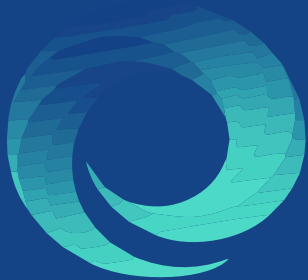




SPECIALIST IN  
ONSITE MACHINING  
METAL STITCHING  
SHAFT MACHINING  
REAMING  
LINE BORING  
WELDING SERVICES  
FABRICATION



PEC

PRECISION ENGINEERING COMPANY

[www.peci.com.sa](http://www.peci.com.sa)

# Our Company

Precision Engineering Company (PEC), is a 100% Saudi company established in the kingdom of Saudi Arabia and based in Al-Khobar to provide in house and on-site machining services to the industrial market in order to minimize costs and asset downtime associated with the dis-assembly and removal, logistics, transportation, and reinstallation of machine and equipment.

Having over 20 years of its management, engineers and technicians experience in the world-wide market, performing such specialized services

PEC understands the demand of its specialized services in house and on-site requirement and we have developed a wide range of specialized designed machining equipment that extends and prolongs the working life of machinery, equipment, and plants

Supporting the industries 24 hours, 365 days a year with the know-how, specialized tooling and technology

*Excellence*      *Professionalism*      *Reliance*      *Reliability*      *Cooperation*  
*Integrity*      *Quality*      *Satisfaction*      *Insurance*      *Team-work*  
*Perfection*      *Rapport*

“

**Excellence in Execution  
Best in Service**

”





# Vision 2030

## Kingdom of Saudi Arabia



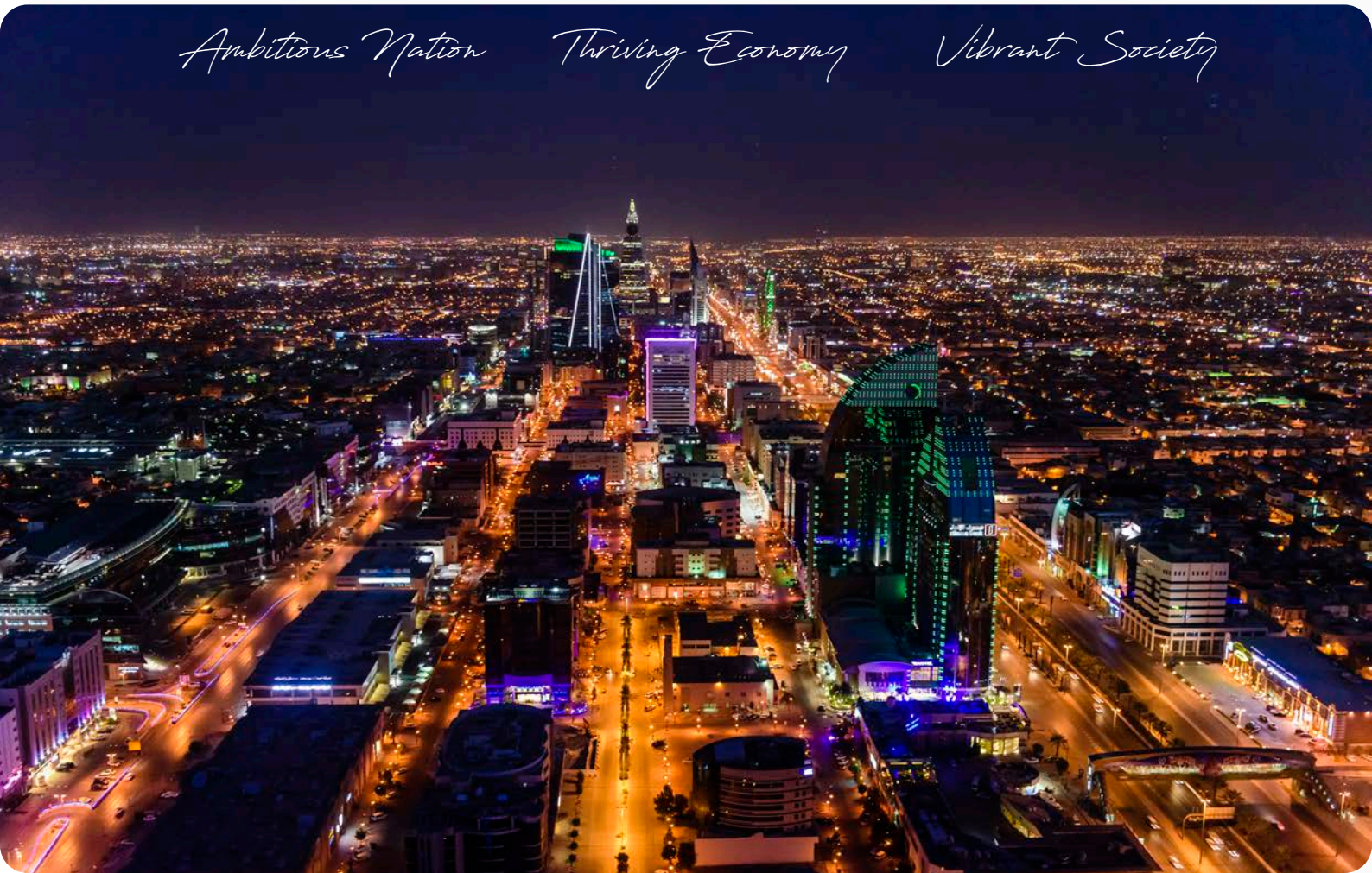
Vision 2030 is an historic vision that was developed by the Council of Economic and Development Affairs, which is chaired by Deputy Crown Prince Mohammed bin Salman. It includes a number of goals and reform strategies for the Kingdom's long-term economic success, including reductions in subsidies, the creation of sovereign wealth fund, and reforms to several industries including tourism and defense.

*Heart of the Arab and Islamic World*

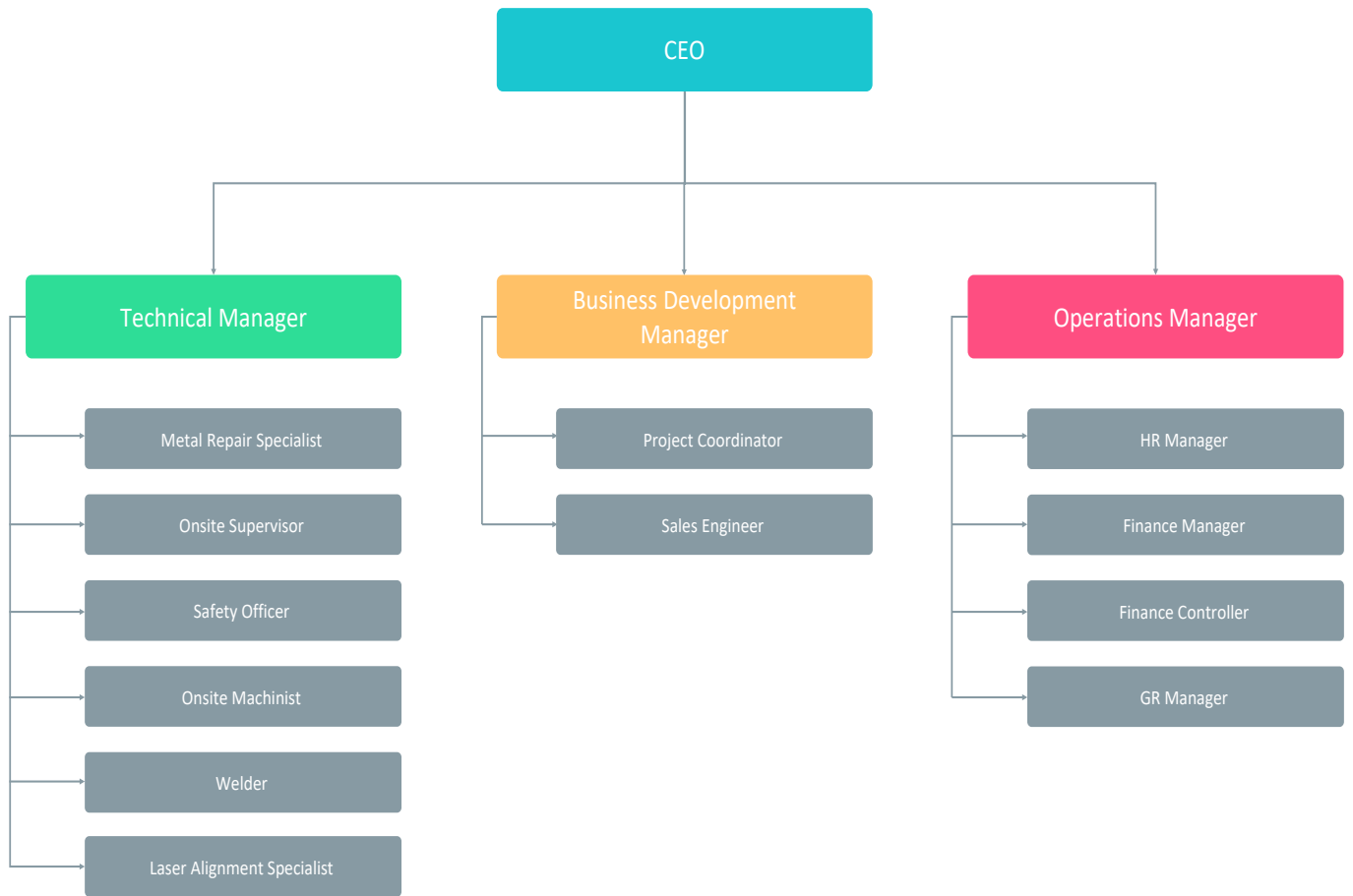
*Ambitious Nation*

*Thriving Economy*

*Vibrant Society*



# Our People





# Best Choice

## Why Choose Us

### Professional Working

Following industrial standards and using a combination of traditional maintenance skills together with modern design techniques has improved equipment availability, efficiency and extended operating periods as a direct result of equipment repaired and upgraded by PEC

### Great Workmanship

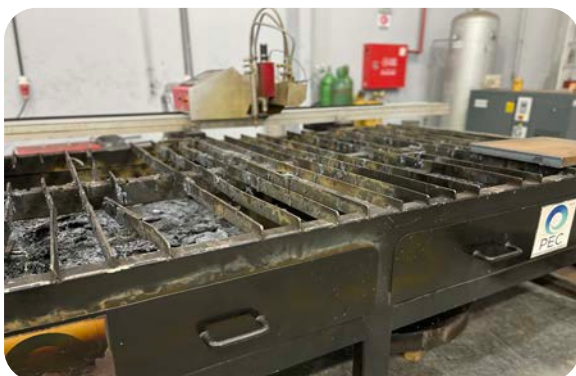
PEC uses expert machinist and technicians to perform a broad spectrum of machining procedures including large scale of repair and maintenance relat-





# Precision Engineering Workshop

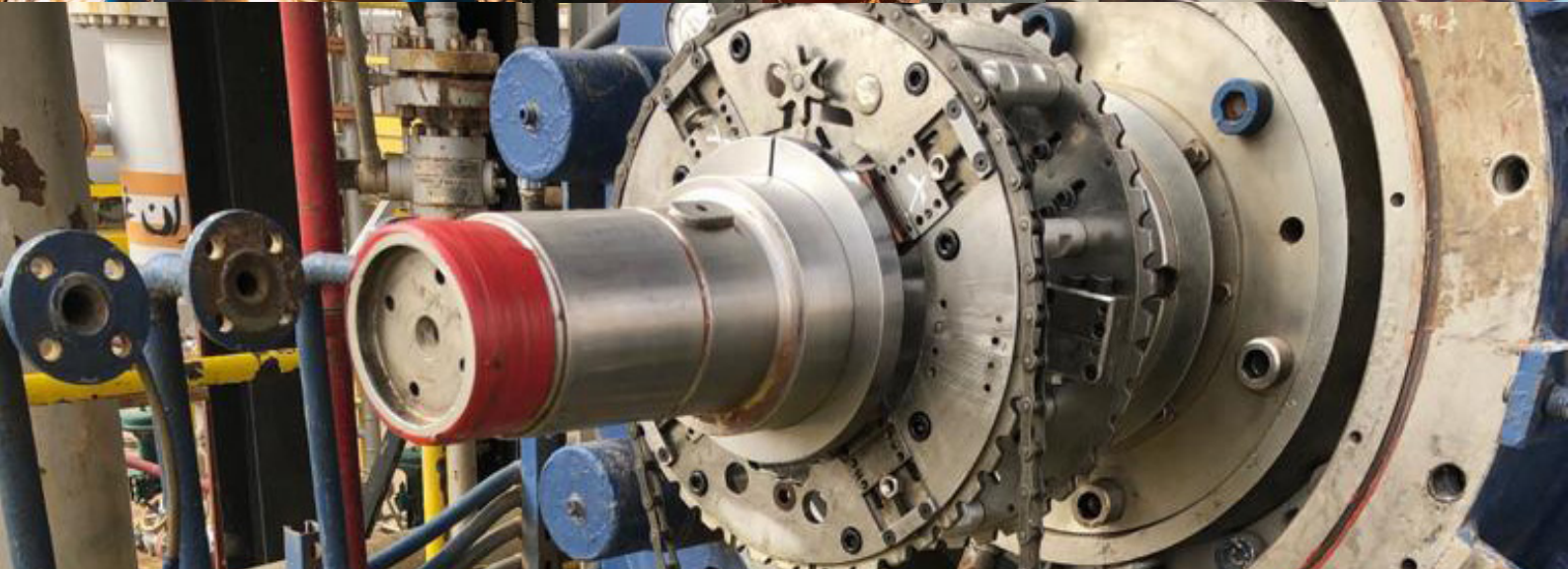
Our workshop is equipped with small to medium ranges of machinery that allows us to provide state of the art fabrication and repair solutions to a wide range of our customers.





# Typical Repairs

*Reliable Engineering takes many forms*  
*Sound quality, Sound Engineering*



# OUR SERVICES

- Small and large-scale flange facing
- Reaming
- Sheared / Broken Stud removal
- Metal stitching of cast components (i.e. Engine block repairs after con rod failure, crack in cooling space and casings etc.)
- Repair of threaded holes (by sleeving)
- Shaft machining
- Line boring of bores
- Machining of gland seal bores
- Milling of split line surfaces
- Spot facing
- Removal and final machining of labyrinth seals
- Removal, calking and final machining of seal fins
- Hydrogen Seal Faces
- Crankpin Machining
- Main Bearing Machining & Grinding
- Journal Machining
- Engine Line Boring
- Turning & Line Boring General
- Liner Landing Machining
- Milling, Grinding, Drilling & Tapping
- Welding Services
- Pipe Cutting
- Turbine Rotor Machining
- Turbine Milling of joint faces, line boring of casings and seal area, coupling hole boring and other turbine services
- Honing & Spinning Operation
- Coupling Hole Machining
- Slipring (collector Ring) Machining
- Tyre Grinding
- Fabrication Services

*Survey*  
*Machining*  
*Welding*  
*Repairing*  
*Alignment*  
*Boring*  
*Milling*





# Boring Repairs

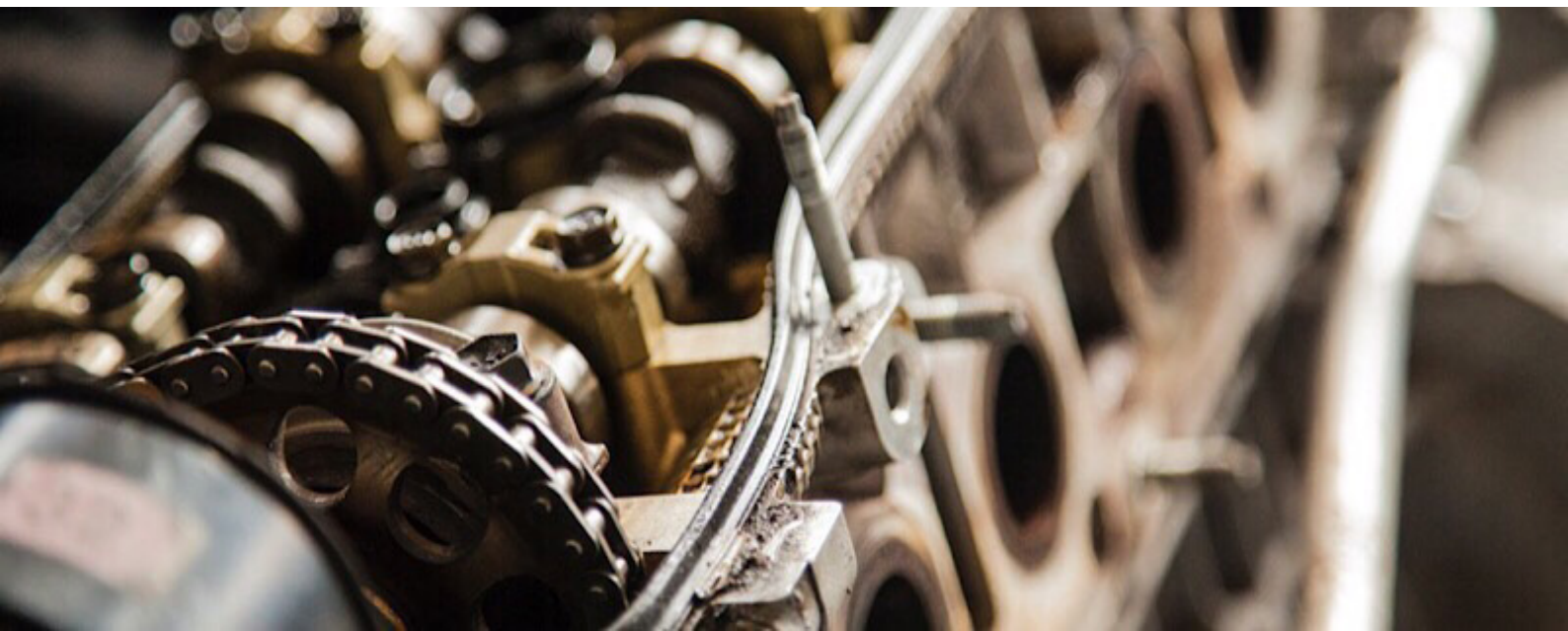
Precision Engineering Co. has built up vast experience with on-site line boring recoveries for industrial applications. Our equipment includes a comprehensive range of tools that be customized to almost any task.



■ Turbine Casing Recovery



In-Situ Machining measuring is done using Laser Tracker with reference to the sealing surface

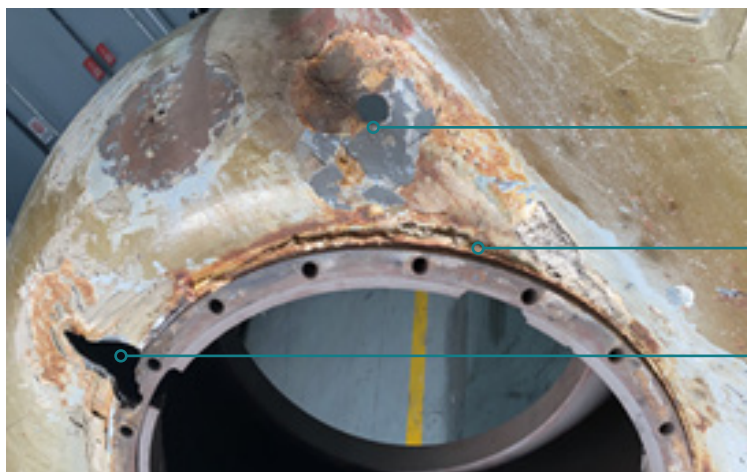


# Cold Repairs

## Findings and Pre-Repair

FGD Pump Casing Metal erosion repairs

Repairing procedure: Metal stitching



Dimension (A) 150mm x 60mm Section

Dimension (B) 150mm x 150mm Section

Dimension (C) Full ring section distortion Ø1120mm x 95mm

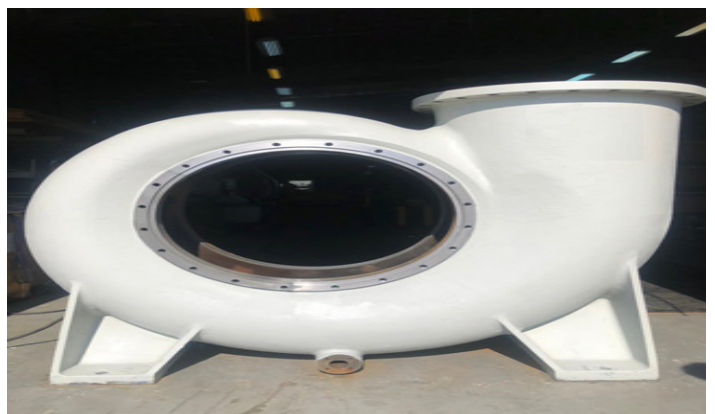
Affected Areas Metal Removed

Metal Repair Process



Repair in Progress

Repair Completion





# Milling Repairs

Compressor Base (CS) 5 x 2 mtr

Removal of 5 mm material via Milling process



Compressor Base (CS) 5 x 2 mtr

Laser Tracker

Milling Machine





# Grinding Repairs

Grinding operations provided by PEC:

- Grinding of tyres, support rollers, drying cylinders
- Shaft Journal Machining, grinding and shaft recovery
- Regrinding press brakes
- Orbital machining and grinding of Shaft journals on ball mills, crushers and drives





# Crankshaft/Shaft Repair and Reconditioning

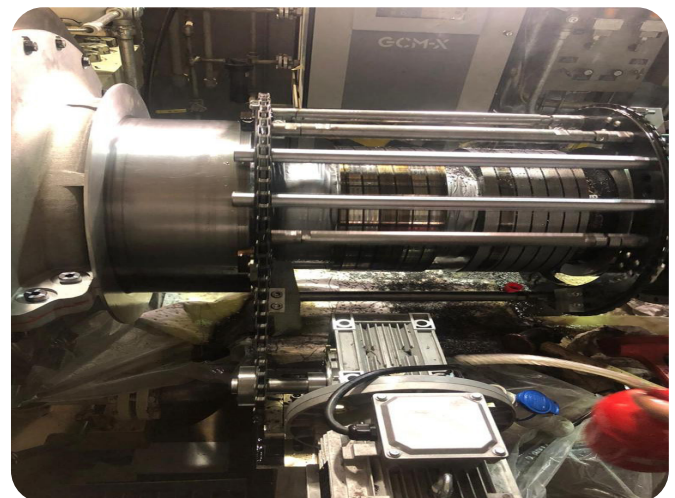
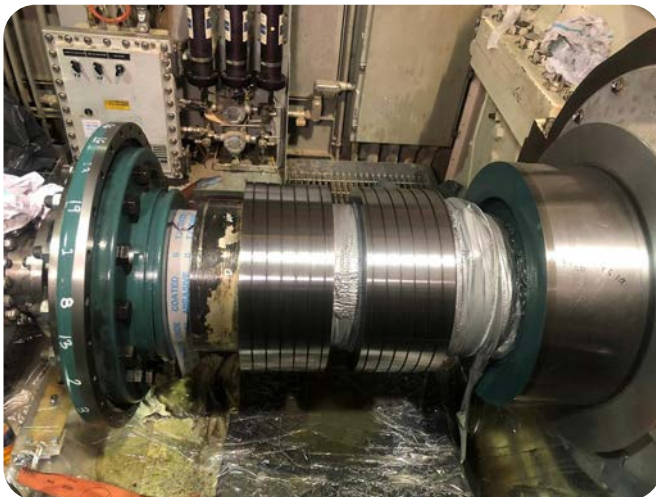
Precision Engineering Co. provides repair and reconditioning services that can extend usable bearing life for increased value and performance. We service all type of bearings from any manufacturer. The first step in this process is a thorough cleaning and inspection to determine its condition. During the repairs, the shaft remains static and the tool rotates around the shaft to perform the necessary machining.

## Types of Orbital Machining/Welding Services:

- Super finishing
- Shrink on sleeve
- Orbital welding
- Metal spraying

## Types of bearings repaired:

- Spherical roller bearings
- Ball bearings
- Tapered roller bearings
- Cylindrical roller bearings





# Welding Services



PEC offers a complete array of welding services that can handle any sized job. We have the equipment and expertise to handle even the most complex welding jobs. Our experienced welders know the right techniques and the right materials to ensure your job is completed following the industrial engineering standards with a minimum of waste or errors.

PEC welders will meet or exceed the specifications for almost any steel or aluminium welding jobs.



Our Welding Services includes a wide range of methods:

- Flux Core Arc (FCA) welding is similar to MIG welding, but uses a special steel electrode in place of the wire
- Gas Metal Arc Welding (MIG/GMAW) forms an arc between a metal electrode and the workpiece, melting the electrode to form a weld bead
- TIG Welding (also known as gas tungsten arc welding) is a welding option where the job requires attractive aesthetics.
- Spot & stud welding (referred to as resistance welding) is used for joining components and uses electrical current to heat metals to forge them together.
- Other methods include:
  - Orbital welding;
  - Stud welding;
  - Mold repair.
  - Welding of fittings, flanges, and pipes
  - Structural steel
  - Skids





# Fabrication Services

Metal fabrication transforms raw metal into components or end products using processes that include forging, stamping, bending, forming, and machining, to shape individual pieces. Additional processes, such as welding and assembling are often used to join separate parts to complete a manufactured product.

There are a number of methods required to offer a complete metal fabrication service. PEC offers metal fabrication options that include:

- Custom forging and stamping
- Cutlery and hand tool manufacturing
- Pipes and pipe fitting production
- Architectural and structural metals manufacturing
- Boiler, tank, and shipping container manufacturing
- Spring and wire product manufacturing
- Machine shop manufacturing for turned products, including screws, nuts, and bolts
- Custom car parts manufacturing
- Coating, engraving and heat treating
- Almost any custom part

PEC is a full-service metal fabrication and manufacturing facility. By having all services and state-of-the-art machinery under one roof, you eliminate the time-consuming need to coordinate numerous vendors to get the job done.



# Alignment and Laser Tracking

Alignment is one of the most important parameters in the successful maintenance and operation of any type of rotating equipment. Misalignment may be responsible for more machinery failures than any other factor. When the belts or shafts or couplings of your equipment are misaligned, it causes several critical failings that lead to breakdowns, unplanned and costly downtime. It does not matter whether it is a belt or a shaft that is uneven. Many vibrations or excessive component wear on bearings, belts, shafts and couplings are correlated to incorrect alignment.

Precision Engineering technicians use conventional equipment such as optical squares, theodolites, total station along with the latest laser tracking equipment, which allows us to achieve workshop accuracy and eliminating the chances of error and speculation.









# Industries We Serve

Steel Industry



Petrochemical Industry



Oil & Gas Industry



Power Industry







## Steel Industry Repairs

The international Steel Manufacturing industry is constantly trying to reduce production costs while increasing efficiency, quality of product and output of their plants

### Typical Steel Industry Repairs and Refurbishments:

- Mill stand screw-down boring
- Roughing or finishing of Mill stand
- Teeming Ladle trunnion recovery
- Gearbox in-line boring
- Tapped hole recovery
- Mill alignment surveys
- Rolls mill machining

Due to the large size of machinery and equipment at the steel plants, it is often not an option to remove/relocate these items for repair and refurbishment, hence, all repairs must be accomplished in situ and this is where Precision Engineering Co. excels.

Our expert team has completed countless projects all around the world performing various repair related services to the steel industry

*Casting Repair*

*Refurbishment*

*Cold Repairs*

*3D Survey*

*Steel Mill*

*Welding Services*





## Petrochemical, Oil & Gas Industry

We fully understand the production demands for the petrochemical industry. Downtime and unplanned lost production can cost millions of Saudi Riyals.

Precision Engineering Co. has a longstanding reputation for high-quality work in this demanding industry, whereas, we have successfully completed the repairs on time and within budget.





## Power Industry

Power plant and power generation are a vital infrastructure requirements that needs to be maintained for continious generation of power.

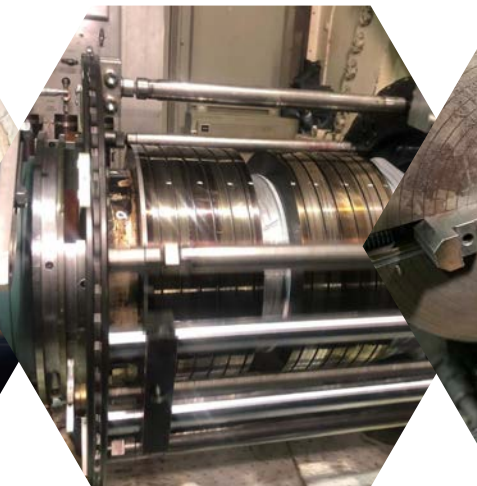
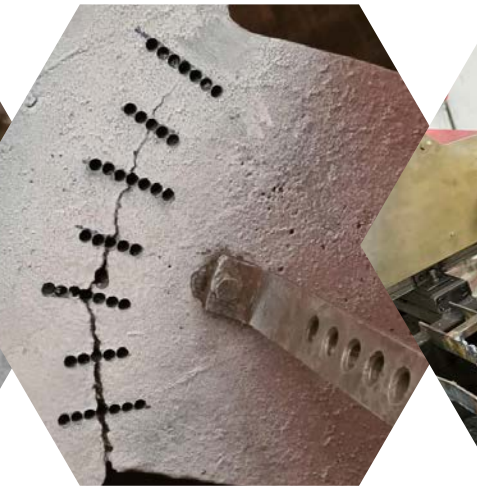
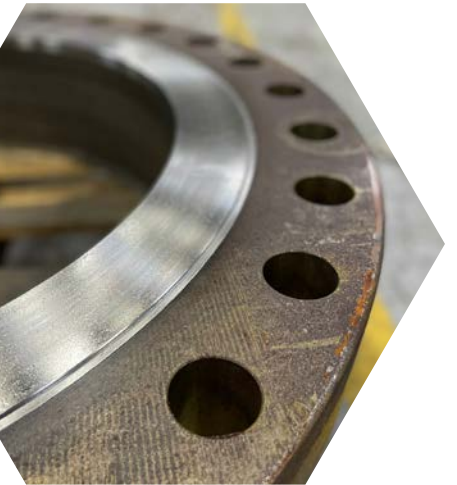
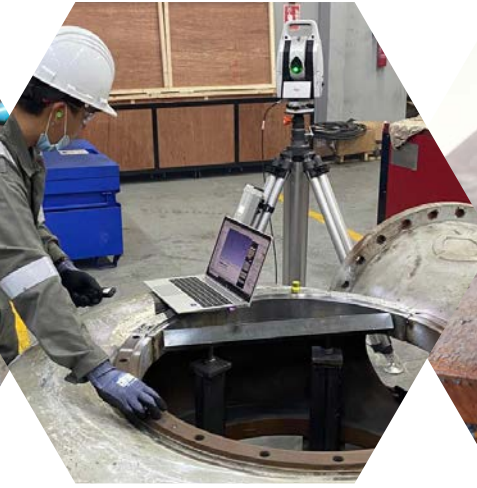
We provide many on-site repair services for challenging applications such as the following:

- Turbine bearing journal repair
- Re-machining of damaged or worn blade
- Damaged thrust-collar
- Turbine retrofit or upgrades

Our specialist engineers work on saving you time and money, avoiding the removal of plant components and the transportation to a workshop.









# Customer Reference

**FieldCore**  
a GE company



**GSW**  
GULF SPECIALIZED WORKS  
الخليج للأعمال المتخصصة

**RPC**  
Rabigh Power Company

**مرافق**  
**MARAFIQ**

**Zamil**  
Trade & Services

**سابك**  
**سابك**

**SIEMENS**



**ELLIOTT GROUP**  
EBARA CORPORATION



**هاتكون**  
**HATCON**

**ABB**

**شركة**  
**shera**

  
المؤسسة العامة لتحلية المياه المالحة  
Soline Water Conversion Corporation (SWCC)

**أرامكو**  
**aramco**



**ARC**  
الشركة العربية للقطارات  
ARABIAN RAILWAY COMPANY



**MAN Diesel & Turbo**

  
شركة أسمنت المنطقة الشمالية  
NORTHERN REGION CEMENT CO.

**Martin**  
Professional Middle East

# 2022

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# PEC

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