer is chemically bonded into and over the porous outer layer. The SealPlex® coating also improves surface hardness, corrosion resistance and frictional properties

International Standard Accreditations

- NADCAP (Merit)
- BS/EN-ISO9001:2015
- AS9100 REV D

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Castolin Services



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Your resource for protection, repair and joining solutions

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