



## Company Profile

[www.wwgengineering.com](http://www.wwgengineering.com)

# WWG Engineering Pte Ltd

At WWG Engineering, we Pride Ourselves as

The Singapore Laser Technology, Thermal (Metal) Spraying Coating and Engineering Equipment Specialists.



Version: QEHS R1.21  
Aug 30, 2022

Customers Presentation Copy

# 1. Why WWG ???

**We Are SURFACE ENGINEERING TECHNOLOGY SPECIALISTS**

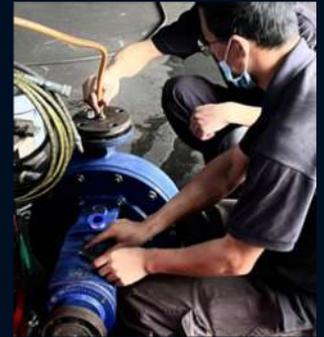
**We Solve Your Equipment and Facilities Problems**

**You Focus on a SMOOTH, EFFICIENT PLANT OPERATIONS & PRODUCTION**

**We Responsible For:**

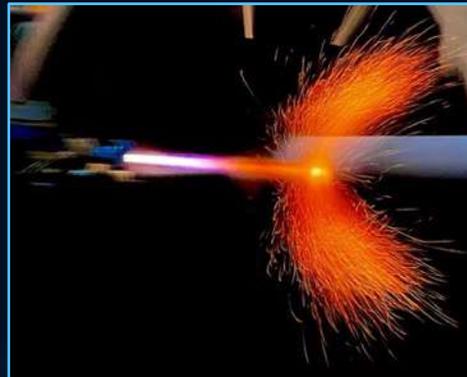
**A New Life for Your Equipment via**

- Repair, Rebuild, Refurbish
- Modify, Upgrade, Enhance Performance, Lifespan Extension
- Or Re-manufacture, Reverse Engineering



**Thermal Spray**

- Metal Spray (Wire & Electric Arc)
- Ceramics Spray
- HVOF Coating
- Plasma & Flame Spray
- COLD Spray)



**Nickel/Hard Chrome Plating/Honing**  
**Welding & Fabrication**  
**Laser Technologies (F- after November 2022)**  
**Laser Cladding (F)/Laser Cleaning (F)**  
**Workshop Machining**  
**Dynamic Balancing**  
**On-Site Machining**  
**Rotating & Stationery Equipment**  
**Engineering Repair Services**

Refinery – Petrochemical - Power-generation - Marine & Offshore - Oil & Gas Production – Breweries - Food Manufacturing - Water Processing

## 2. Why WWG ???

Plant Expansion? Maintenance Outages?

What can we do for you??

**Protective Coatings (Blast-Paint), Epoxy Coating, TSA, Piping, Structural Fabrications, Insulation, Jacketing**

Be it Machining Works, Reverse Engineering, Temporary Fix or Modification and Upgrading....

**A Perfect Match and Unique Blend of Surface Technology, Machining and Engineering Services Solutions Inclusive of REVERSE ENGINEERING Under One Roof**

- Process Piping
- Welding Fabrication
- Equipment Repair
- Metal Spray, HVOF Coating
- Laser Cladding
- Laser Cleaning
- On-site Machining
- Protective Coating (Blast, Paint Coat)
- Metal Machining (Turning, Milling, Boring)



**We Are A Phone-call Away ...**

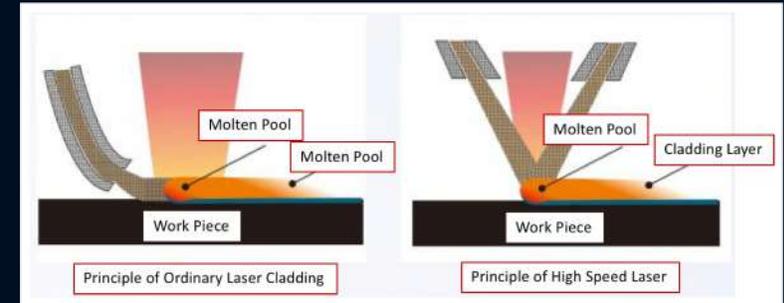
WWG ENGINEERING PTE. LTD.  
42A Penjuru Road, Singapore 609164.  
Office: Level 6 Lobby 1.  
Workshop: Level 4 Bay 1.  
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sales@wwgengineering.com  
www.wwgengineering.com

**WWG Engineering Pte Ltd**

Refinery – Petrochemical - Power-generation - Marine & Offshore - Oil & Gas Production – Breweries - Food Manufacturing - Water Processing

# 3. Why WWG ???

New Development



We Conduct R&D

We Create New Applications For You

We Work Together with You Until Technical Problems Resolved

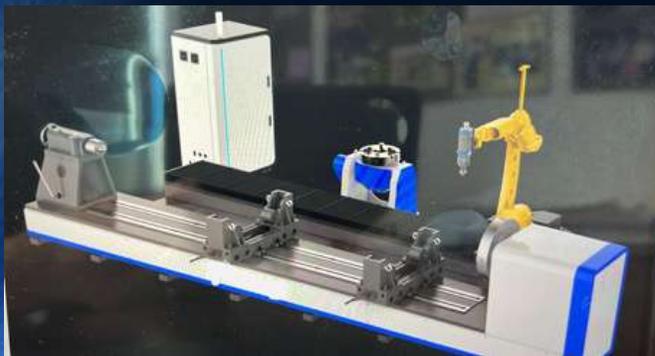
Current Key R&D: **UHLA™** (Ultra HighSpeed Laser Applications)

High Power, High Speed, High Performance Laser Sources (After November 2022)

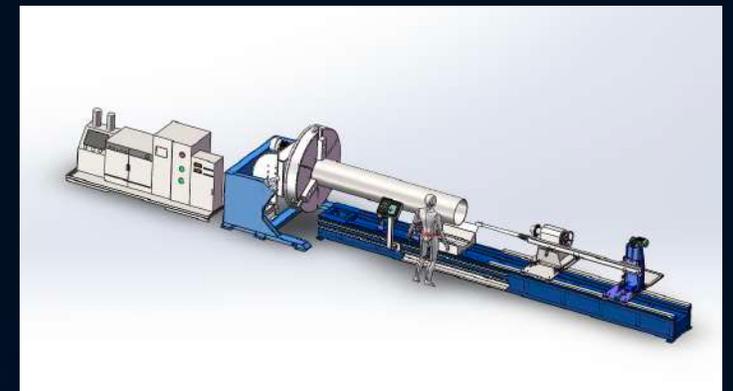
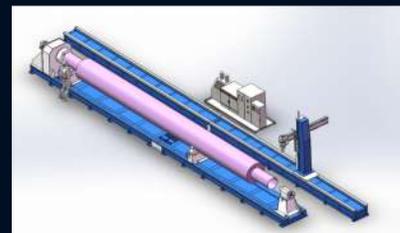
- Laser Cleaning
- Laser hardening
- Laser Outer Surface Cladding
- Laser Internal Bore Surface Cladding

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**PRIORITY TOPIC:  
HARD CHROME REPLACEMENT COATING**



CNC Automated 6-Axis Laser Cladding  
Swing 1,600 mm X Length 12 m





## About WWG Engineering

**... A One-stop Integrated Engineering Solutions**

We are a Singapore registered company, set up in 2012.

Founded by Willie Wong, a serial entrepreneur who has founded many diversified Regional Business Groups.

Specializing in assembling some of the most sought-after technologies serving facilities and machineries in the manufacturing and processing plants environment, WWG Engineering's objective is to offer a One-stop Integrated Engineering Solutions to meet industrial needs.

# WWG Engineering Pte Ltd

## About Us – A Brief Description



Established in January 2012, WWG Engineering is offering services to plants facilities and machineries in a very diverse Singapore and Regional Engineering Industry such as **Food, Water, Power-generation, Marine, Offshore, Refinery and Petrochemical.**

Founding members and technical team was primarily a Specialized **Welding, Thermal Spraying Coating, Surface Engineering** Experts with very extensive knowledge and experience in the **Rotating, Stationery, Mechanical, Plants Equipment and Projects.**

Among its latest business initiatives, WWG Engineering Pte Ltd is also specializing in **Fabrication and Process Pipping works, Ferrous and Non-Ferrous Welding**, complementing its existing **Engineering Services, Surface Engineering Technology, Mechanical Engineering Works, Equipment Refurbishment, Components Re-manufacturing**, etc.

# Regional Presence



Under WWG, we have Engineering Plants facilities serving Process Plants, Offshore Oil & Gas, and Power Generation Industries in Singapore, Kemaman (Terengganu), Pengarang (Johor) and Bintulu (Sarawak).



# Introduction of Key Strength

Workforce: 30  
Production Plant & Office: 21,000 sq ft  
Address: 42A Penjuru Road, Singapore 609164  
Office: Level 6 Lobby 1  
Workshop: Level 4 Bay 1

Thermal Spray Coating – Wire Metallizing, Electric Arc, HVOF, Plasma Spray, Rokide Ceramic Spray, Cold Spray  
Metal machining & Large Format Cylindrical Grinding, Dynamic Balancing  
Laser Technology – Laser Cladding, Laser Cleaning  
Hydraulic Cylinders, White Metal Bearings Repair and Remanufacturing  
Stainless Steel & Steel Fabrication - Tubes, Pipes, Pressure Vessels, Steel Structural, Platform, Walkway, Stairways  
and Many More.....  
Non-ferrous metal works – Aluminium, Brass, Copper Welding and Fabrications  
Process piping Insulation and Jacketing  
Mechanical Equipment installation  
Mechanical Works and Designing works  
Safety Management on site



# Quality, Environmental Health & Safety (QEHS) Policy

## Quality, Environmental Health & Safety (QEHS) Policy

### 1.1 Quality, Environmental Health & Safety (QEHS) Policy

#### QUALITY ENVIRONMENT HEALTH AND SAFETY (QEHS) POLICY

WWG Engineering Pte Ltd (WWE) is committed to providing customized Thermal Spraying Coating and Engineering Equipment value-added solutions that exceed our customers' expectations, through Superior Quality Works, within Budget and on Schedule, unmatched by the competition.

We are committed to conduct our operations in a manner which protects people, the environment and property and which conforms to all applicable legislations, regulatory and other requirements.

The safety and well-being of our employees and others is very important to us. We are conscious of the potential impact that our activities on the environment and our employees. WWG supports the principles of environmental sustainability and recognises that a sustainable environment is central to our lives and our work.

We are convinced that the prevention of workplace accidents, preservation and managing our Quality Environment Health and Safety (QEHS) performance and working towards targets set to reduce adverse impacts.

Towards this end, we shall as far as reasonably practicable,

- Eliminate all injuries & ill-health at work by providing a safe place of work and safe systems of work
- Working towards an injury-free workplace through Risk Management, Health and Safety programs and employee involvement.
- Eliminate all significant adverse environmental effects that may arise from our activities.
- Commit & comply with all local Legislative, Regulatory and other requirements.
- Implement innovative technologies to maximize resource recovery to customers while minimizing workplace Health and Safety hazards and negative environment impacts.
- Conserve natural resources through pollution prevention, energy conservation, and waste minimization.
- Train staff, suppliers, and contractors to cultivate good QEHS awareness and practices.
- Achieve and continual improvement in QEHS objectives and targets through regular monitoring and measurement.

**WILLIE WONG**  
DIRECTOR  
WWG Engineering Pte Ltd

Date: 1 May 2022

## Organization Chart



### 1.5 Quality, Environmental Health & Safety (QEHS) Objectives

#### A. Quality Objectives

WWG ensure quality by establishing quality processes that uphold international standards and regulations and help our customers achieve their goals. To do so, we manage business through the certified approach of the Plan-Do-Check-Act (PDCA).

S/N	Objective	KPI Target	Process Owner
<b>1 Account</b>			
	Performance assessment of top 20% service providers	Yearly review of top 20% service providers	Account Manager
	Arrears management	Monthly review	Account Manager
<b>2 Operations &amp; Planning (Production)</b>			
	Defects	Achieve 100 percent zero defect/ product recalls.	Production Manager
	Delivery	Achieve 100 percent of on-time deliveries.	Production Manager
	Environment, Health & Safety	Monthly GEMBA Walk Inspection	Director/Production Manager/ESG&I
<b>3 HR &amp; Admin: Maintain a positive, values-based work environment.</b>			
	HR & QEHS Competency	Monthly QEHS training/briefing to employee	HR Manager/ESG&I
<b>4. Sale and Marketing</b>			
	Customer service	Maintain a customer satisfaction rate of 80% percent/ year	Sale Manager
	Business Development	Measure prospecting pipeline, database contacts (Hot, Warm and Cold Leads) / month	BD Director

#### B. Environment & Sustainability Objectives

WWG are committed to environmental sustainability targets, environmentally sound, sustainable and innovative solutions that will continue to reduce our global footprint, strengthen relationships within the communities we operate in, and assist our stakeholders to achieve their own targets.

<b>1 All Department</b>			
Objective	KPI Target	Process Owner	
To ensure compliance of environmental legislation	Achieve 0 NEA fine / year	Production Manager	
Annual certification	Annual certification of site as required to attain 100% certification by 2022. 100% certification renewals achieved	ESG&I	
Energy consumed	Monitoring monthly electricity consumed	Account	
Waste Management	Monitoring monthly waste generation and recycled	Account	

#### C. Occupational Health and Safety Objectives

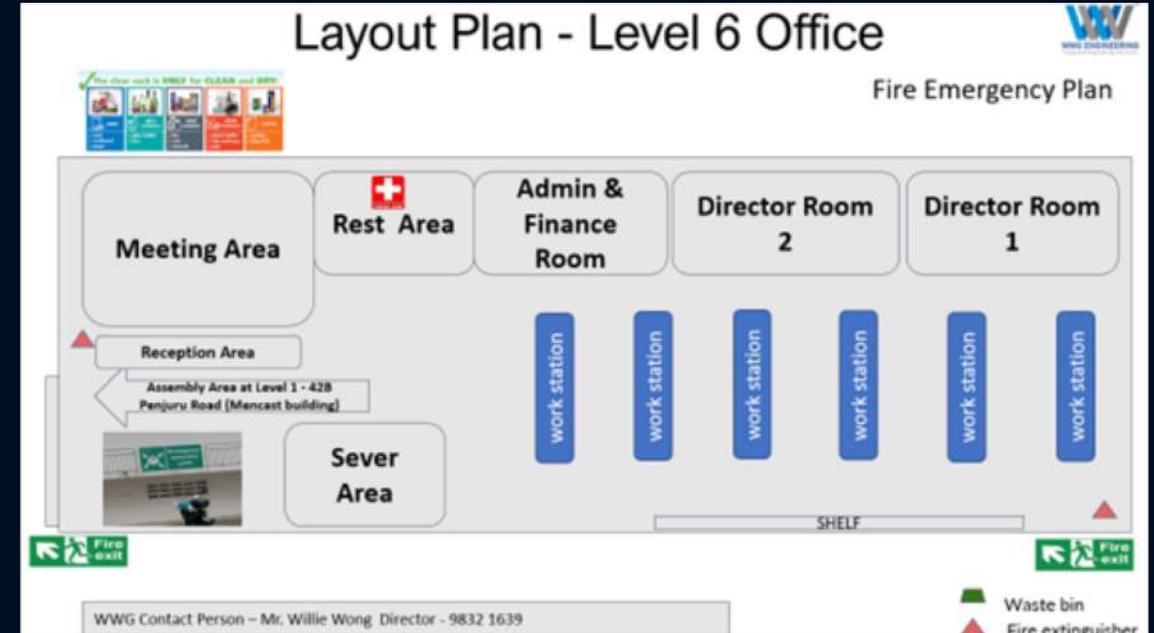
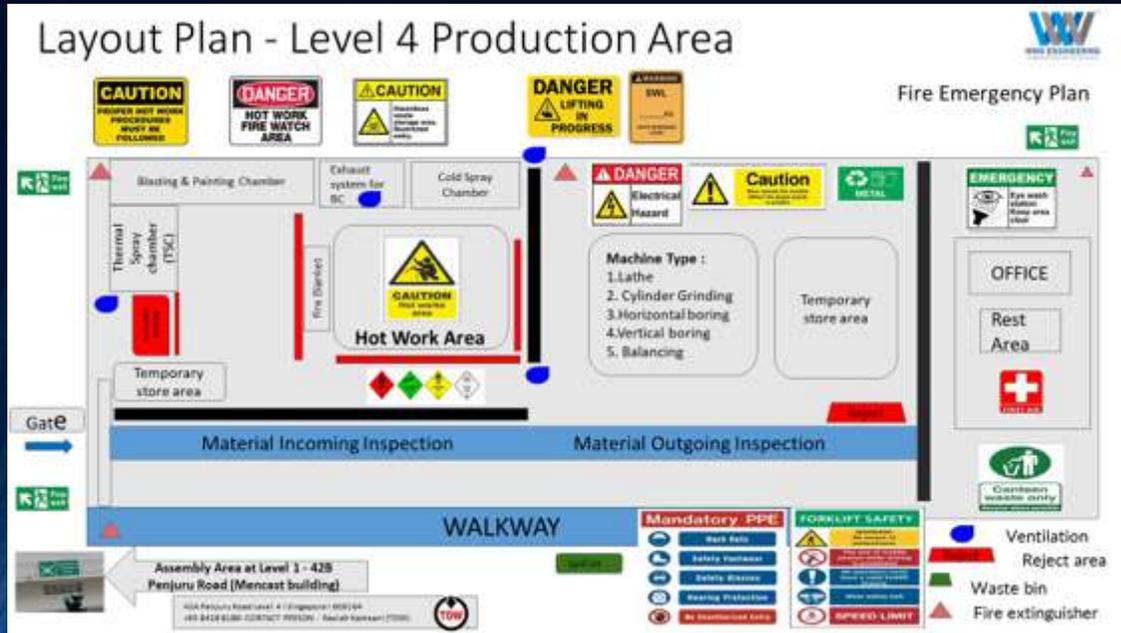
WWG are committed to maintaining a safe and healthy working environment for our employees, partners, customers, and the communities we operate in.

<b>1 All Department</b>			
Objective	KPI Target	Process Owner	
To ensure work safety in the workplace	To achieve zero MOM i-report in the workplace	Director/Operations Staff	
Prompt reporting of incidents/accidents	To submit written report of workplace incident/accidents on the same business day	Director/Operations Staff	

# Quality, Environmental Health & Safety (QEHS)

Fire Evacuation Plan ( Level 4 Workshop)

Fire Evacuation Plan ( Level 6 Office)



Assembly Area at Level 1 - 42B Penjur Road (Mencast building)



WWG Contact Person

- Mr. Willie Wong Director - 9832 1639
- Mr. Derek Ng, Production – 9271 3071
- Neighbor : +65 8428 8186
- Rasiah Kamsani (TDW) - T.D. Williamson

Nearest Hospital - Ng Teng Fong General Hospital - 3.6 km (1 Jurong East Street 21 Singapore 609606)  
SCDF – 995 , Police – 999

# Quality Certifications



## Certificate of Registration

**WWG ENGINEERING PTE. LTD.**

42A PENJURU ROAD #06-01 SINGAPORE (609164)

has been assessed and Certified by Ostia Management Pvt. Ltd.  
as meeting the requirements of:

### ISO 9001:2015

### Quality Management System

For the following scope of activities:

**PROVISION OF METAL MACHINING, SURFACE TECHNOLOGIES (THERMAL SPRAY, COATING, COLD SPRAY, 3-COAT SYSTEM, EPOXY COMPOSITE), WELDING, FABRICATION AND ENGINEERING SERVICES**

Date of Registration	: 06 June 2023
1st Surveillance Due	: 05 June 2024
2nd Surveillance Due	: 05 June 2025
Certificate Expiry (subject to the company maintaining its system to the required standard)	: 05 June 2026

EA Code: 17  
Certificate No:- 0606Q26523  
To Verify this certificate please visit at [www.ostiamanagement.com](http://www.ostiamanagement.com)

  
MEMBER OF MULTILATERAL  
RECOGNITION ARRANGEMENT

  
ACCREDITED  
Management Systems  
Certification Body

  
MANAGEMENT PRIVATE LIMITED  
OSTIA

  
Authorized Signatory

MSCB-284  
**OSTIA MANAGEMENT PRIVATE LIMITED**  
Accredited by IAS (International Accreditation Service, Inc.)  
(3060 Saturn Street, Suite 100, Brea, California 92821 U.S.A.)  
Validity of this certificate is subject to annual surveillance audits done successfully.  
This Certificate of Registration remains the Property of Ostia Management Private Limited and shall be returned immediately upon request.  
Email:- [info@ostiamanagement.com](mailto:info@ostiamanagement.com) Website:- [www.ostiamanagement.com](http://www.ostiamanagement.com)



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42A PENJURU ROAD #06-01 SINGAPORE (609164)

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as meeting the requirements of:

### ISO 14001:2015

### Environmental Management System

For the following scope of activities:

**PROVISION OF METAL MACHINING, SURFACE TECHNOLOGIES (THERMAL SPRAY, COATING, COLD SPRAY, 3-COAT SYSTEM, EPOXY COMPOSITE), WELDING, FABRICATION AND ENGINEERING SERVICES**

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has been assessed and Certified by Ostia Management Pvt. Ltd.  
as meeting the requirements of:

### ISO 45001:2018

### Occupational Health & Safety Management System

For the following scope of activities:

**PROVISION OF METAL MACHINING, SURFACE TECHNOLOGIES (THERMAL SPRAY, COATING, COLD SPRAY, 3-COAT SYSTEM, EPOXY COMPOSITE), WELDING, FABRICATION AND ENGINEERING SERVICES**

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# Quality Certifications



 WSHCOUNCIL  
Tripartite Alliance for  
Workplace Safety and Health

Date of issue: 27/04/2023

**bizSAFE**  
STAR

**CERTIFICATE**

The Workplace Safety and Health Council  
is pleased to certify that

**WWG ENGINEERING PTE. LTD.**

has fulfilled the requirements to attain bizSAFE Level Star

This certificate is valid till 23/06/2025



**Christopher Koh**  
General Manager  
Workplace Safety and Health Council

Certificate No. E19736



# Risk Management, Risk Assessment

WWG is very serious in WSH Implementation

**WWG Engineering Risk Assessment Team**  
Directors, Production/Project Managers/Leaders

**Project/Work Activities Environment Assessment**  
Thorough Identification - List/Scope Info & Involvement

**Individual and Sub-Work Activities & Environment**  
Identification, compiling, Finalize Template



Action :

**Hazard Evaluation, Risk Evaluation, Risk Control**

**Monthly, Annual Review, Continuous Improvement**



## Machinery List

CNC Milling: 1 unit  
1,000 mm X 800 mm X 800 mm

Horizontal Lathes: 10 units  
Swing 500 mm X L1,000 mm  
Swing 1,800 mm X L10,000 mm

Facing Lathe: (F) 1 unit  
Swing 1,600 mm X L 2,000 mm

Vertical Lathe: (F) 1 unit  
Swing 1,600 mm X H 1,200 mm

Milling: 3 units  
1,000 mm X 600 mm X 600 mm

Crankshaft Grinding: 2 units  
Max Swing 1,160 mm X L4,000 mm

Cylindrical Grinding: 1 unit  
Swing 500 mm X L1,200 mm

Surface Grinding : 1 unit  
600 mm X 300 mm X 300 mm

Horizontal Boring  
2,400mm X 2,000mm X 1,200mm

## Equipment & Facilities

### Welding - Cladding

MIG, TIG(GTAW), Arc(SMAW)

Laser cladding (F, 6KW)  
Swing 1,600 mm X L 12,000 mm  
Turntable Swing 2 m X 6 Ton

### Laser Cleaning (F, 2 KW)

### Application Chambers

Painting 7,000 mm X 5,500 mm X 3,500 mm  
Blasting 7,000 mm X 5,500 mm X 3,500 mm

TSC/Blast 13,200 mm X 2,400 mm X 2,830 mm  
TSC (F) 9,200 mm X 5,200 X 3,000 mm  
TSC 4,800 mm X 4,000 mm X 3,000 mm

Cold Spray: 6,100 mm X 2,400 mm X 2,830 mm

Blast Booth: 1,500 mm X 1,500 mm X 1,000 mm  
Blast (F): 15,000 mm X 4,500 mm X 4,500 mm

### Lifting

Fort Lift 3 Ton (Electric)  
Overhead Crane 1 20 T  
Overhead Crane 2 10 T  
Overhead Crane 3 5 T

Screwed Air Compressors  
(50, 100 HP) X3

### Thermal (Metal) Spray

Electric Arc Spray X 2  
Wire Flame Spray X 3  
Flame Powder (6 P-II) X 1  
HVOF Spray System X 3  
Plasma Spray Sys X 1  
Cold Spray System X 1  
Rokide Ceramic Spray X 2  
ABB Robot X 2  
Horizontal Spray Rotator X 3  
HVOF/Plasma Spray Chiller X 2

# Key Technologies

A Perfect Integration of  
**Engineering Solutions**

Welding (Ferrous, non-ferrous)  
Thermal Spray Coating  
Anti-Corrosion Protective Coating  
Erosion-resistant Coating  
Advanced Composite Coating  
Hard Chrome Plating  
Metal Machining, Cylindrical Grinding  
Dynamic Balancing  
White Metal Bearings  
Laser Cladding, Laser Cleaning (F)



**HVOF Spray**



**Cold Spray**



**Electric Arc Spray**



**Hard Chrome, Cylindrical Grinding**

Examples of Thermal Spray Coating: Stainless Steel Series, Metal & Alloy, Tungsten & Chromium Carbides, Ceramics ....

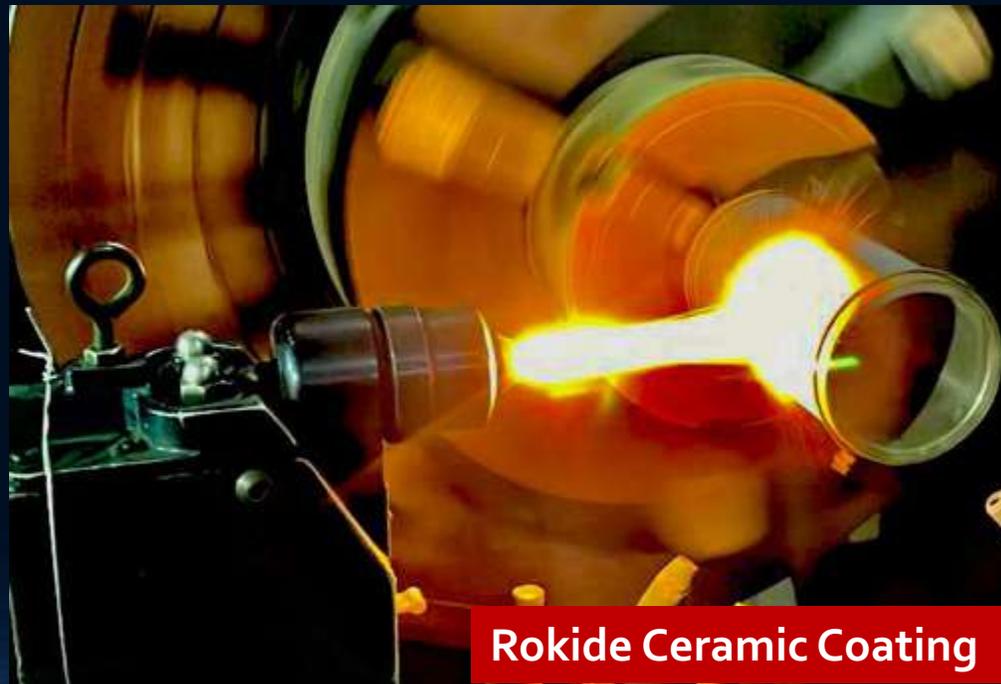
# A Perfect Integration of Engineering Solutions



**Wire Metallizing**



**3 Ton Dynamic Balancing  
Speed 2,000 RPM  
For 500 Kg**



**Rokide Ceramic Coating**



**Engineering Services**

# Machine Shop Capabilities

Horizontal Lathe  
Vertical Lathe  
CNC/manual Milling  
Horizontal Boring  
Surface Grinding  
Cylindrical Grinding  
Crankshaft Grinding

A Perfect Integration of  
**Engineering Solutions**



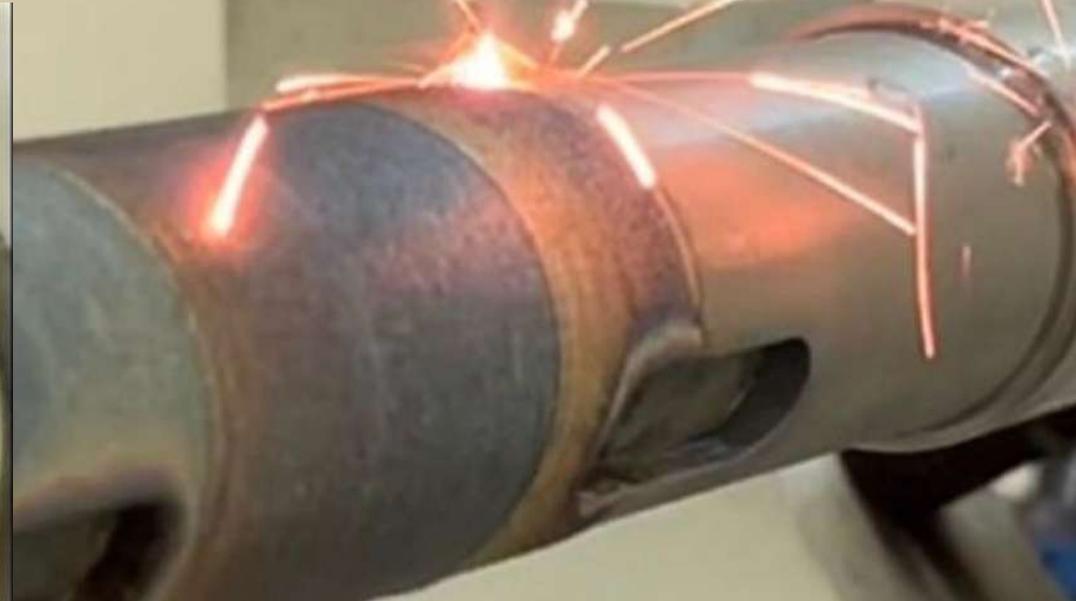
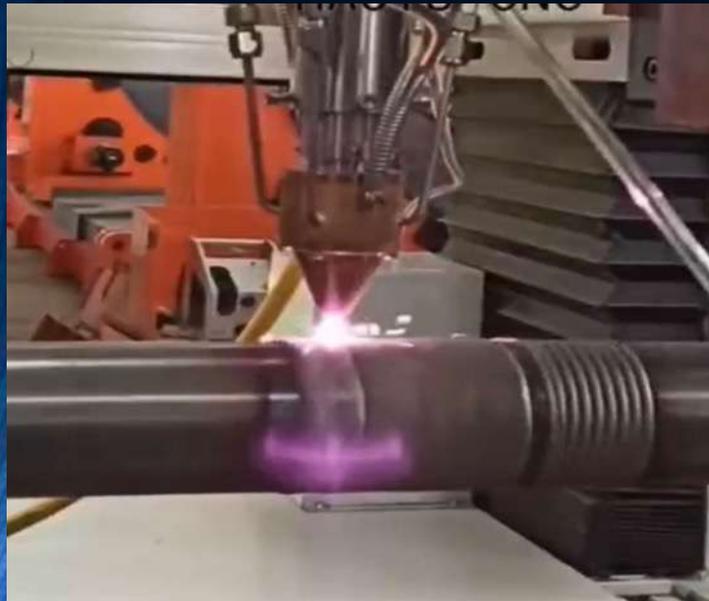
## Why Are We Different?

- Never-Stop Innovating
- Aggressive R&D
- Leading the Trend

High Power  
High Speed  
Hi Performance

The  
UHLA™

## WWG Laser Technology Innovations



A Perfect Integration of  
Engineering Solutions



Laser Cladding (F)  
Outer Surface & Internal Surface

# A Perfect Integration of Engineering Solutions

## WWG Laser Technology Innovations

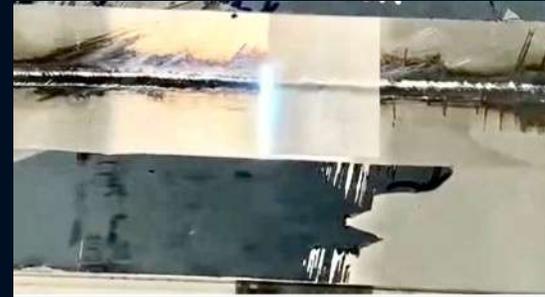
## Laser Cleaning (F)



The  
**UHLA™**



**Engine Block/Head**



**REMOVAL:**

- Surface Paint Coating
- Rusty-corroded Scales
- Welding Scales, Marks



**PRE-BLASTING**

**REMOVAL:**  
To Speed up Grit Blasting  
=> Follow by Sweep Blast



# A Perfect Integration of Engineering Solutions



## PRODUCTION

- Coating Shop
- Fabrication
- Machine Shop



# Parts Refurbishment

Our Expertise in  
Process & Engineering Plants





## Parts Refurbishment

**Our Expertise in  
Process & Engineering Plants**



# Complimentary Services

Process Piping,  
Pipe & Tubes  
Hot & Cold Pipe Installation  
Mechanical Works & Design  
Machinery/Equipment Installation  
Engineering Services  
Equipment/Component Repair  
Parts Re-manufacturing

Latest: **On-Site Machining**



# Complimentary Services

In-situ Line Boring

Boring Internal Diameter range: 60mm to 600mm



# Complimentary Services

On-Site Machining  
In-situ Flange Facing  
Facing Range: Diameter ½ Inches to 75 Inches



## Pump/Compressor Motor Laser Alignment

# Kennametal Products

**STELLITE**  
Powder  
Rods  
Laser Powder



# Customers Reference



MALAYSIA LNG SDN. BHD



PETRONAS



PETRONAS  
LNG



## Summary:

**We serve Businesses Who Own and Operate Machineries & Facilities**

**Plant Expansion?**

**Production Facilities, Equipment Maintenance Services?**



**We Are Here To Serve :**

# WWG Engineering Pte Ltd

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THANK YOU

