



Seng Heng Engineering Pte Ltd

Engineered For Quality, Built To Last

# A COMPANY DRIVEN TO EXCELLENCE

#### **Single Source Solution**

Seng Heng Engineering is a single-source solution provider of fasteners, turnkey machining and corrosion resistant coated products with more than 70 years of experience.

#### **Capacity and Capability**

We provide a total solutions' package and on-time delivery worldwide.

With our new machining and coating facilities in Singapore, we have the capability to customize any fasteners and turnkey solutions to our customers' requirements.

In addition, our raw materials are stocked in a special automated retrieval system for full traceability records which meet stringent requirements by our clients.

#### **Continuous Growth**

Through the years, we have forged long-term partnerships with Original Equipment Manufacturers (OEMs), Engineering Procurement Contractors (EPCs) and major oil companies to support their needs. Seventy years on, we remain steadfast in our commitment to our customers' trust and loyalty, motivated by a genuine passion for continuous improvement in our products, quality standards and services.

We keep up with global trends and employ what the latest technology can offer. This includes a sophisticated ERP system for order processing, coupled with online traceability software for efficient product tracking to guarantee that your orders are in good hands. Likewise, we have in place, a highly flexible manufacturing system that produces a wide range of products, both in small and large scale, on demand.



# **Long Established Expertise**

We have an extensive track record in providing products and services to a wide range of industries that include:

- Refineries and Petrochemical Plants
- LNG Plants
- Onshore & Pipe Transportation
- Power Station Plants
- Gas & Steam Turbine
- Heavy Civil Construction
- Offshore Platform
- FPSO
- Subsea (API 20E)

# **Guiding Principles**

#### Vision

To be the global leading manufacturer of fasteners, turnkey machining and corrosion resistant coated products for the Oil & Gas industry for OEMs, EPCs and major oil companies.

#### Mission

To deliver top quality products on time through long term global partnership in achieving total customer satisfaction.

#### **Value System**

We are strongly committed to "Deliver Quality Products on Time", a philosophy that has earned us our impressive track record in the last seven decades.

# **7 Core Values**

- Agility
- Caring
- Commitment
- Customer Focus
- Integrity
- Respect
- Team Spirit

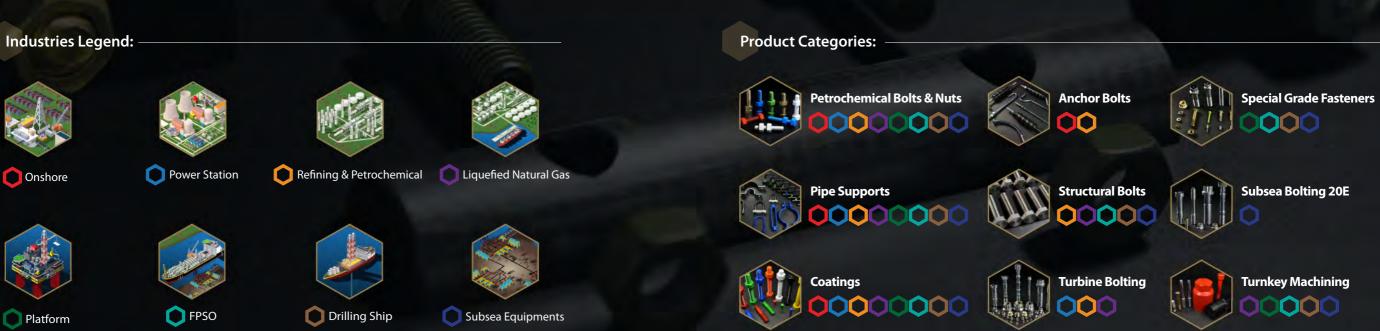






# The SHE Hallmark





# **Products Portfolio**



# Petrochemical Bolts and Nuts —

Our core strength is in the manufacturing of bolt assemblies for the petrochemical industry. Materials include various grades of alloy, carbon and stainless steel based on international standards from ASTM, AISI, ISO, BS, and SAE.

Diameter Range: 1/4" - 7", M5 - M150



Our anchor bolts are specially customised to our customer's drawings required mainly for turnkey projects such as LNG, refineries and power plants.

\* As per customer's requirements



# **Special Grade Fasteners**

Special grade fasteners are specially manufactured from corrosion resistant materials which are well suited for service in extreme environments. These materials are effective against temperature and pressure requirements such as pressure vessels and valve flanges.

Diameter Range: 1/4" - 7", M5 - M150

# **Pipe Supports**

We manufacture a full range of pipe support items such as U-Bolts, Tie Rods, Threaded Rods, Turnbuckles and Clamps according to customer's specified drawings and material grades with corrosion resistant coatings.

Pipe Size Range: 1/2" - 45", M10 - M1200





# **Structural Bolts**

We supply a wide range of heavy duty bolting for joints in structural steel.

#### **Specifications:**

- BS 3692 Gr 8.8, 10.9, 12.9
- ASTM A325 High Strength Bolts
- JIS 1186 F10T, BS4395 Part 1,2,3 High Strength Friction Grip Bolts
- Torque Shear Type High Strength Bolts (TC Bolts)
- BS EN ISO 3506 A4-70/80, BS ISO 3506 A2-70/80
- SAE Grade 5, 8, 10
- A490 Type 1
- SS 316, SS 304, SS 316L

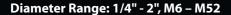
Diameter Range: 1/2" - 2", M12 - M52





# **Turbine Bolting**

We produce special grade bolting for steam and gas turbine engines. Grades include 718, 660 class A/B/C/D, SS321, SS410, B4B, B8M class 2, B7, B16 and others are for use in extreme environments. Raw materials which meet the turbines' requirement are stocked in our special automated retrieval system for full traceability records. Where required, bolts and nuts and machining items may be enhanced by special coatings like silver or electroless nickel plating.







# **Turnkey Machining**

We provide turnkey machining to OEMs through stocking their specified grades of steel followed by machining and specific coating in accordance to their drawing's requirement.

\* As per customer's requirements

# **Subsea Bolting 20E**

Our subsea fastener is certified to API Spec 20E. We stock special raw material with additional testing done to cater to the subsea bolting requirement. Our full traceability record system and stringent testing ensure that the correct bolts that meet API Spec 20E requirements are supplied – i.e. fasteners for coating such as SermaGard, Xylan, Moly, which are commonly used in subsea operations are also carried out in-house to provide one stop service for subsea OEMs' requirements.

Diameter Range: 1/4" - 4", M6 - M120



# **Coatings**

We have an extensive range of plating and coatings that provide outstanding temperature, chemical, abrasion and corrosion resistance designed to withstand harsh conditions. These coating services are combined with our production capabilities to customize a multilayered-coating system ideally suited to any specific environment.

# **Plating**

- · Zinc (White / Yellow / Black)
- · Zinc Nickel
- · Cadmium (White / Yellow / Black) · Electroless Nickel



# Galvanising

· Hot-Dipped Galvanise · Mechanical Galvanise



# **Fluorocarbon Coating**

SermaGard Coating Systems:

Xylan' Coating Systems:

· Xylar 2

Molykote Coating Systems:

. 7409

- · 1105
- · 1280

· 1014

· 1628

· 1070 · 1052

· 1175

· 1424

# **Customised Coating Systems**

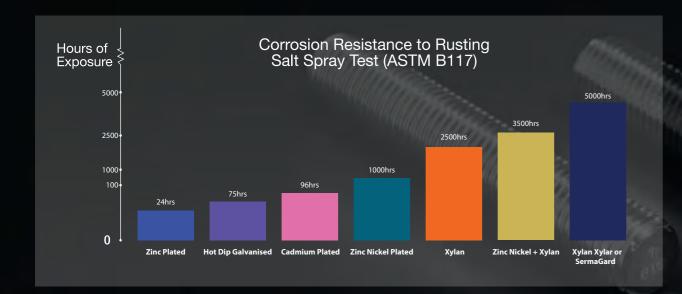
- · Zinc + Fluorocarbon / PTFE
- · Cadmium + Fluorocarbon / PTFE
- · Zinc Nickel + Fluorocarbon / PTFE
- · Hot-Dipped Galvanise + Fluorocarbon / PTFE
- · Zinc Plating + Xylan 1424 Blue

- · SermaGard 1105 + SermaGard 1280
- · Zinc Nickel + Xylan 1014 Black
- · Xylar 2 + Xylan 1070 Blue
- · Zinc Chromate + SermaGard 1280
- · Zinc Electroless + Xylan 1424 + Xylan 1514

SHE specializes in producing a better protective coating for steel that enhances its service life in harsh environments. It is particularly useful to industrial plants operating in hot, humid tropical and marine atmospheres where high corrosion rates occur.

#### It has the following quality characteristics:

- Inert to a wide range of chemicals and solvents commonly used in industries
- Superior coating adhesion throughout its service life
- Low coefficient of friction
- Able to withstand severe temperature extremes, from -45°C to 232°C, without significantly affecting its properties
- Non-wetting property which facilitate cleaning-up and ease of maintenance
- Good resistance to chipping
- Excellent weather resistance





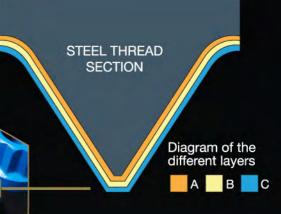
### The coating process involves:

(A) first thoroughly cleaning and chemically treating the steel substrate to ensure good bonding;

(B) it is then coated with primer before

(C) finally applying a coat of fluorocarbon polymer.





# **Outstanding Features**

#### 1. Rust and Corrosion Prevention

- Outstanding corrosion protection owing to unique coating system.
- Superior durability in corrosive environments and marine atmosphere
- Excellent performance in outdoor hot and humid tropical environment

#### 2. Heat Resistance

• Applicable over a wide temperature range from -45°C to 232°C

#### 3. Weather Resistance

• Good resistance towards action of sunlight, rain and seawater spray

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Chemical Resistance			
Solvents (aliphatic and aromatic)	Excellent		
Petroleum (gasoline, naphtha etc)	Excellent		
Oils (animal and vegetable)	Excellent		
Acids (HCI, H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , organic acids)	Good		
Soaps, Detergents, Diluted Alkalis	Good		
Other Chemicals	Generally Unaffected		
Seawater	Unaffected		
o current.			





# **Quality Assurance**

Total customer satisfaction is our goal in all that we undertake.

We place great emphasis on product quality and we are dedicated in our stringent processes that ensure our products are engineered for lasting performance.

Our operations are certified ISO 9001, OHSAS 18001, API Spec Q1 9th Edition and each and every one of our product is certified by our strict QC regime. We aim to achieve the API Spec 20E accreditation shortly to further raise our standards as a leading global manufacturer.





Our Statement of General Policy is:

- To provide and maintain a safe and healthy working environment for all employees;
- To prevent accidents and eliminate totally work-related injuries and ill health;
- To comply and exceed relevant legal occupational health and safety practices.







bizsAFE

# **Available Material & Specifications**

#### **ALLOY STEELS**

ASTM A193 B7, B7M, B16, B5 ASTM A194 2H, 2HM, 3, 4, 7, 7M, 16

ASTM A320 L7, L7M, L43 BS 3692 Grade 10.9, 12.9

EN10269 Grade 20CrMoVTiB4-10

#### **CARBON STEELS**

ASTM A325 Type 1

ASTM A490 Type 1

ASTM A307 Grade A, B, C

BS 3692 Grade 4.8, 8.8

SAE J429 Grade 5, 8, 10

ASTM F1554 GRADE 36

#### STAINLESS STEELS

ASTM A193

B6, B8, Class 1 & 2, B8M Class 1 & 2, B8T Class 1 & 2 B8MA, B8A

ASTM A194

6, 8, 8A, 8M, 8MA, 8C, 8CA, 8T

ASTM A320

B8 Class 1 & 2, B8M Class 1 & 2, B8T Class 1 & 2, B8MA, B8A

ASTM A453

660 Class A / B / C / D

ASTM A437 B4B

ISO 3506 A2-50, A2-70, A2-80, A4-50, A4-70,

A4-80, A4L-80

AISI SS 304(L), SS 316(L), SS316 Ti, SS410

Nitronic 50/60® B8R, B8S

Others® 17-4 PH, FV 520B, Sanicro 28,

Carpenter 20CB-3

### **DUPLEX STAINLESS STEELS**

UNS S31803, S32750, S32760 (SA, FG, FLT)

#### NICKEL ALLOYS

Hastelloy® B2, C4, C22, C276, G, G-3, X Incoloy® 800, 800HT, 825, DS, Ra330 Inconel® 600, 601, 625, 718

Monel<sup>®</sup> 400, K500

#### **COPPER ALLOYS**

Aluminium Bronze B150, CA104, DGS 1043/1044, NES833/834/835

1045/1044, NES655/654/653

Phosphor Bronze PB102

Cupro Nickels 70/30, 90/10

#### OTHER MATERIAL GRADES

Titanium GR 2/5/7

Durehete® 900, 950, 1055

#### **PLATING**

Zinc ASTM B633
Cadmium ASTM B766
Zinc Nickel ASTM B841
Electroless Nickel ASTM B733
Phosphate ASTM F1137

#### **GALVANISING**

Hot Dip Galvanise ASTM A153/ BS EN ISO 1461:1999

Mechanical Galvanise ASTM A695

COATINGS —

Xylan<sup>®</sup> Primer P-92, Xylar 2, 1010, 1070, 1014, 1052, 1424

SermaGard® 1105, 1175, 1280, 1628

MolyKote® 7409

Fluorocarbon Polymer PTFE, Teflon®, Xylan®, SermaGard®

Everslik® 1301

Polyolefin Coating

Magni® Coating

Thread Locking - Loctite®





# **Our Clients**

# McDermott International

### MODEC Inc

# Petrobras

#### **PETRONAS**

#### PTSC

# Punj Lloyd Limited

### PTT Public Company Limited

#### Qatar Petroleum

### Reliance Industries Limited

## Sakhalin Energy

#### Saudi Aramco

# ExxonMobil

Doosan Engineering & Construction

# Eni S.p.A

#### **FMC Technologies**

#### Foster Wheeler

**Aker Solutions** 

**ADNOC Distribution** 

**Bechtel Corporation** 

Cameron International

Chevron Corporation

ADCO

Borouge

CB&I

**CUEL Ltd** 

ConocoPhillips

Daewoo E&C

Daelim Industrial

## General Electric

# Gazprom

# GASCO

# **INPEX Corporation**

#### INTER RAO UES

### JGC Corporation

# KBR Inc.

### Keppel Shipyard Limited

#### **KNPC**

#### MA'ADEN

# Saipem S.p.A

### Saudi Kayan Petrochemical Company

### Singapore Technologies Marine

#### SMOE

## SNC-Lavalin

# SABIC

## Sonatrach

# SK E&C

### Técnicas Reunidas

#### Technip S.A.

#### The Shell Global

#### Total S.A.

#### Woodside Petroleum

#### ZADCO

**Our Global Reach** 



#### **Middle East**

# · Egypt

- · Jordan
- · Kuwait
- · Oman · Pakistan
- · Qatar
- · Saudi Arabia
- · UAE

#### **Asia Pacific**

- · Australia
- Brunei
- · China
- · India
- · Indonesia
- · Japan
- · Korea
- Singapore
- · Malaysia
- · New Zealand
- Philippines
- · Thailand · Vietnam

· Belgium

**Europe** 

- · France
- · Italy
- Netherlands
- · Russia
- · Spain
- Switzerland
- · United Kingdom

# **North America**

# · United States

· Canada

# **South America**

- · Brazil
- · Chile
- · Ecuador





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