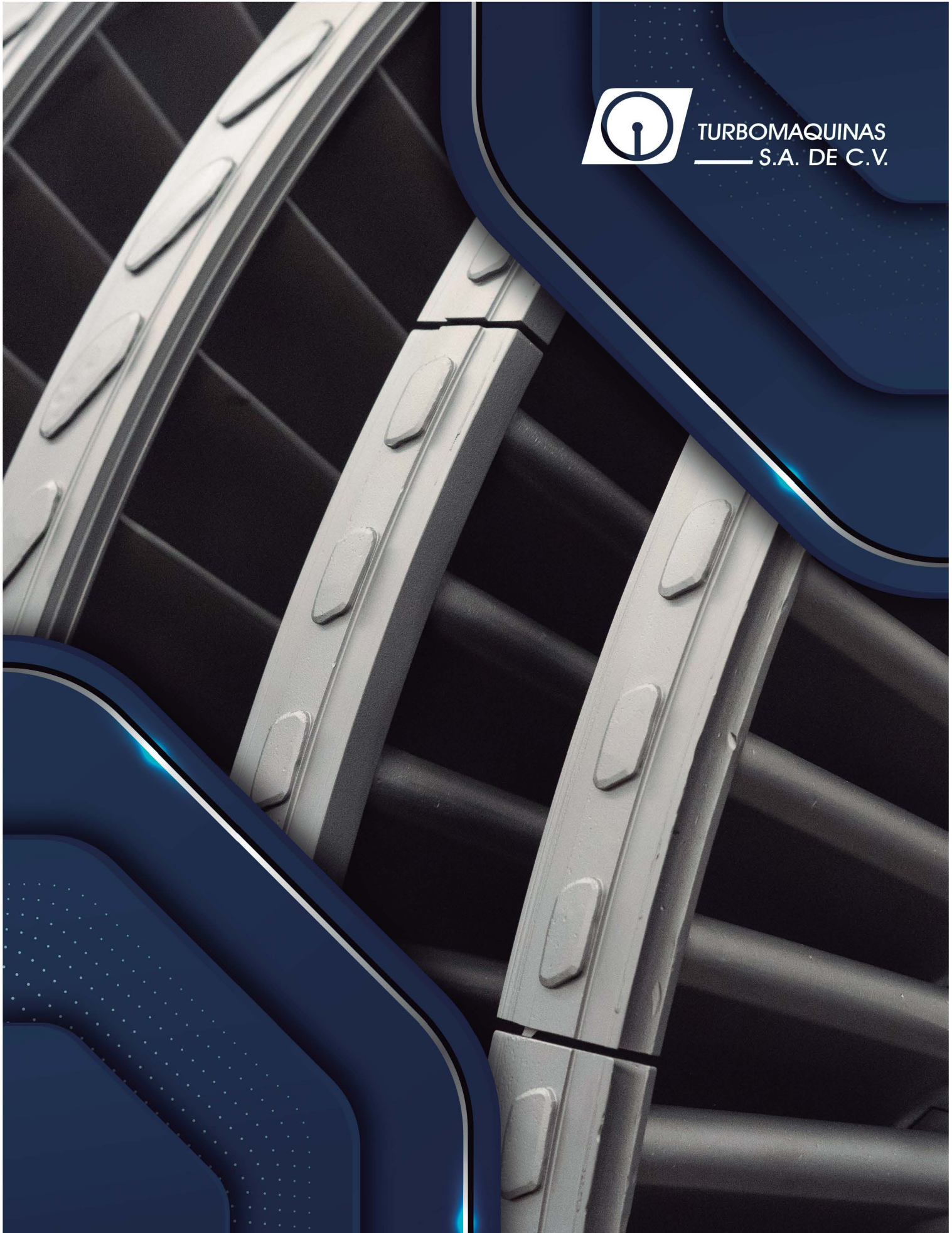




TURBOMAQUINAS
S.A. DE C.V.



We are a company committed to our clients to make efficient, update and modernize process and generation plants.

We have an infrastructure made up of 2 process plants with 11,000m² area and more of 300 collaborators.

Equipped with lathes, milling machines, grinding machines, boring machines, 3, 4 and 5 axes machining centers, portable measuring arms, Dynamic balance equipment and hard coating application equipment (HVOF and Arco Spray) cranes up to 60 tons, metrology laboratory, as well as certifications that guarantee our quality standards, which make Turbomaquinas the most reliable supplier in the reconditioning of Turbomechanisms.

QUALITY POLICY

To comply with the quality standards required in each of our activities to guarantee that our products and services far exceed the expectations of our clients, being quality as a way of life our best competitive advantage, having competent staff to perform effectively and self-controlling their processes, complying with the requirements of our quality system and improving continuously.



VALUES

- Honesty and integrity.
- Quality first.
- Personal productivity.
- Teamwork.
- Personal development.
- Service attitude. Creativity and innovation.
- Fighting spirit.

MISSION

We are a company focused on solve the needs of steam turbine users in an effective and timely manner; centrifugal compressors, pumps and similar equipment, adapting to your expectations to carry out comprehensive maintenance, being the best option for our customers.





LOCATION

Turbomaquinas S.A. de C.V. is in the area of La Piedad, Michoacán, in the heart of Mexico, is TURBOMAQUINAS, a one hundred percent Mexican company, with more than 60 years of experience in technology development and service to support the industrial development of our country and the continent, guaranteeing reliability and availability in turbomachinery equipment.





STEAM TURBINES

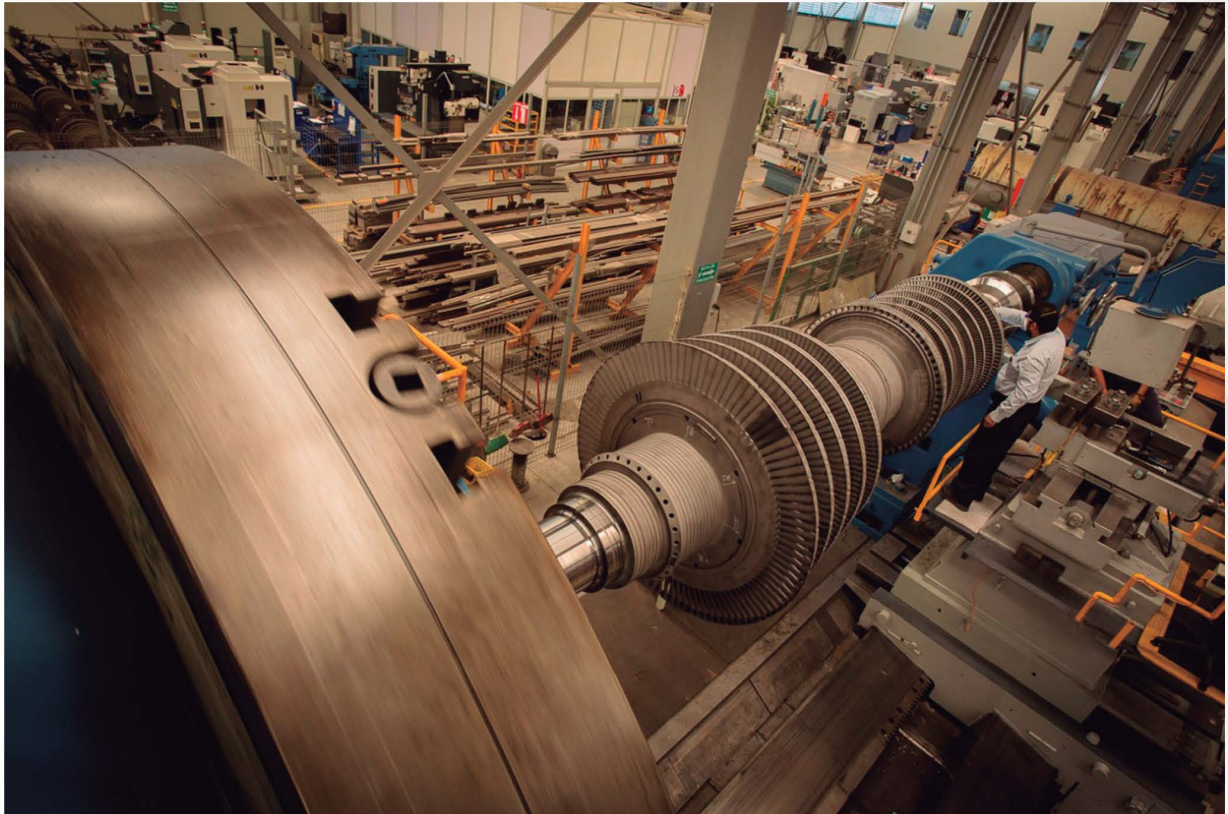
SERVICES WE PROVIDE

TURBOMAQUINAS, offers manufacturing and rehabilitation services of: steam turbines up to 678 MW, complementary turbine rotors, blades labyrinth seals, diaphragms, nozzles, bearings, valve components, governors systems, among others.

WE HAVE THE SERVICES OF:

- Inspection and Diagnostic of components.
- Alignment and Dynamic Balancing of rotors.
- Complete supply of sealing system.
- TIG, MIG and Submerged Arc spray welding.
- Steam Turbine Repowering and Thermo-economic Analysis.
- HVOF coatings, to prolong the life of the components
- as well as the recovery of dimensions in work areas.

Characterization of materials, metallographic tests, chemical analysis and hardness tests.

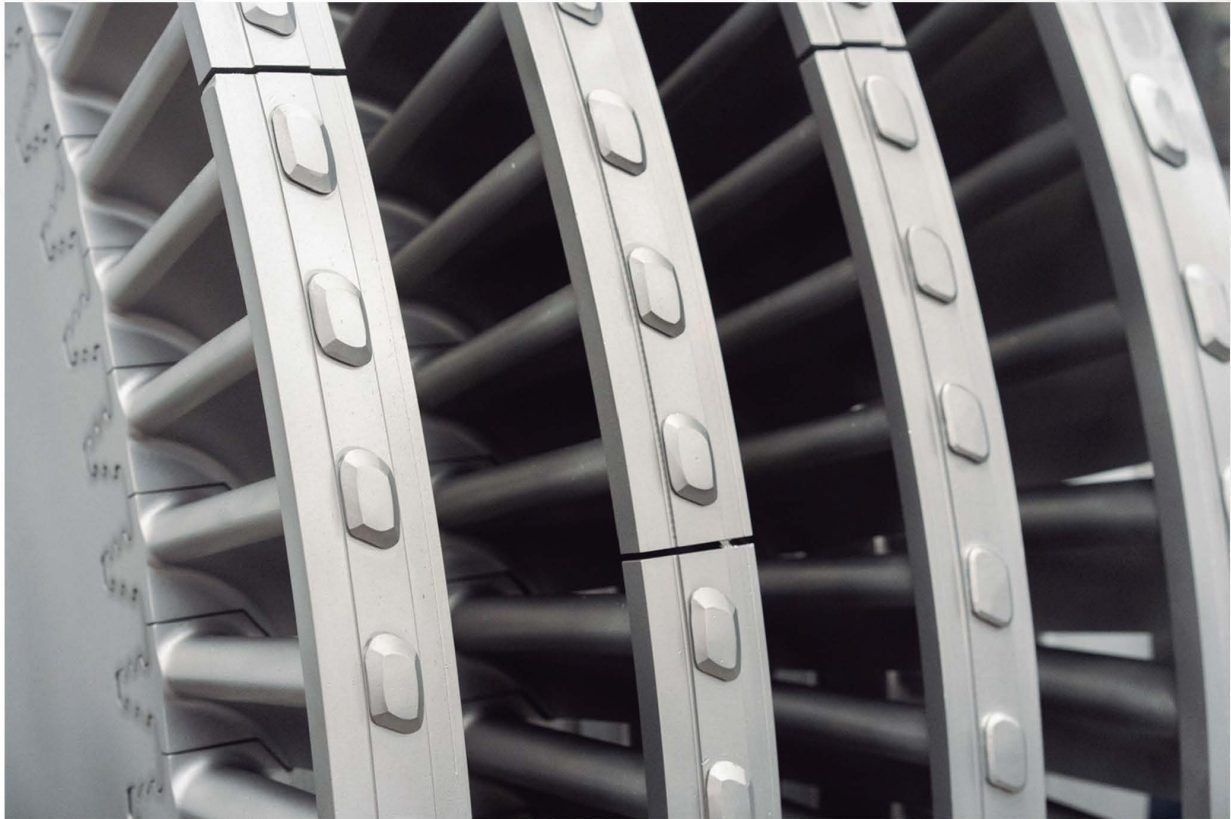


RECONDITIONING AND COMPONENTS MANUFACTURING

- Blades for Steam Turbines and Gas Turbines
- Labyrinth seals
- Nozzles
- Diaphragms
- Guiding axes
- Discs
- Bearings
- Coupling
- Carbon Seals.
- Casing Reconditioning
- Reconditioning of gas turbine parts

SPARE PARTS SUPPLY

Through the use of our advanced reverse engineering procedures for part sizing and material characterization we can supply any type of component according to your needs from a blade to a complete rotor.



MANUFACTURING AND BLADE ASSEMBLY

- TURBOMAQUINAS has diverse and modern machining centers and digital universal milling machines. In addition to qualified staff and experience in the manufacture of blades for more than 60 years.

- We supply blades for any brand and model.

- We have highly qualified staff for the assembly of blades of any type.

NON-DESTRUCTIVE TESTING

- Liquid Penetrant Testing

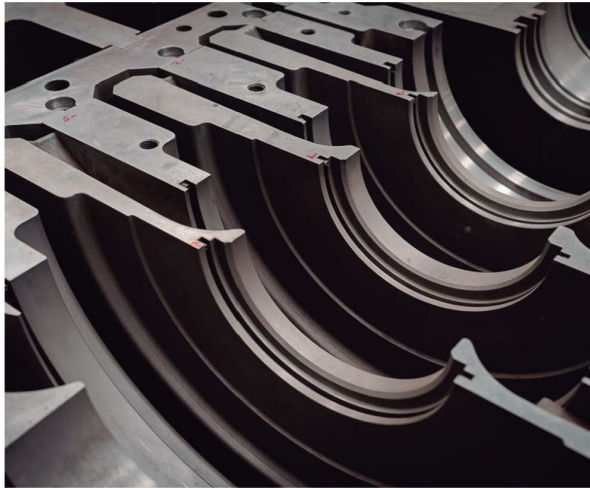
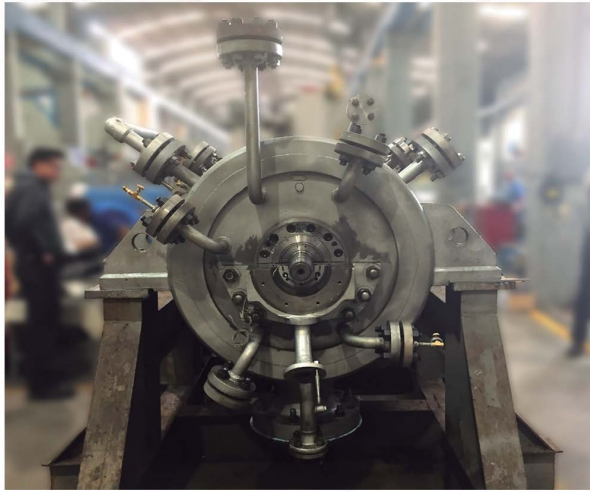
- Magnetic Testing

- Ultrasonic Testing

Complying with the requirements of the "American Society for Mechanical Engineers" (ASME) TURBOMAQUINAS experience includes the reconditioning of static and dynamic components. Our quality System contemplates the qualification of staff in the in the Quality System, it contemplates the qualification of the staff in the application techniques of TIC, MIC, MAC, and SAW welding.







COMPRESSORS

PRODUCTS AND SERVICES WE OFFER:

- Inspection and diagnosis of centrifugal and axial compressors.
- Overhaul of centrifugal compressor.
- Retrofit of wet seals and dry seals.
- Maintenance of dry gas seals system.
- Dry seal repair.
- Revamp of centrifugal compressors.
- Supply of compressor .
- Supply of compressor impellers.
- Supply of centrifugal compressor spare parts.
- Overspeed impellers tests.
- Integral on-site services for compressors (Onshore/Offshore).

REFURBISHMENT AND SUPPLY OF COMPLETE CENTRIFUGAL COMPRESSOR ROTORS



SPARE PARTS KIT FOR STEAM TURBINES AND CENTRIFUGAL AND AXIAL COMPRESSORS





DRY GAS SEALS



- DGS removal and installation.
- Disassembly of DGS according Turbomaquinas, S.A de C.V procedures.
- Stainless steel repair and supply.
- Supply of spare parts (O-Rings, springs, screws, etc.).
- Lapped Seal Rings Supply.
- Unidirectional or Bidirectional Grooved Seal Rings Supply.
- Dynamic balancing.
- Overspeed tests.
- Dynamic tests.

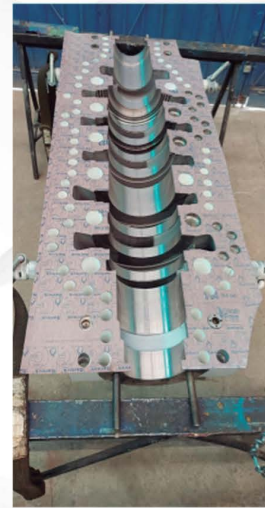
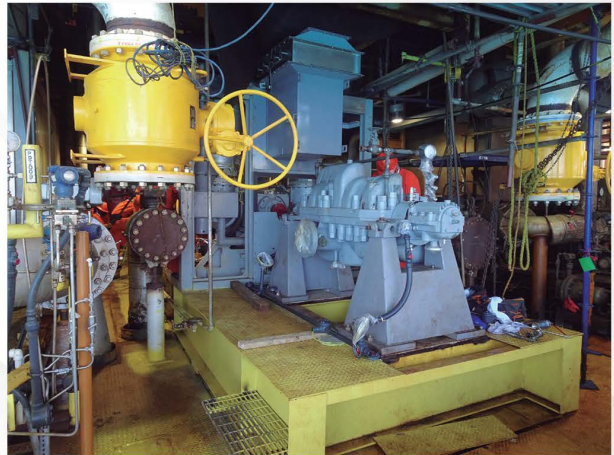
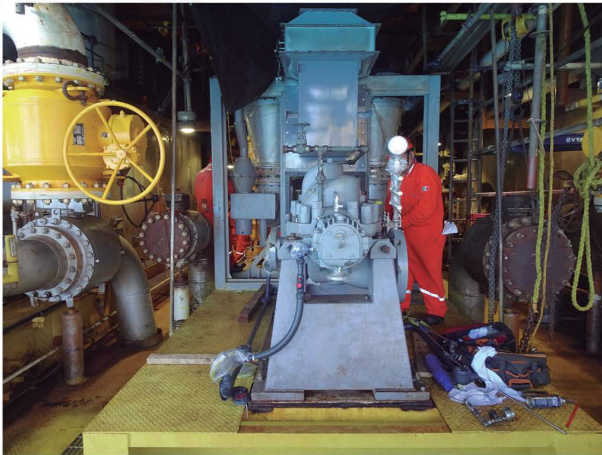
Standards: API 692, DIN ISO 1940-1, ASME, ASTM, Among other.



ELECTRIC GENERATORS

SPARES AND SERVICES

- Electric generator rotor inspection and diagnostic.
- Reconditioning of shaft and impellers with welding contribution.
- Reconditioning with Hard Coatings (HVOF).
- Generator Impeller Manufacturing .
- Low speed dynamic balancing according to API and ISO standards.
- On-site machining field services.

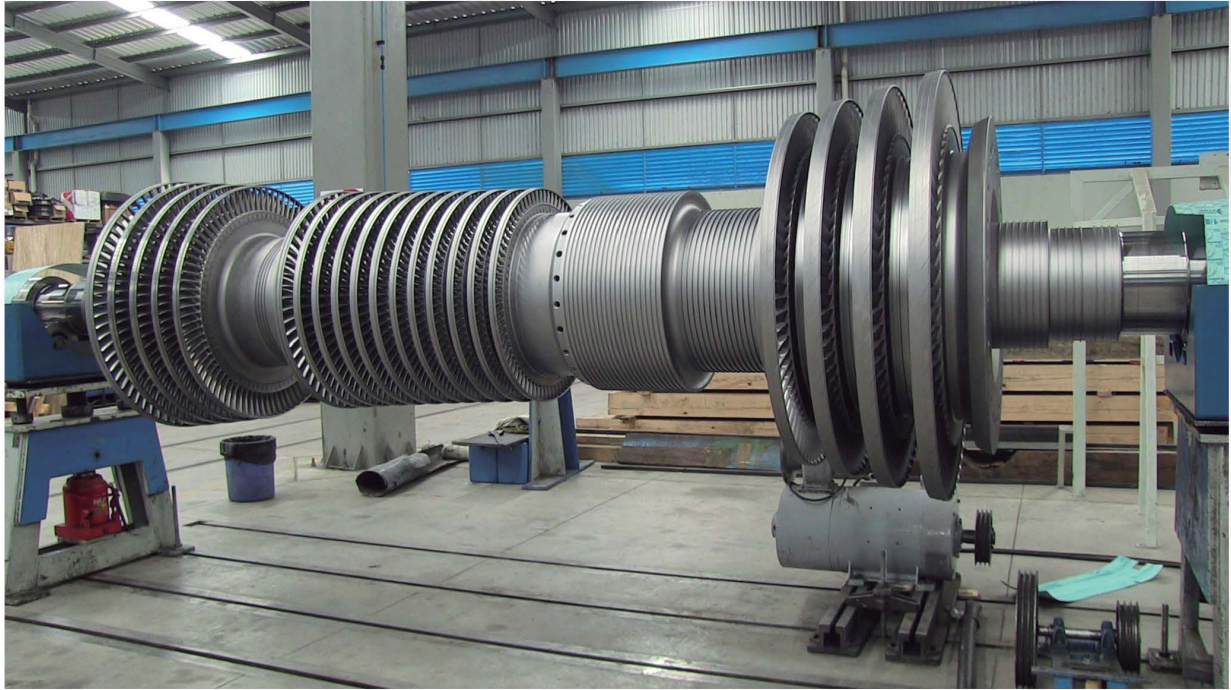


PUMPS

SPARES AND SERVICES:

- Inspection and diagnostic of centrifugal pumps.
- Pumps overhaul.
- Supply of Pumps rotors.
- Supply of Pumps impellers.
- Supply of Pumps spare parts.
- Overspeed impeller test.
- Integral on-site pump field services (Onshore/Offshore).
- Low speed dynamic rotor balancing according to API and ISO standards

DYNAMIC BALANCING



- Capacity to carry out Dynamic rotor balancing of steam turbines of up to 678 mw with a weight of 44 tons.
- High-tech balancing equipment from brands such as Schenck, IRD and CSI.
- Balancing in two or three planes, by "modal" type.
- Dynamic standards balancing such as: API, Mil-Std 167 and ISO.

INTEGRAL FIELD SERVICES

The integral field service is executed under the following procedure:

- Previous and operation status of the equipment before maintenance.
- Disassembly and cleaning of turbomachine components
- Component inspection.
- Change and/or repair components.
- Dynamic balancing of rotor.
- Laser and digital calibrations.
- Turbomachine assembly.
- Start up.





- Detailed visual equipment inspection.
- Dimensional static elements inspection.
- Non-destructive inspection tests.
- Penetrating liquids.
- Magnetic particles.
- Stellite protections change.

SPARE COMPONENTS MANUFACTURING PRODUCT LIST

STEAM TURBINE & CENTRIFUGAL COMPRESSOR

- Bearings

Radial Bearing
Thrust Bearing
Cilindrical Bearing
Liner Bearing

- Seals

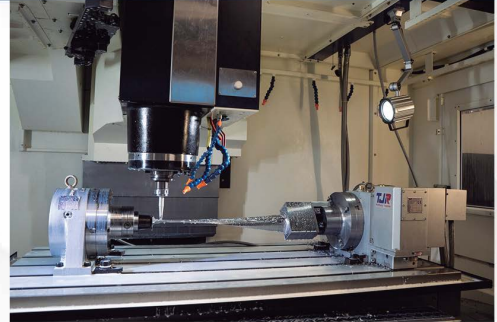
Wet Seals
Dry Gas Seals
Steam Seals
Labyrinth Seals

- Steam Valves

- Bushing Seals
- Springs
- Fixed Seats
Stems

- Blades from:
0.5 MW up to 678 MW
Stationary Blades

- Steam Chest
- Stator
- Nozzles Chamber
- Spare Rotor
- Balance piston
- Screws
- Impellers
- Diaphragms



The logo for '60 Años' features the number '60' in a stylized, white, serif font. The '0' is partially enclosed by a white circular element that resembles a turbine or a gear. An orange, flowing ribbon-like graphic curves around the top of the '60'. To the right of the '60' is the word 'Años' in a white, serif font.

60 Años

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TURBOMAQUINAS
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