



**INTEGRATED AND COMPLETE ONE STOP
ENGINEERING SERVICES AND SOLUTIONS**

COMPANY 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.

OUR VISION

To be recognised by all its customers as a world-class business.

OUR MISSION

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.





ENGINEERING REFURBISHMENT & SERVICES

EQUIPMENT

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, Globe Valves, Safety Valves, Control Valves, Check Valves, and Parallel Slide Valves, Boiler Feed Pump Valves, Pressure Relief Valves, Spray Valves, Ball Valves, Strainers, Pumps and Compressors.

We are the specialist in both static as well as rotating mechanical equipments.

STATIC EQUIPMENTS

- Valve
- Strainer

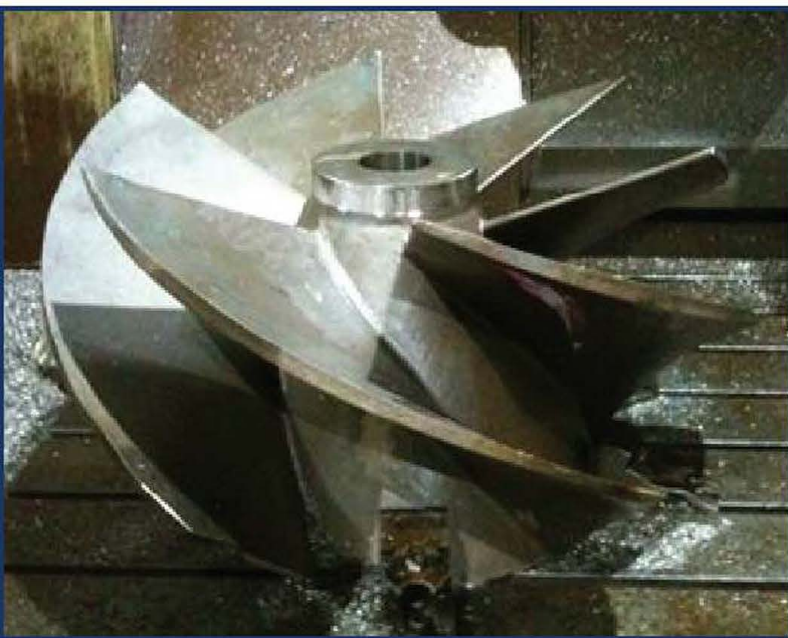
ROTATING EQUIPMENTS

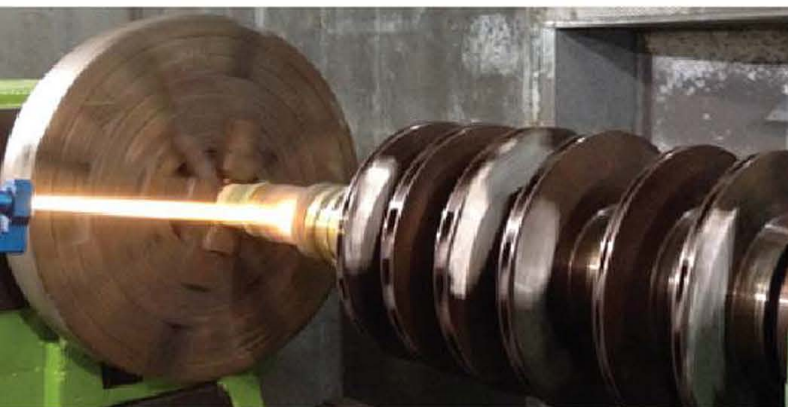
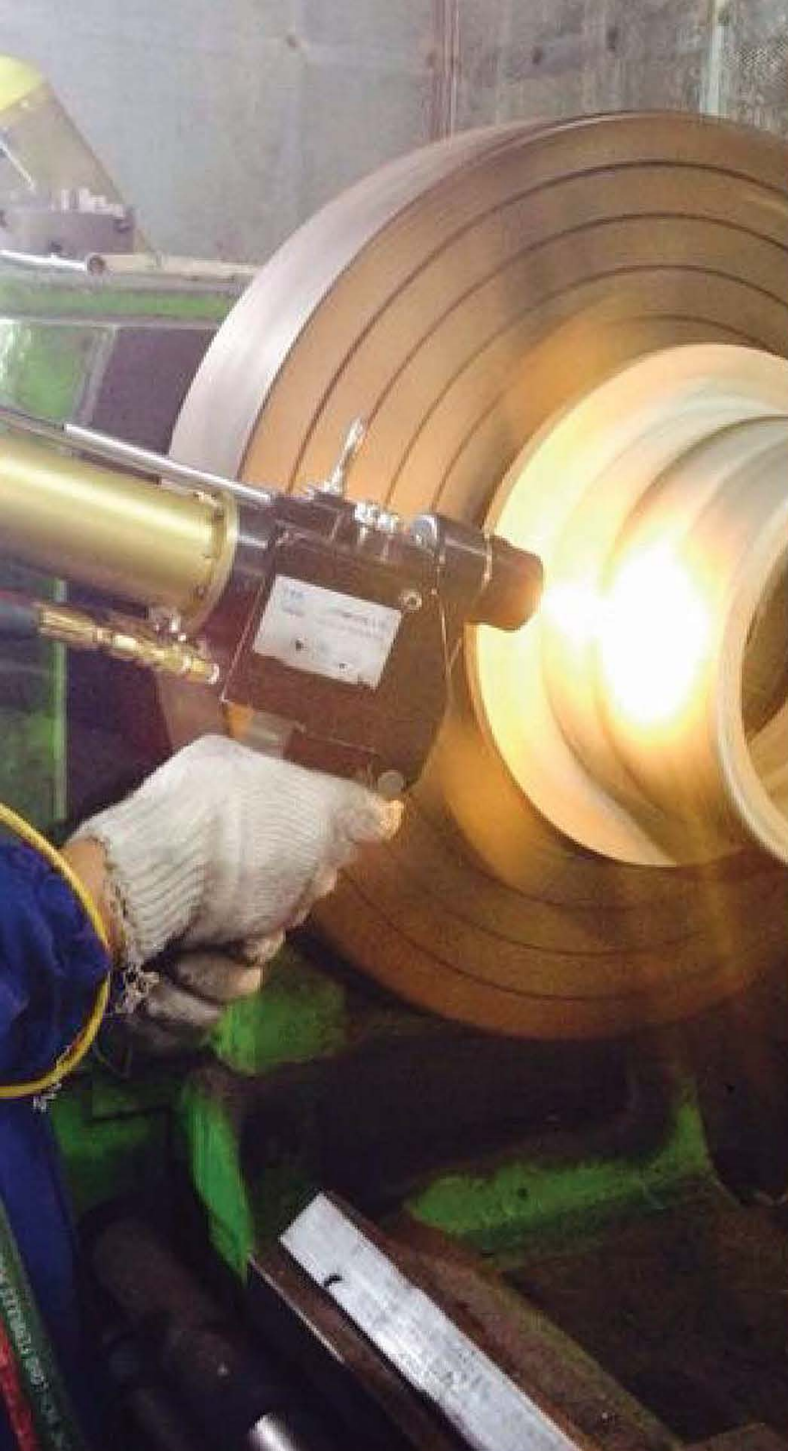
- Pump
- Compressor
- Steam Turbine
- Cooling Fan
- Gear Box
- Blower

COMPONENT

Our technicians are all fully experienced in both service centre and field service disciplines and are qualified to perform both standard and specialised repair on all main makes of mechanical components including the following :

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





SURFACE ENGINEERING & TECHNOLOGY

WWG Engineering applies surface engineered coatings to precision component parts to improve performance. Our coatings provide for improved wear resistance, temperature resistance, inert surfaces, low friction and sticking, elimination of galling, and many other benefits. Enhance your components with our advanced range of surface technologies. With our extensive knowledge, we can determine the right coating service to match your application needs regardless of your industry. Our skill ensures a top quality coating application.

THERMAL SPRAY

We offer surface engineering and thermal spraying to ensure optimal performance. WWG Engineering 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:

- High Velocity Oxygen Fuel spraying (HVOF)
- Atmospheric Plasma Spraying (APS)
- Flame / Powder
- Electric arc (TWAS)

Technology	Surface Type	Application
HVOF	Metallic/ Carbide	Abrasion, Erosion, Corrosion, Oxidation
APS	Ceramic	Thermal Barrier, Dielectric, Abrasion, Erosion, Corrosion, Oxidation
Flame / Powder	Ceramic/ Metallic	Abrasion, Erosion, Corrosion, Oxidation, Low Friction
TWAS	Metallic	Abrasion, Erosion, Corrosion, Oxidation

Our Thermal Spray System Capability:
6 AXIS ROBOTIC THERMAL SPRAY SYSTEMS
THERMAL SPRAY COATING CHAMBER UP TO 7M

SURFACE ENGINEERING & TECHNOLOGY

COLD BUILD UP

Our cold build up coatings are our optimized surface solutions with exemplary functionality for demanding requirements designed to optimize your products and production. Our coating application experience and our reliability as a solution provider are hallmarks of the service we offer to our customers.

Our Cold Build Up surface engineering technologies are as follows,

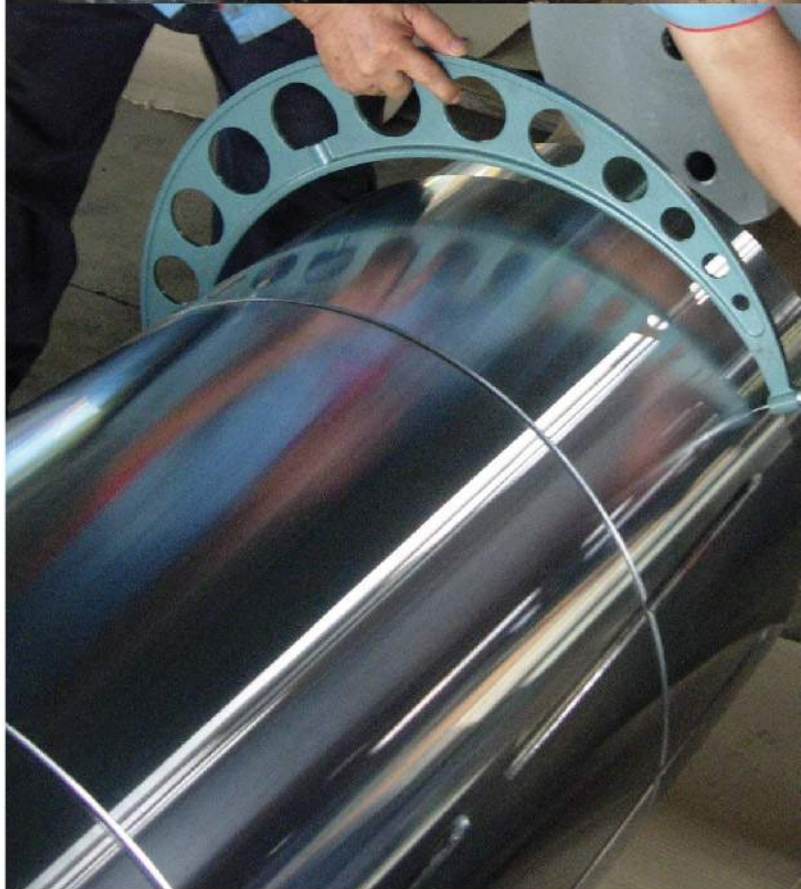
Technology	Surface Type	Application
Composite	Ceramic/ Metallic	Thermal Barrier, Erosion, Corrosion
Spray Coating	Epoxy/PU/PE/ ALU/Zinc/PTFE/ Molydenum	Corrosion, Anti Galling, Dry Lub
Chemical Conversion	Phosphate/ En/Chrome	Abrasion, Corrosion, Oxidation
Cold Spray	Metallic/PTFE	Abrasion, Corrosion, Oxidation

GRIT BLASTING & SHOT PEENING

Our Grid Blasting & Shot Peening System Capability:
COATING, BLASTING CHAMBER UP TO 6M

HARD CHROME PLATING SERVICES

Hard chrome plating is a very hard electroplating process in which chromium is deposited from a chromic acid solution. Thickness of hard chrome plating ranges 25 - 1,000 microns thickness for a wide range of applications. Electro-deposited Chrome is extremely hard, with typical values of 850 - 1050 HV (63 - 70 HRc), hence the term "Hard" Chrome.



MANUFACTURING

MACHINING

We have comprehensive range of machine and equipments to undertake the precision machine services from small to big components of rotation and stationary machinery.

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.

From threading to complex shapes such as tapers and spheres, our experience, expertise and technologies allow us to provide you with efficient, effective solutions to the exacting standards you require.

Machine Capability :

- Small/large Cylindrical lathe machine
- Small/large Crankshaft Grinding machine
- Polishing machine
- Milling machine and other special machine tools



CYLINDRICAL GRINDING

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.

From threading to complex shapes such as tapers and spheres, our experience, expertise and technologies allow us to provide you with efficient, effective solutions to the exacting standards you require.

MANUFACTURING

WELDING

Our high-purity welds have earned the confidence and praise of the pharmaceutical, semiconductor, vacuum welding and specialty chemical industries.

We have highly skilled and experience staff in our welding department along with the right tools we can offer mig, tig and arc welding in stainless steel, aluminium, mild steel and plastic. We can also offer brazing and silver soldering.

We work in a plethora of industries so we can cater for most requirements. So if you need a small sheet metal component or a large one off frame, we can help.

OUR WORKSHOP IS A LEADING SUPPLIER OF WELDING SERVICES INCLUDING:

Repairs to existing equipment or components including reworking and rewelding of damaged items or replacement of parts where it is uneconomical to fix.

Specialised welding including MIG, TIG and manual metal arc welding.

In house non-destructive testing with magnetic particle inspection.

Building up worn components in our welding lathe.

Site fabrication and welding including being equipped with single phase welding equipment.



Weld Hardfacing



MANUFACTURING

DYNAMIC BALANCING

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.

We also provide :

- High Speed Balancing
- Probe Area Burnishing
- Rotor Electrical & Mechanical
- Demagnetising

ANTICORROSION / PROTECTED COATING

We provide corrosion protection services such as in-house or onsite blasting, painting, thermal spray Aluminum services for offshore marine, oil and gas, power plant and other industries.

Corrosion prevention lengthens the lifespan of metal structures. When exposed to the elements in the environment, metal structures will suffer deterioration in structural strength. Corrosion prevention typically begins with the blasting process, which cleans and eliminates contaminants on the surface of metal structures. We provide corrosion protection services such as onsite blasting, painting, thermal spray Aluminum, Zinc and Monel coating services.

SPECIAL COATING

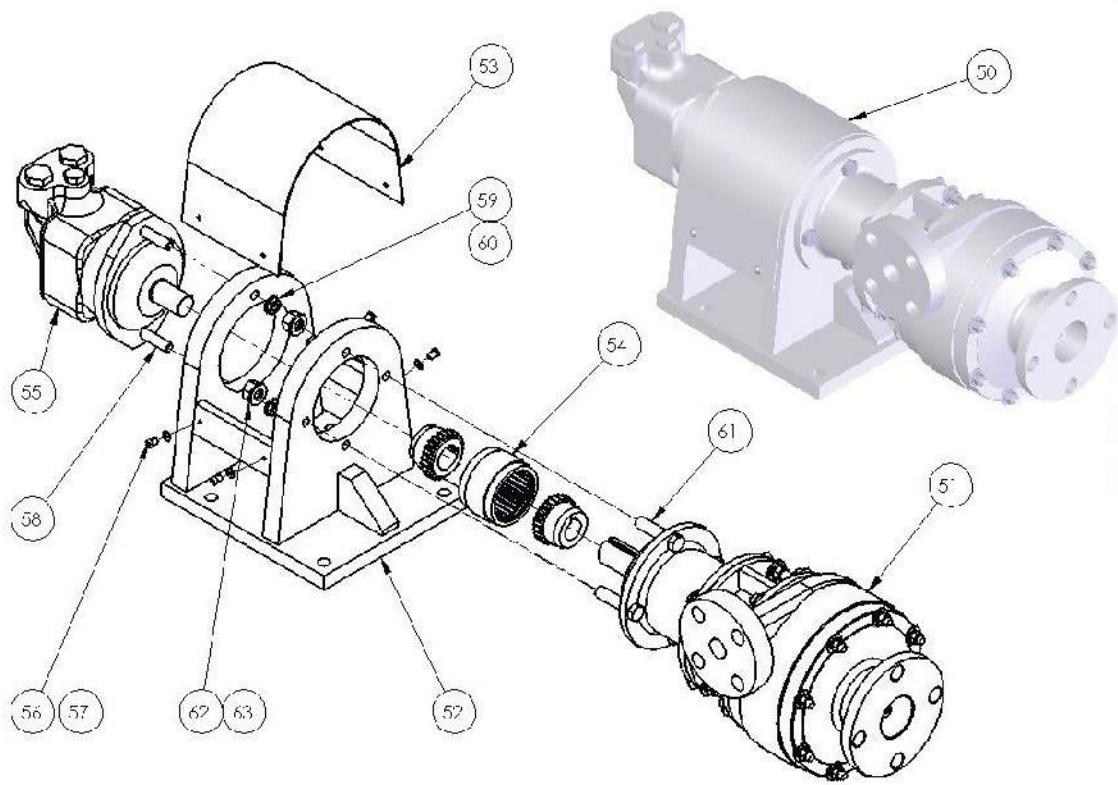
a) HBE Coating process

We provide special coating process such as HBE-HT, a state-of-the-art two component epoxy coating system for high temperature pipelines. HBE-HT is used for protection of pipeline field joint girth welds, valves and fittings, as well as bend pipe. This epoxy system can be applied with plural component special pump to the blasted substrate.

b) Passive Fire Protection (PFP) Coating

We also provide the application for passive fire protection coating system. The protection of steel from the effects of fire in Hydrocarbon environments requires a coating application by specialist equipment and materials to provide a Passive Fire Barrier Coating.





OUR SOLUTIONS

1. PROBLEM STATEMENT

Problem statement and design is a core service and Fatter is able to deliver highly precision engineering design service, supporting clients from conceptual design, through prototype optimisation, design validation and testing, i.e., across the total life cycle of a product.

2. ANALYSIS

Our advanced structural analysis engineering capability is wide ranging and uses both traditional engineering and advanced computer aided engineering technologies like finite element analysis to understand structures and their responses throughout the project life cycle, from concept development through to the full detailed engineering phase.

3. ENGINEERING

Our Engineering Solutions specialized in increasing operational efficiency and productivity through enhanced equipment and customized maintenance programs to support clients with their design development, verification and production processes.

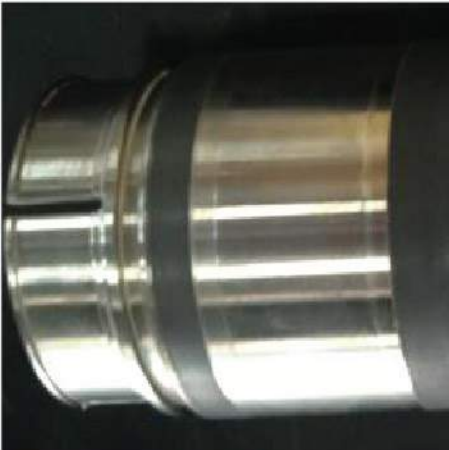
4. REFURBISHMENT / MANUFACTURING

Our Engineers provides repair and refurbishment services for existing mechanical equipment or components. Such services may be required for the repair of worn components or damage to the vessel itself caused by corrosion or handling. As process requirements change alterations may be required for vessels and equipment. We offer all these services to the Oil & Gas, Chemical & Refinery, Marine & Offshore and Construction industries.

5. INTEGRATED ENGINEERING

Our aim is to provide integrated engineering solutions to our customers and partners in a way that enables them to achieve their current and future goals.

OUR SERVICES



ACCREDITATION

bsi.
Certificate of Registration
 QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that: **FATTER PTE LTD**
 107 Gul Circle
 Singapore 629593

Holds Certificate No: **FM 598849**
 and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:
The management of manufacturing, refurbishment and surface engineering services.

For and on behalf of BSI:

Yap Lley Lly, Managing Director (Singapore & Malaysia)

Originally registered: 25/06/2013 Latest issue: 25/06/2013 Expiry Date: 24/06/2016

Page: 1 of 2

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract. An electronic certificate can be downloaded at www.bsi-global.com/Certificates or telephone +44(0)2077777777. Further conditions regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization. This certificate is valid only if printed on original paper and is complete only.

BSI Group Singapore (Pte) Ltd, 3 Robinson Road, #12-01, RIA Tower, Singapore 048522
 A Member of the BSI Group of Companies.

NACE Certificate of Achievement
 The NACE International Institute Recognizes
Maung Htut
NACE Coating Inspector Level 1—Certified
 CIP Certification Number 00688


 Awarded
February 2014

NACE Certificate of Achievement
 NACE International Recognizes
Jerry Berdan
NACE Coating Inspector Level 1—Certified
 CIP Certification Number 22849


 Certification Awarded
December 2009

NACE Certificate of Achievement
 NACE International Recognizes
Ye Htut
 As a Certified
CP1 - Cathodic Protection Tester
 CERTIFICATION NUMBER 18327


 Awarded
November 2010

OUR VALUED CUSTOMERS





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