

# Engineered Components

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الشركة السعودية للصناعات الميكانيكية  
SAUDI MECHANICAL INDUSTRIES CO.

## VISION

To be a leading local manufacturer and reliable partner providing engineered products and solutions to our customers.

## MISSION

**Supporting the socio-economic development of the Kingdom.**

- Enhance local content through technology transfer and human capital development.
- Contribute to the development of Oil & Gas, Water and upcoming industrial initiatives.

**Manufacturer of engineered metal products and provider of solutions to our customers.**

- Exceed customer expectations through partnerships, high quality and timely delivery.
- Focus on operational excellence in the manufacturing of engineered products.

**Involved proactively with our key stakeholders.**

- Care for our employees, community and the environment.
- Maximize shareholder value through innovation and effective resource utilization.

## VALUES

**Commitment**

Be reliable and add value to our customers.

**Empowerment**

Trust our employees to make the right decisions.

**Integrity**

Show transparency in everything we do.

**Excellence**

Operate professionally, safely and effectively.

**Collaboration**

Deliver through cooperation and team work.



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## Saudi Mechanical Industries Company

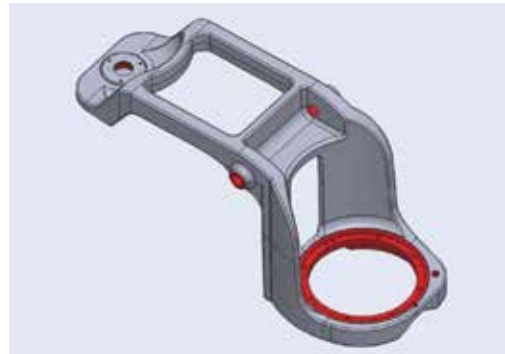
SMI is a world-class precision manufacturing company, offering a comprehensive service with emphasis on total customer satisfaction. With a dedicated and experienced team of skilled personnel, we provide an efficient service to achieve the required specifications and quality set by our customers.

- Technical resources in both skilled personnel and capital equipment.
- 20 years of experience in supplying precision engineered components to international markets.
- Ongoing investment programs.
- Flexible approach to suit all business models of our customers.
- Accredited BS EN ISO 9001-2015.

# Engineering

The Engineering, Research and Development Department within SMI employs a team of qualified engineers and provides a wide range of services.

- Reverse Engineering
- Laser Scanning and 3D modeling
- Full dimensional analysis
- Pattern making
- Casting, machining and flow simulation
- Animated assemblies



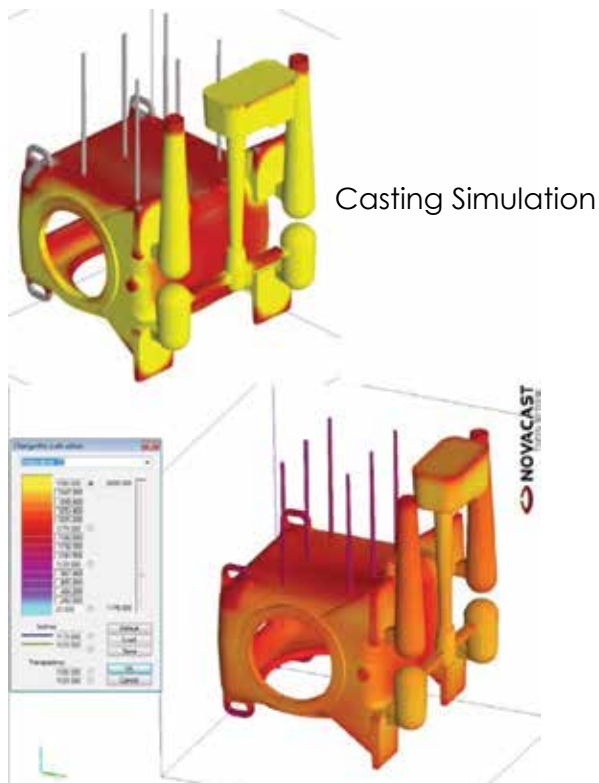
3D Model



Laser Scanning



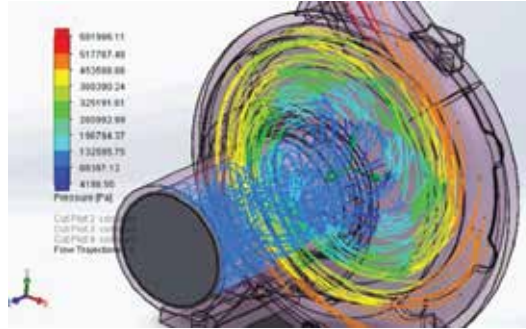
Pattern Mounting & Inspection



Casting Simulation



Our specialized custom pattern making capabilities make us one of the leaders in our industry. We listen to the end user needs in order to effectively design and develop patterns that will deliver product quality and performance up to the specified requirements. We understand the importance of creating patterns made to exact design specifications, as patterns provide the design foundation for your parts. Typical industries served by our industrial pattern making include: aerospace, petrochemical, architectural, and foundry industries.



## Sample Cycle



Production Lot



Trial Order



Sample Final  
Inspection



Sample Machining



Casting  
Verification



Sample Casting  
Batch



Sample Component



Reverse Engineering



3D Modeling &  
Pattern Design



Pattern Manufacturing



Pattern Assembly  
and Checking

# Foundries

An integrated iron foundry equipped with fully automated DISA green sand equipment with capacity latest core shooting equipment. All supported by top of the line of 2,000 MTon/Month, electric induction melting furnace up to 6 tons/hour capacity.

Production of world class engineered castings for a wide range of industries ranging from pumps, valves, automotive and heavy equipment to power generation and oil and gas.

With fully equipped sand, metallurgy and mechanical labs, our foundry is capable to supply castings that meet international standards and customer quality requirements.

The foundry is supported with a pattern design and manufacturing facility; utilizing the latest in design, casting, simulation, reverse engineering and 3D modeling software and equipment.

Furan steel and iron foundry with capacity of 600 M Tons/month with three induction furnaces. Two Furan (self-set) sand molding, five core shooter machines and three shot blasting machines.

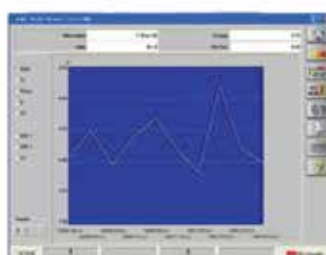
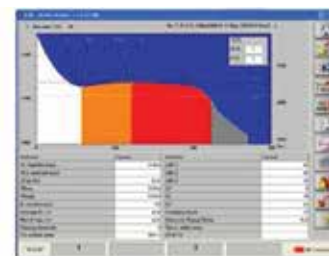
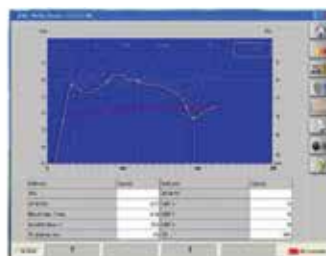


Non-ferrous sand casting foundry with capacity of 8000 tons per year. Catering for multiple and Stainless Steel grades (CF3M, CF8M, Duplex Steel) Copper Base Alloys ASTM B584 (Silicon Bronze, Nickel Aluminum Bronze, Brass, ...etc.). Foundry is equipped with induction melting heat treatment furnaces, CNC fettling & shot blasting shop and mechanical/chemical and thermal analysis.



- In-Line CT3 Automatic Shot blasting machine.
- CNC Finishing Shop.
- Gray Iron ASTM A48 (25A-C, 30A-C, 35A-C, 40A-C and 45A-C) material grades.
- Ductile Iron ASTM A536 (60-40-18, 60-42-10, 65-45-12, 70-50-05 & 80-60-03) material grades.

## Adaptive Thermal Analysis System



# CNC Machining

Utilizing a planned and continuous program for ongoing investment in both our equipment and personnel, SMI ensures it has the capabilities to satisfy the requirements of our customers. Precision machining equipment to the latest advanced CNC machines are employed to manufacture engineered products to the highest standards.

Our CNC equipment was updated three times in the past decade with the latest technologies and programming control systems in the machine tool industry.



- 80 CNC Machines.
- 2 ,3 Axis CNC Lathes.
- Horizontal Multi Pallets Machining Centers.
- Vertical Machining Centers.
- 5-Axis machines.
- CNC Tubular Threading.
- Weight up to 2000 kg.



Precision Turning up to	Vertical 32" Dia. X 30" Height	Horizontal 60" Dia. X 20" Height
Precision Milling up to	Vertical 55" L X 26" W X 20" H	Horizontal 31.5" L X 31.5" W X 50" H



- Latest cutting technologies.
- Custom designed jigs plus fixtures to maximize output and reduce cycle time.
- Electronic tool setter.
- Cutting Tools Management Systems.



# Engineered Products

SMI's competitive edge is achieved through operational versatility and integrated manufacturing processes. Beginning with the selection of raw materials for the foundry, through the casting process and finishing with the production of Precision Machined Components. This integrated process allows SMI to be a competitive supplier of high quality components to the global market.

SMI operates advanced manufacturing equipment in the casting of continuous and centrifugally bronze bar alloys. Bronze alloys include bearing bronzes, aluminum and manganese bronzes.

In the production of Precision Machined Components, SMI employs high quality CNC turning lathes and milling centers capable of meeting the exact demands of the OEM in such industries as Marine, Power Transmission, Railroad, Earthmoving & Mining, Valve and General Engineering.

In meeting the requirements of global industry, SMI displays expertise from a dedicated team of employees focused on customer satisfaction and total commitment to service.





# Quality

- Ensuring customer quality standards and requirements are met and sustained.
- Involvement in:
  - Vendor assessment.
  - Inspection.
  - Documentation.
  - Continued Process Improvement.
- CMM (Coordinate Measuring Machine).
- Spectrometer, Tensile & Hardness Testing.
- Range of Gauges and Fixtures.
- Electronic Gauge Calibration and Tracking System.
- A qualified and experienced team of engineers.



## Certification

- ISO 9001-2015
- UL 448



# Assembly

The assembly of right angle gear drives that requires precision fitting is carried out by qualified mechanics capable of adapting to a wide range of mechanical assemblies.

All manufactured gear drives are subject to functional tests prior to dispatch. Gear drives testing guarantees product conformance to Johnson Gear Company LLC manufacturing and testing standards.



# Dynamic Balancing

Balancing Machine with Touch Screen Computer is used to measure the amount and location of a part's unbalance. Balancing reduces wear, increases performance, and eliminates vibration in rotating parts.



# Manufacturing Integration

**Engineering R&D**



**Finished Product**



**Metal Scrap**



**Machining**



**Melting Metal**



**Casting**



# Global Reach

- More than 20 years of experience in exporting engineered parts around the world.
- Product marking and packaging in conformance with international standards.
- Guaranteed containers availability, weekly sailing and standard transit time door to port.
- Regular updates of customer orders status.
- On time delivery monitoring system.
- Around the world shipment tracking.



www.smi.com.sa



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