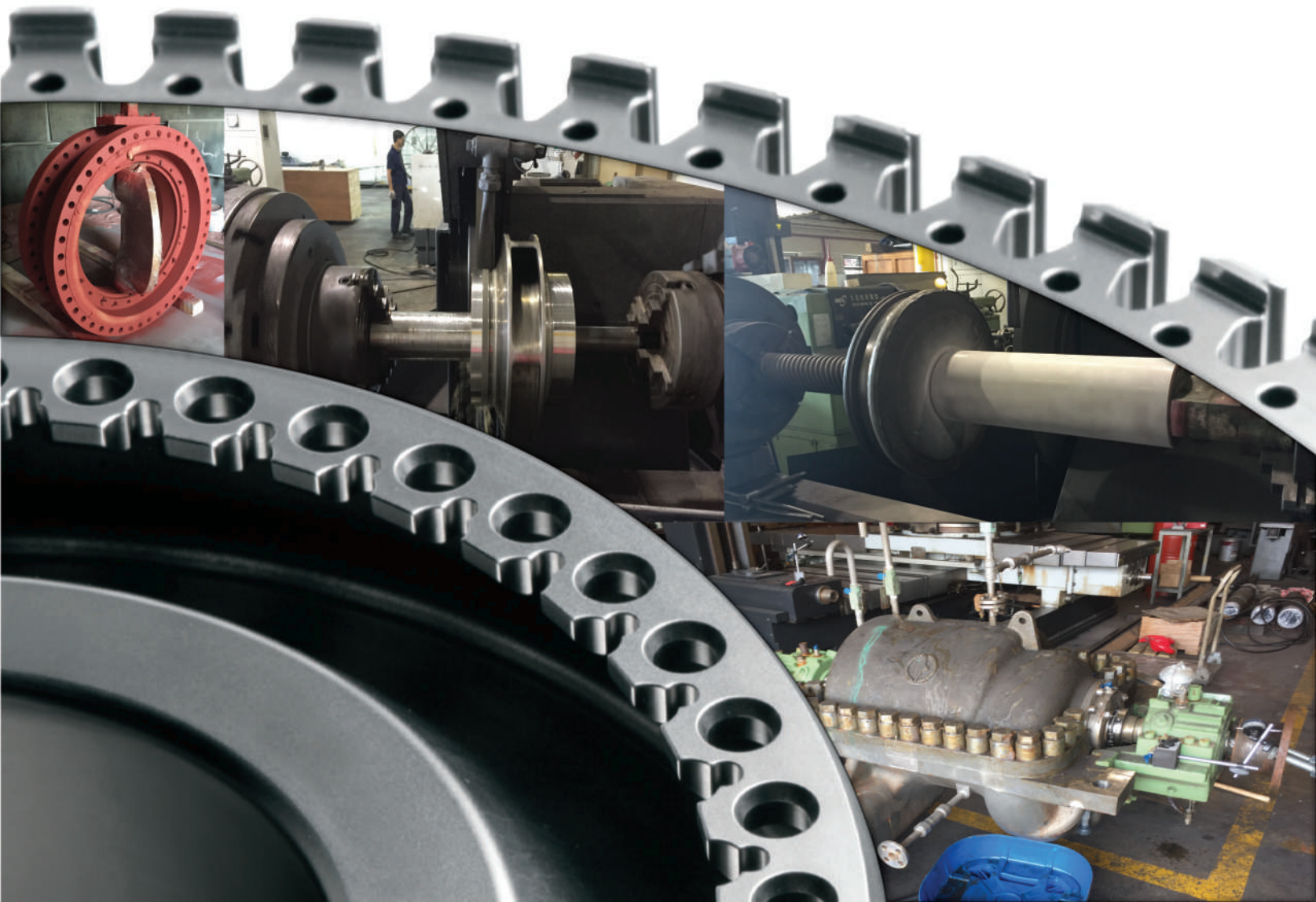


Integrated and Complete One Stop Engineering Services and Solutions

ENGINEERING REFURBISHMENT

SURFACE ENGINEERING

MANUFACTURING





OUR PROFILE

Established in January 2012 as an Engineering Service provider aimed at providing Integrated and Complete One Stop Engineering Services and Solutions.

WWG Engineering is supported by a team of experienced Engineering and Manufacturing Personnel with more than 100 years of combined experience in Manufacturing, Mechanical, Material and Surface Science and Engineering.

Located at 42A Penjuru Road Level 6 Lobby 1 Singapore 609164

Certification: ISO 14001:2015 / ISO 45001:2018 / ISO 9001:2015 / bizSAFE Level Star / bizSAFE Level 3



VISION & MISSION

OUR VISION

Our vision is to be recognised by all its customers as a world-class business.

OUR MISSION

Our mission is to provide quality green solutions, go beyond meeting our client's expectations and goals, provide opportunity for all our employees to succeed, and grow our business profitably by abiding by ethical values.



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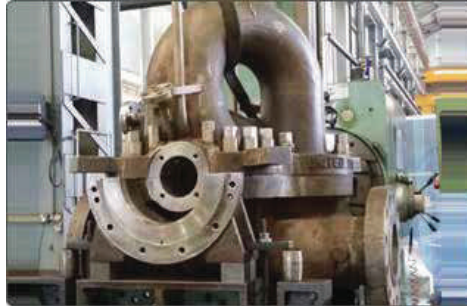
WWG Engineering is one of the leading Industrial mechanical equipment refurbishment based in Singapore with modern state-of-the-art equipments to refurbish any make, type and size of mechanical equipments. We provide a variety of customized Repairing services both static and rotating equipments. We repair, recondition and rebuilt Gate Valves, Hydraulics Cylinder, Ball Valves, pumps and compressors.

Rotating Equipments

- Pump
- Compressor
- Steam Turbine
- Cooling Fan
- Gear Box
- Blower

Static Equipments

- Valve
- Strainer



Our technicians are all fully experienced in both In House / Onsite service disciplines and are qualified to perform both standard and specialised repair/restoration on all main makes of mechanical components including the following.

- Seat
- Sterm
- Rotor
- Shaft
- Impeller
- Pump / Compressor Casing
- Crankshaft
- Pipe & Spool
- Storage Tank
- Boiler tube



WWG Engineering is a renowned and established provider of surface technology and mechanical engineering solutions, providing and serving a wide range of solutions to our clients from the Oil & Gas, Power Generation and Marine industries. We perform overhaul, repair and refurbishment services for critical industrial equipment ranging from Pumps, Valves, Hydraulic Cylinders and Compressors.

The company also specializes in an array of engineering services that include coating, machining and grinding, manufacturing and Hydraulic Cylinder repairs. Through surface technologies such as Thermal Spray, PTA overlay and Chrome plating - we offer components protection, lifetime extension, performance and efficiency improvements to enhance our clients' wide range of equipment and instrumentation.

In simple terms, we add value to our clients' business by providing them cost savings. Instead of purchasing new critical industrial equipments, they can refurbish their existing ones and make them new again. We also manufacture and fabricate new equipments for clients if needed.

We offer surface engineering and thermal spraying to ensure optimal performance. Fatter can engineer the most suitable surface or coating to improve the performance of a component in a specific environment.

We provide all forms of thermal spraying currently available and which can be used to restore component dimensions with materials similar to the original.

By using of recently-engineered coatings, increases equipment life without distorting, cracking, or making the base material brittle.

We use various techniques:

- Electric arc
- Flame
- Atmospheric plasma spraying (APS)
- High velocity oxygen fuel spraying (HVOF)

<u>Technology</u>	<u>Surface Type</u>	<u>Application</u>
HVOF	Metallic/Carbide	Abrasion, Erosion, Corrosion, Oxidation
APS	Ceramic	Thermal Barrier, Dielectric, Abrasion, Erosion, Corrosion, Oxidation
Flame	Ceramic/ Metallic	Abrasion, Erosion, Corrosion, Oxidation, Low Friction
ARC Spray	Metallic	Abrasion, Erosion, Corrosion, Oxidation

OUR THERMAL SPRAY SYSTEM'S CAPABILITY:

- 6 AXIS ROBOTIC THERMAL SPRAY SYSTEMS
- THERMAL SPRAY COATING CHAMBER UP 7M



Welding Services

Welding is one of the longest established methods for joining metals. Using appropriate techniques and materials, professional welding enables all manner of cost- effective plant and equipment repairs and modifications.

That's why it pays to choose the most highly skilled and experienced welding partner for your repairs or fabrication...

Cost-effective Plant and Equipment repairs

Specialises in repairing metal machine parts using the highest quality welding. Experience shows manual arc welding to be the most often used method –other welding services, include these:

- MIG (metal inert gas) welding
- TIG (tungsten inert gas) welding
- Heat treatments

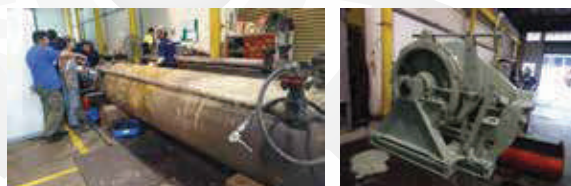
As you expect from your one-stop engineering services partner, we also perform a wide range of heat treatments. We can do on site at your location using the mobile heat treatments equipment.

Hydraulic Marine: Maintenance, Repair and Overhaul

We have the specialist facilities to service and repair hydraulic components, systems and equipment. These facilities with service quality and response enables to do the maintenance, repair and overhaul of mechanical handling equipment and hydraulic components.

The Services:

- Dis-Assembly & Assembly
- Inspection & Test
- Component Repair
- Honing & New Parts Machining
- Hard Chroming & Thermal Spray Coating



Hard Chrome is extremely hard, with typical values of 850 - 1050 HV (63 - 70 HRC), hence the term "Hard" Chrome. This increases the life of components in wear applications or corrosive environments. Hard Chrome has an extremely high resistance to atmospheric oxidation, and a good resistance to most oxidising and reducing agents.

Applications

- Hydraulic and Pneumatic Piston Rods and Cylinder
- Print Cylinders and Plates
- Valves, Gates and Bodies
- Mining Equipment
- Pump Shafts and Rotors
- Textile Components



We have comprehensive range of machine and equipments to undertake the precision machine services. We offer a comprehensive surface and cylindrical grinding capability that enables us to grind a variety of materials on both external and internal faces, to provide highly polished and finished components and products to highly exacting tolerances and form integrity.

MACHINE CAPABILITY:

- Small/Large Lath Machine
- Polishing Machine
- Milling Machine And Other Special Machine Tools

We offer a comprehensive cylindrical grinding capability that enables us to grind a variety of materials to provide highly polished and finished components and products to highly exacting tolerances and form integrity. Also has a capability of surface and internal grinding.



We have earned the confidence and praise of the specialty chemical industries.

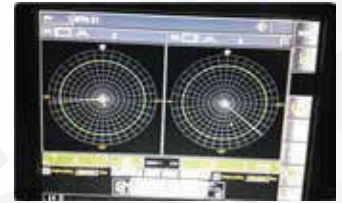
We have highly skilled and experience welders, along with the right tools we can offer mig, tig and arc welding.

- Repair/Restoration to existing equipments or components by specialised welding including MIG, TIG and SMAW.
- We have a qualified NDT Inspector to conduct the inspection such as LPI, MPI and UT.



We can offer up to 3 tonnes with 4 Ø Dynamic Balancing capability for troubleshooting & correction of unbalanced rotating equipment experiencing vibrations.

Dynamic Balancing allows sets of bearing pedestals to be connected to sensors and the unbalance at the two planes can be independently identified, thus reducing vibrations to a level that will prolong the bearing life and will reduce noise levels.



Corrosion resistant coatings protect metal components against degradation due to moisture, saltspray, oxidation or exposure to a variety of environmental or industrial chemicals. Anti-corrosion coating allows for added protection of metal surfaces and act as a barrier to inhibit the contact between chemical compounds or corrosive materials. Many of the coatings listed below also provide a bonus of abrasion resistance, non-stick performance and chemical protection. A wide variety of anti-corrosion coatings are available to match the performance requirements of a specific application.

Epoxy Coating-cost-effective, corrosion resistant coating.

TSA-is found to be a cost effective solution compared to other systems when reviewed over the lifetime of the facility. TSA at a petrochemical plant, as a solution for the longterm protection against atmospheric corrosion and CUI.

Polyurethane-high gloss topcoat for epoxy and inorganic zinc.

Inorganic Zinc-corrosion and weathering protection for steel.

Ceramic Composite Epoxy Coating-a unique abrasion resistant coating that protects by binding ceramic particles to a resin system.





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