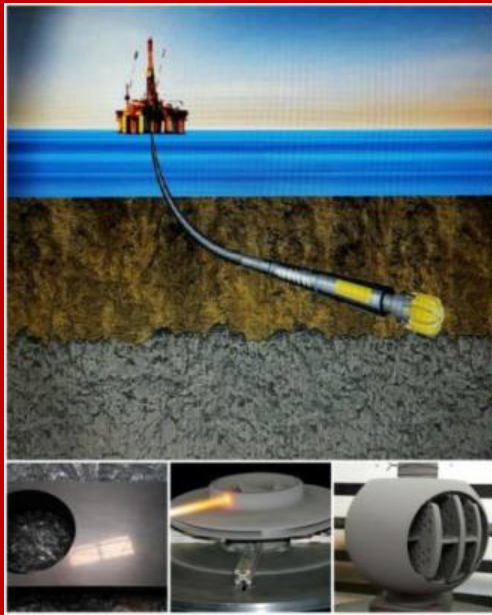


Castolin Eutectic® Eutectic Castolin



**CASTOLIN EUTECTIC MIDDLE EAST FZE
DUBAI – UNITED ARAB EMIRATES**

Stronger, with Castolin Eutectic

Castolin Eutectic is a worldwide leader of application solutions in maintenance, repair and wear protection. With more than **110 years** of experience in welding, brazing, thermal spraying technologies and polymer coating products and services, innovative solutions to wear & Tear. Castolin Eutectic is your partner with industrial expertise in surface protection, repair and joining solutions. We are present globally with operations in over **100 countries**. Having local office in Dubai's Jebel Ali Free Zone, in a move aimed at strengthening product availability across the Middle East and Africa.

FACILITY IN JEBEL ALI FREE ZONE SOUTH -3, DUBAI

Castolin Eutectic Middle East FZE is located in Jebel Ali free Zone South. The facility was established in 2013 to service the MENA and Asia regions. It has an ISO9001 2015 accreditation, underpinning our commitment to excellence in servicing oil & gas, marine, petrochemical, steel, cements, pulp and paper and various other sectors.

Our location in free zone allows us to provide unparalleled service in terms of lead times with a guaranteed end product resulting from our aerospace-derived quality system.

OILTEC DIVISION

The facility is a state-of-the-art thermal spray and repair shop, incorporating our own advanced technology for thermal spray, and utilizing our proprietary ceramic sealant (SealPlex® range), to deliver extended and enhanced component performance.

CDP/ VRM/WELDING SERVICES DIVISION

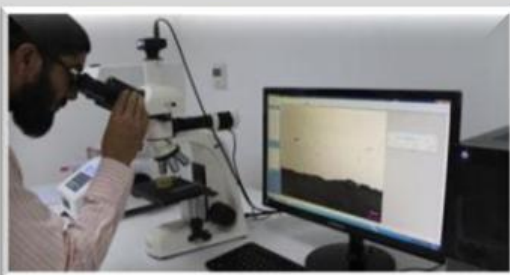
Our CastoDur® Diamond Plates (CDP) and CastoTubes® (CTB) are manufactured in our state-of-the-art shop in Germany, Brazil, Austria, Egypt, etc., supplying to all the Cement, Steel, Aluminium, Oil & Gas plants and other industrial wear problems. Now, We are glad to inform you that we have our own set up in Dubai for rebuilding VRM roller and table welding and CDP fabrication jobs, Thermal Spray coating, Surface Polymer Coating in our facility/In-Situ condition and also having complete technical team, with International support from Castolin Group to cater all Industrial customers in Middle East, Africa and South East Asia.

STRINGENT QUALITY CONTROL

Every stage of production is controlled by our quality management system ISO9001:2015.

From incoming inspection to final dispatch, our processing is subject to stringent controls allowing us to deliver high level quality in terms of coating, machining and stub welding processes to our customer base.

IN-HOUSE METALLOGRAPHY LAB



OILTEC DIVISION KEY SERVICES

KEY SERVICES	KEY PRODUCTS REPAIR
HVOF Coating	Mud Motor Rotors
Twin Wire Arc Spray Coating	Mono flow Rotors
Stub Welding	Housings
Hard facing	Mandrels
Machining	Pump Shafts
Honing	Impellers
Cylindrical Grinding	Piston Rods
Surface Grinding	Bearing General
Lapping	Ball & Gate Vales
Milling	OEM Coatings
Drilling	Anti-Corrosion Coatings
Fabrication	Ducts & Liners



HVOF Coating Process

HVOF is a high pressure, high velocity thermal spray process, using liquid fuel (kerosene) and oxygen which are fed into a combustion chamber, whereupon they are ignited and continuously combusted. The resultant hot gas at a pressure close to 1 MPa, emanates through a converging – diverging nozzle and travels through a straight section. The jet velocity at the exit of the barrel (>1000 m/s) exceeds the speed of sound.

A powder feed stock is injected into the gas stream which accelerates the powder up to 800 m/s. The stream of hot gas and powder is directed towards the surface to be coated. The powder partially melts in the stream, and is deposited onto the substrate. The result is a coating which consists of thin, overlapping platelets and has low porosity and high bond strength.

HVOF Advantages

The value is in the technology – to make it intuitive to operate, to reduce operator errors, to simplify the maintenance and to obtain repeatable high quality coatings.

- High bond strength and low porosity
- Liquid fuel – thick, low stressed coatings
- High hardness, low oxide level coatings
- Bond strength >10,000 psi
- Proprietary range of ceramic sealants through our SealPlex® range of products
- Enhanced corrosion protection and reduced surface friction

HVOF coating on 29" diameter Ball Valve



Refurbishment of Gate by HVOF coating, surface grinding and lapping



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Application of HVOF Coating in Different Industries

Application	Materials	Properties
Soft Bearings, Piston Guides, Bronze Component Repair.	Aluminium Bronze	Produces coatings resistant to wear and cavitation at low temperature. Abradable fine as sprayed surface. High Density.
Coating of Equipment in the Chemical Industry, Inconel Component Repair.	Inconel625 Nickel Chrome Moly Iron	Produces coating resistant to oxidation up to 870°C (1605°F) High resistance to chemical corrosion.
Turbine Repair, Pump Components, Furnace Components.	Inconel718 Nickel Chrome Iron Moly	Produces coatings resistant to oxidation up to 870°C (1605°F).
Electrical Components, Electrical Circuits, Print Rolls	Copper	Produces non-magnetic coatings having excellent electrical and thermal conductivity. Fine particle size producing extremely dense coatings.
Crankshafts, Hard Chrome Plating alternative, Hydraulic Rams.	Iron Chrome Moly	Resistance to wear and corrosion up to 650°C (1199°F). Low friction.
Wire Drawing Blocks, Paper Rolls, Hard Chrome Plating Alternative.	NiCrBSi Nickel Chrome Boron Silicon	Coatings are extremely dense and semi-fused in the as-sprayed state. Fusible, Oxide free.
Wire Drawing Blocks, Paper Rolls, Hard Chrome Plating Alternative.	50% Tungsten Carbide Nickel Chrome Boron Silicon	Coatings are extremely dense and semi-fused in the as-sprayed state. Fusible to produce fully homogenous coating, Oxide free.
Turbine Engine Components, Valves, Extrusion Dies, Mandrels, Flap Tracks.	Tungsten Carbide 12% Cobalt	Produces an exceptionally tough coating to resist wear by fretting at low temperature. High bond strength.
Turbine Engine Components, Cutting Blades, Machine Elements, Screw Flights, Wire Drawing Blocks, Selector Forks.	Tungsten Carbide 17% Cobalt	Produces exceptionally tough coatings to resist wear by fretting at low temperature. Fine finish. High bond strength.
Pump Components, Valve Shafts, Turbine Engine Components.	Cobalt Moly Chrome	Produces coatings having resistance to wear, corrosion and oxidation up to 980°C (1808°F).
Mud Motor Rotors, Mandrels, Pistons, Plungers, Gate Valves, Ball Valves, Pumps, Aircraft Landing Gear.	Tungsten Carbide Cobalt Chrome (86/10/4)	Produces exceptionally tough coatings to resist wear by fretting at low temperature. Fine finish. High corrosion resistance.
Slides, Steam Turbine Components.	Chrome Carbide Nickel Chrome 20	Produces coatings which are extremely dense and resistant to wear by fretting up to 850°C (1568°F).
Turbine Air Seals, Hot Forming Dies, Forging Tools.	50/50 Chrome Carbide Nickel Chrome 20	Produces coatings which are extremely dense and resistant to wear by fretting up to 815°C (1504°F).
Forging Tools, Turbine Components, Exhaust Struts.	80/20 Chrome Carbide Nickel Chrome 20	Produces coatings that are extremely dense and resistant to wear by fretting up to 850°C (1568°F). High Hardness.
Chemical Process Equipment, Hastelloy Alternative.	Nickel Chrome Tungsten Moly	Produces coatings resistant to wear and corrosion up to 875°C (1615°F). Low coefficient of friction. Excellent sliding wear resistance

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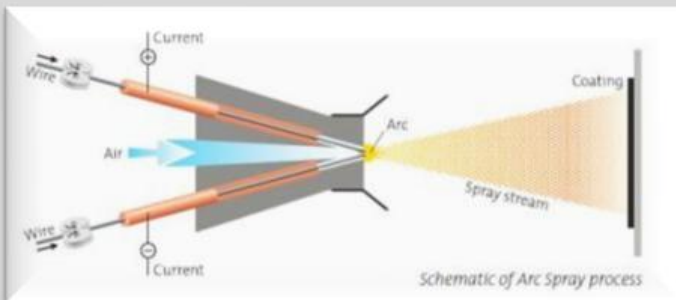
ARC SPRAY COATINGS

ARC spray process uses a pair of wires which are melted by an electric arc.

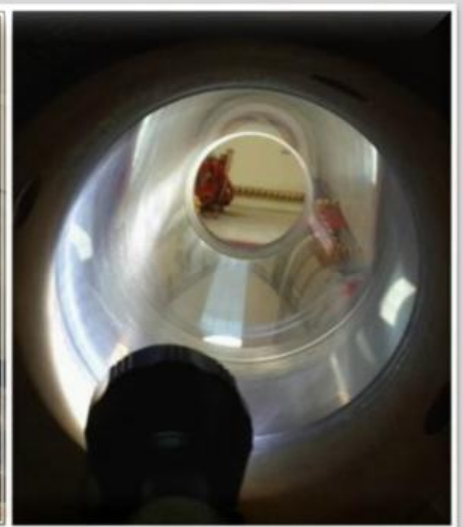
The arc has a temperature of 5,000 – 6,000 °C that melts the wire continuously. The molten wire tips are atomized by compressed gas, which propels the droplets toward the substrate at velocities exceeding 100 m/sec onto the workpiece to form a coating. This combination of high temperature and particle velocity gives arc sprayed coatings very good properties with high bond strength and low porosity.

Arc spray is a cold thermal spray process where the temperature of the substrate is held below 150 °C. Because of this low temperature, the base metal of the component is not exposed to any metallurgical changes or distortion.

Eutronic Arc Spray



Refurbishment of Housing by ARC Spray



Refurbishment of bearing seal area of motor rotor



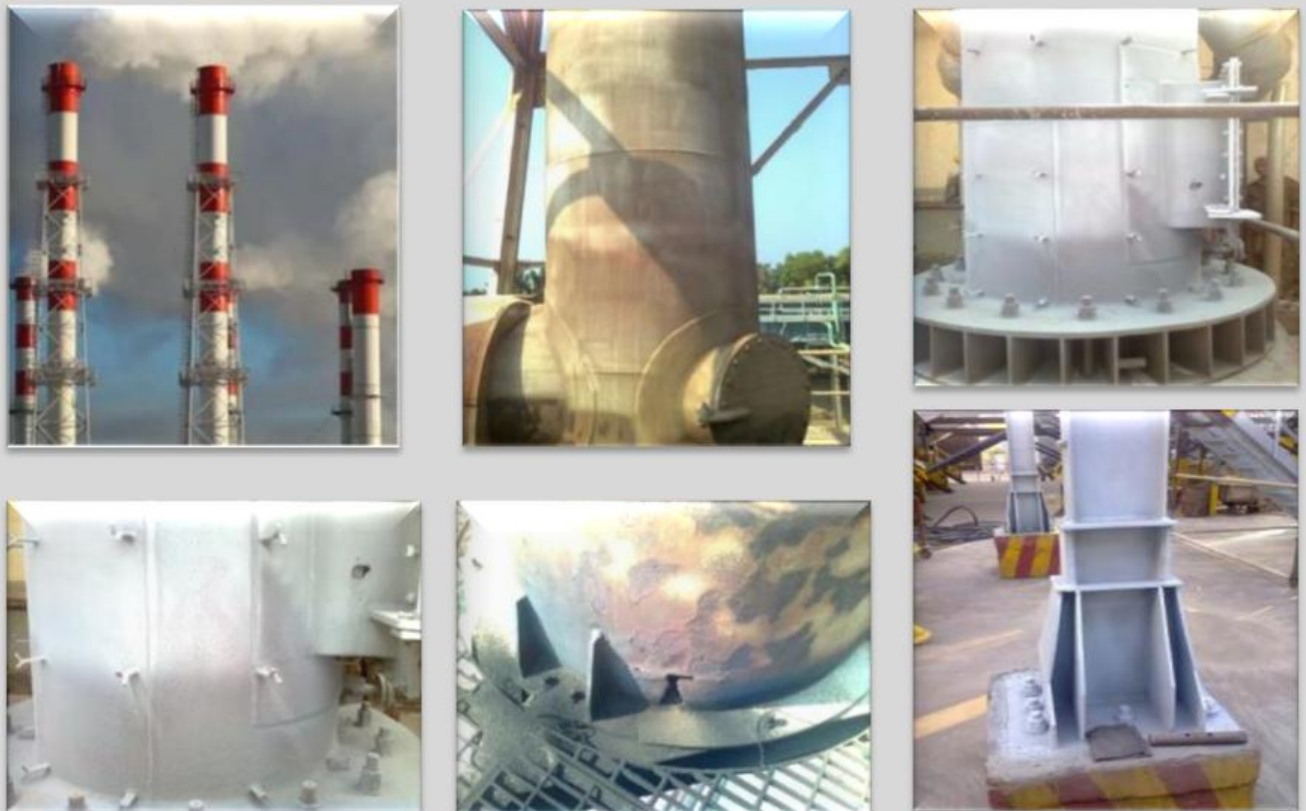
Roller shaft bearing area repair by ARC spray coating and grinding



Arc Spray Anti-Corrosion Coating for Sea Water application on Butterfly Valve



Aluminizing Chimneys/Stack



Aluminizing or aluminum diffusion alloying is an economical process for inhibiting corrosion by protecting the surface of steels, stainless steels and nickel alloys operating in severe high-temperature environments. Similar to the galvanizing process, aluminum is metallurgically bonded to the steel surface, providing excellent heat reflectivity and corrosion protection.

- **HIGH BOND STRENGTH**
- **HIGH DENSITY COATING**
- **THICK COATING POSSIBLE**
- **8-10 TIMES MORE LIFE**

CDP/ VRM/WELDING SERVICES DIVISION

WORKSHOP CAPABILITIES

SPECIAL PURPOSE CLADDING M/C



CNC PLASMA CUTTING M/C



ROLLING M/C



BENDING M/C (PRESS M/C)- 450 TON



COLUMN & BOOM FOR OVERLAY



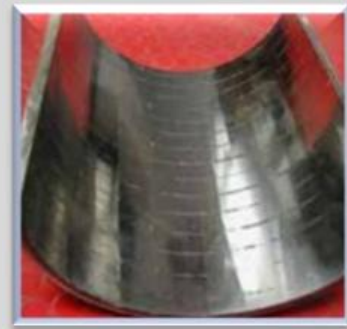
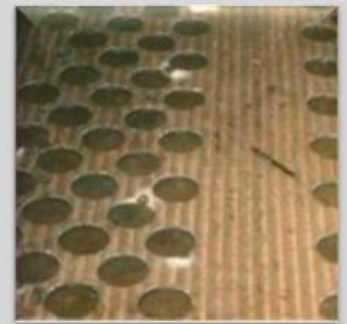
WELDING POSITIONAR



CDP FABRICATION JOBS



CDP/WEAR RESISTANCE PLATE FABRICATION



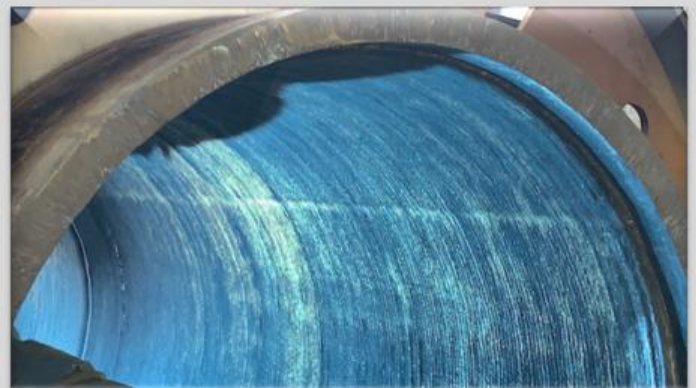
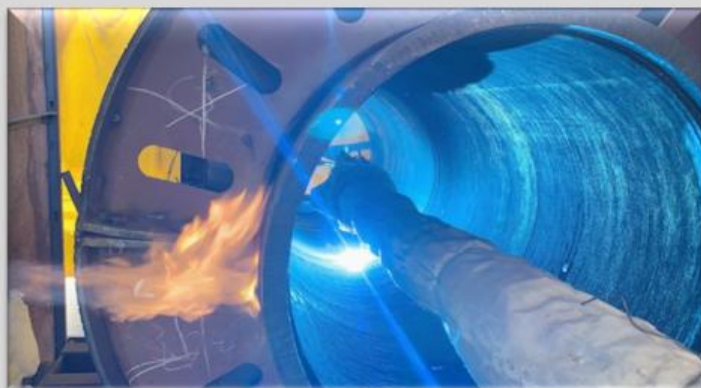
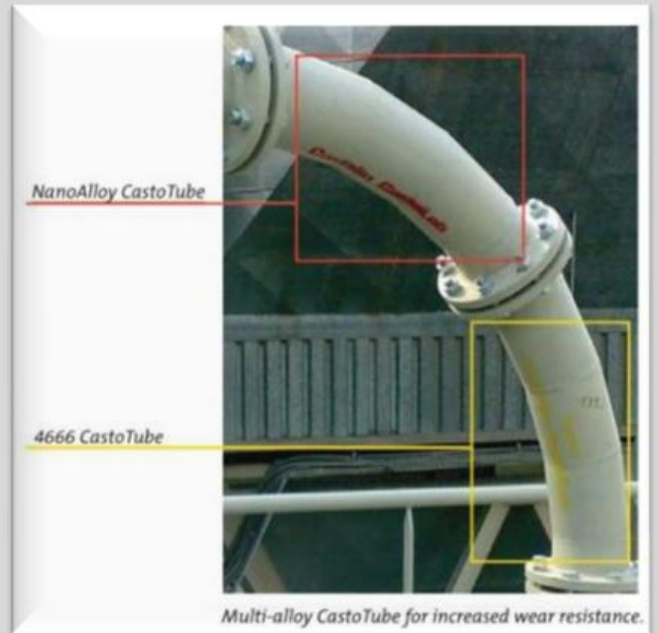
WEAR PLATE INSTALLATION AT SITE CONDITION





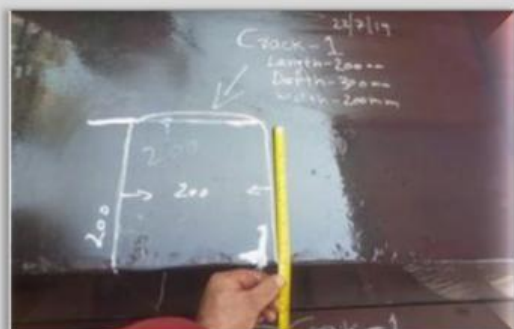
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CASTOTUBE MFG & FABRICATION



WELDING SERVICES

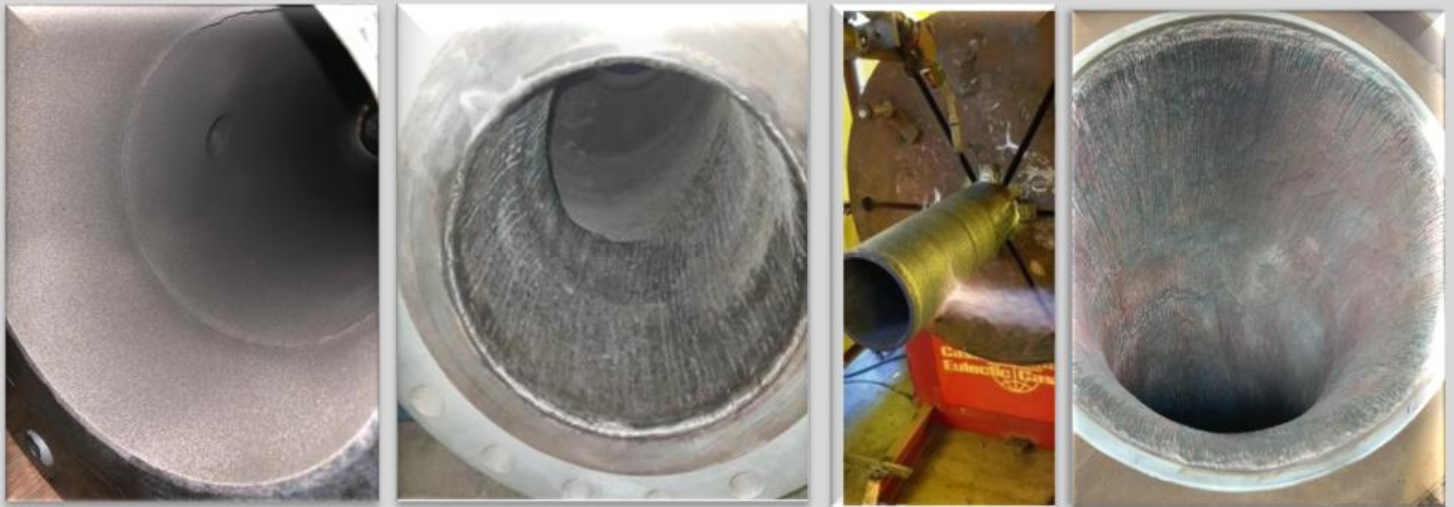
Kiln Tyre Repair



Cast Iron Repair Jobs



SLURRY SPOOL PROTECTIVE OVERLAY WITH INCONEL 625 & STELLITE 6



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Slurry Pump Refurbishment



Gantry crane wheel refurbishment



VRM TABLE & ROLLERS REBUILDING



RPR REFURBISHMENT



SURFACE POLYMER COATING SERVICES



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Castolin Eutectic Middle East FZE

Jebel Ali Free Zone South-3

Near Gate No. 9 & 10

P.O Box 18656,

Tel: +971 4 880 6884

Fax: +971 4 880 6885

Email: ame@castolin.com

Google Maps: <http://goo.gl/5jbDO5>