



**SPECIALIZED INDUSTRIAL CASTING COMPANY**



# ABOUT US

## **Specialized Industrial Casting Company (SICAST)**

is formed under the laws and regulations of the Kingdom of Saudi Arabia for production of Steel Casting Components of Valves, Pumps, Turbines, Compressors, Earthmoving equipment used in Oil and Gas, Refineries, Petrochemical, Energy, Cement and Mining Industrial Sectors. The manufacturing facility is built on MODON leased land in Sudair Industrial and Business City, 130 km north of Riyadh. The total land area is 75,000 square meters and covered factory building area is 40,000 squaremeters.

## **OUR VISION**

To enable the economic transformation and prosperity of the Kingdom of Saudi Arabia.

## **OUR MISSION**

To become the partner of choice for leading public and private organizations by acting as a long-term anchor shareholder, operating and developing key infrastructural projects for Oil, Gas and Energy sectors.

# CHAIRMAN MESSAGE

Becoming a globally recognized foundry and manufacturing company, committed to the highest global standards of quality, efficiency, operational performance

and customer care is the vision towards which Specialized Industrial Casting Company (SICAST) is invested. Guided by our clear corporate philosophy, we are committed to building a reputable leading position within our industry. It is my firm belief that our mission will be one of success. In compliance with Vision 2030 and in accordance with international demand, we will grow. We will achieve. We will excel.

Success is not possible, however, without the continued support of our shareholders, colleagues, bankers, customers, suppliers, advisors, and other associates. To them, I extend my most sincere appreciation. Also to my colleagues on the Board for their valuable input and guidance that has been fundamental in taking the company towards a sustainable business.



**Abdulrahman Bader Algozaibi**

Chairman, Specialized Industrial Casting  
Company



# INFRASTRUCTURE

*delivering on our promise*

75,000m<sup>2</sup>  
Plot Area

3,500m<sup>2</sup>  
Administrative  
Building

40,000m<sup>2</sup>  
Factory  
Building

2,000m<sup>2</sup>  
Utility

## SHAREHOLDERS

### **KHALIFA ABDULRAHMAN ALGOSAIBI INVESTMENT COMPANY (KAI)**

KAI was founded in the 1940's by Sheikh Khalifa Abdulrahman Algosaibi. The history of the group includes pioneering achievements such as the founding of the Middle East's first airline, Gulf Air (formerly Gulf Aviation), establishing the first storage facilities, as well as forming the first commercial diving company in Saudi Arabia. Today KAI is active in several sectors including industrial catering, diving and marine services, manufacturing of construction and fireproofing materials, real estate, and investments. The group employs over 6,000 people. KAI is the first majority shareholder in SICAST.

### **AL-TAMIMI GROUP**

Al-Tamimi Group was founded by Late Sheikh Ali Tamimi bin Abdullah Al-Tamimi about 50 years ago. It is owned and managed by his heirs and employs more than 20,000 people. The Group is active and very large player in food services and facilities management, retailing, construction, power and industrial activities, real estate development, and trading. It also has a very large portfolio of investments in banks, insurance and other companies and in other listed and unlisted companies.

### **ARABIAN OXIDE FOR INTERNATIONAL DEVELOPMENT AND INVESTMENT CO.**

Oxide is a Private Local Company established in the year 2001. Located in Al Khobar, Saudi Arabia. Oxide is actively involved in several commercial and industrial investments in the Kingdom which includes management technical training and development programs, chemical and plastic conversion industry and chemical products distributor.



# PRODUCT TYPES

*products we produce*

- Control Valve
- Manifold Energy Castings
- Compressor Castings
- Stainer Housing
- Engineering and Mining Castings
- Pump Castings
- Oil and Gas Energy Castings
- Excavators
- Railways and Transportation
- Control Valve Bodies
- Disc of Tripple Offset Valve
- Triple Offset Bodies
- Ball Valve Bodies
- Check Valve Bodies
- Gate Valve Bodies



# PRODUCT RANGE

*markets and use*

- Steel casting for gate globe, check, butterfly, plug, ball valves
- Pumps and turbines, for liquid and gas applications
- Engineering castings for machinery and mining, ground engaging tools
- Vehicles and railways

## **SIZE AND WEIGHT RANGE**

- From 50 Kg to 10,000 kg per casting
- From 200 Kg x 400 x 300mm to 2,500 x 2,500 x 3,000mm

## **CASTING GRADE**

- Carbon steel
- Low alloy steel
- Stainless steel
- Duplex, Super Duplex Steel & Nickel based alloys

# CASTING ALLOY GRADES

*all ferrous and nickel base alloys*

- Alloys to all ASTM, DIN and BS standards
- Carbon steels WCB/LCB/1.0619
- Low-alloy steels CF8M, CF3M, CF3
- Duplex 4A, CD4MCuN, 6Mo
- Super Duplex Grade 5A, 6A Inconel 625 and 825
- Monel



# OPERATIONAL MANAGEMENT

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*quality process key and strenghts*

*The plant is managed and operated by qualified and experienced professionals who have contributed and played a key role in set-up and operations of renowned steel foundries in Europe, Middle East and India.*





## COMMERCIAL AND MARKETING

- Customer segregation by geographic areas
- Customer segregation by different purpose (casting type)
- Website with on-line inquiries
- Addressing in main search engines and foundries, oil and gas, mining, power and energy on-line databases



## MACHINING CAPABILITIES

- Broad range of machining to satisfy market demands
- Machining Center Capable of Finish- ing in a single setting
- Twin Pallet horizontal machining center
- Vertical & horizontal turning centers



## FINANCE

- SAP S4 HANA ERP for operation, costing and accounting.



## ENGINEERING AND FEASIBILITY

- Hardware and licenses for PTC Creo and MAGMASOFT
- 3D modeling and design for all castings
- Methods simulation by MAGMASOFT
- PDM PTC Windchill and ERP with budget costing on-line
- Key to metals material database
- Hardware and software for process control



## FOUNDRY CAPACITY

- 1,350 tons of castings per month operating at two shifts per day:
- **Flaskless Molding**  
1,000 Tons per month from 50 to 1,200 Kg cast weight
  - **Flask Molding**  
300 Tons per month from 600 to 10,000 Kg cast weight
  - **3D Printing Molding**  
50 Tons per month for special high valve and rapid delivery casting





# PATTERN SHOP

*CNC pattern making using state of the art technology  
(equipped with servo controlled 3D CNC routing systems)*

- FLEXICAM XL 2040 (work area: 4.0 x 2.0M, z axis clearance: 400 mm)
- FLEXICAM XL 2030 (work area: 3.0 x 2.0M, z axis clearance: 900 mm)
- FLEXICAM XL 1515 (work area: 1.5m x 1.5m, axis clearance: 400 mm)
- Pattern and core box assembly
- Covered pattern storage of 3,000 m<sup>2</sup>steel

# SAND MOLDING PROCESS

*automated molding systems using cutting edge technology*

- Alkaline phenolic sand bonding system for molds
- Beta Set process for core making in core shooters
- 3D printing process for specific mould and core making
- Compatible cold box process for core making



# FLASKLESS MOLDING LINE FOR SMALL AND MEDIUM SIZE CASTING

*for cast weight up to 1,200 Kg*

- 45 ton/hour sand mixer with auto blend and IRIS auto pattern recognition and filling
- 10 station fast loop with auto wipe-off
- Mould size: mm 2,000 x 1,400 x 550/550 (Max), 550 x 500 x 150/150 (Min)
- 25 liter and 12 liter core shooter for horizontal and vertical split core boxes
- Pouring and cooling lines with pallet tracking systems
- Shake out and reclamation: 15 ton/hour
- Thermal sand reclamation: 3 ton/hour

# FLASK MOLDING FOR LARGE SIZE CASTING

*for cast weight from 800 Kg to 5,000 Kg*

- 60 Ton/hour sand mixer with auto blend
- 10 Ton/hour sand mixer for core making
- 8 station shuttle system
- Speed: 2 moulds/hour
- Mould size: mm 3,000 x 3,000 x 1,800/1,800 (Max), 2,000 x 1,500 x 500/500 (Min)
- Mould weight: 30 Ton (Max)
- Shake out and reclamation:
- 35 Ton/hour



# 3D PRINTING

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*for special and rapid delivery casting*

- Vx 2000 for build volume up to 2,000 x 1,000 x 1,000 (mm)
- Vx 4000 for build volume up to 4,000 x 2,000 x 1,000 (mm)
- For castings with complex shape requiring high dimensional accuracy

# SCRAP MANAGEMENT

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*2,000 m2 scrap yard*

The scrap yard is equipped with:

- Area for material acceptance with scale
- Sorting and sizing
- Bailing and shredding machines
- Portable spectrometer
- Covered bunker for segregated scrap of different material grades



# HEAT TREATMENT

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Our capability includes:

- PLC controlled gas fired furnaces for normalization, homogenization, stress relieving, tempering and quenching processes
- 4 Heat Treatment Furnaces for normalization and homogenizing
- 3 Heat Treatment Furnaces for hardening with agitated water quench tanks operating temperature up to 1,250 °C
- 6 Heat Treatment Furnaces for stress relieving and tempering
- Precise process control to achieve customer desired mechanical properties



# FETTLING AND FINISHING

*highly automated fettling and finishing shop*

Equipped with:

- Hanger type shot-blasting machines
- Table type shot-blasting machine
- Innovatively designed cabins for cutting, grinding and welding
- Lean process layout for high productivity and quick throughput
- Automated finishing cells

# MACHINE SHOP

*in-house machining*

- Broad range of machining capabilities
- Machining Centers capable of finishing all machining operations in a single setting
- Twin pallet horizontal machining center
- Vertical & horizontal turning center



## QUALITY LAB

Our lab offers:

- Chemical and metallurgic lab for all tests (charpy-impact, hardness, tensile)
- CNC lathe for test bar
- Sample cutting and polishing machine
- Spectrometer
- Positive material identification through portable xrf analyzer

## CHEMICAL AND MECHANICAL CAPABILITIES

Our chemical and mechanical capabilities include:

- High temperature heat treatment oven for alloy development
- Full metallurgical sample preparation and evaluation equipment
- Full Mechanical Properties Testing, Including High Temperature Tensile Testing Machine up to 1,100 °C
- Metallurgical examination of micro- structures, gas content and impact properties of metal, to measure and improve upon mechanical (toughness) and corrosion resistance properties



# PICKLING AND PASSIVATION

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In-house pickling and passivation facility include:

- Immersion pickling and passivation bath
- Weight range: Up to 5 Ton of Cast Weight
- Pickling Bath Size: mm 4,000 X 2,400 X 2,400
- Acid Fumes Extraction System

# NON DESTRUCTIVE TESTING

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Our NDT setup offers:

- Magnaflux 6,000 / 10,000 amp magnetic particle
- Inspection units - wet and dry inspection techniques
- Dye penetrant inspection cabins
- Radiography - cobalt 60 and iridium 192 isotope came as in 2 exposure bunkers
- Ultrasonic inspection
- NDT operators qualified to ANSI level 2 for RT, UT, MT, VT and DT
- In house Radiography using Cobalt 60 and Iridium 192



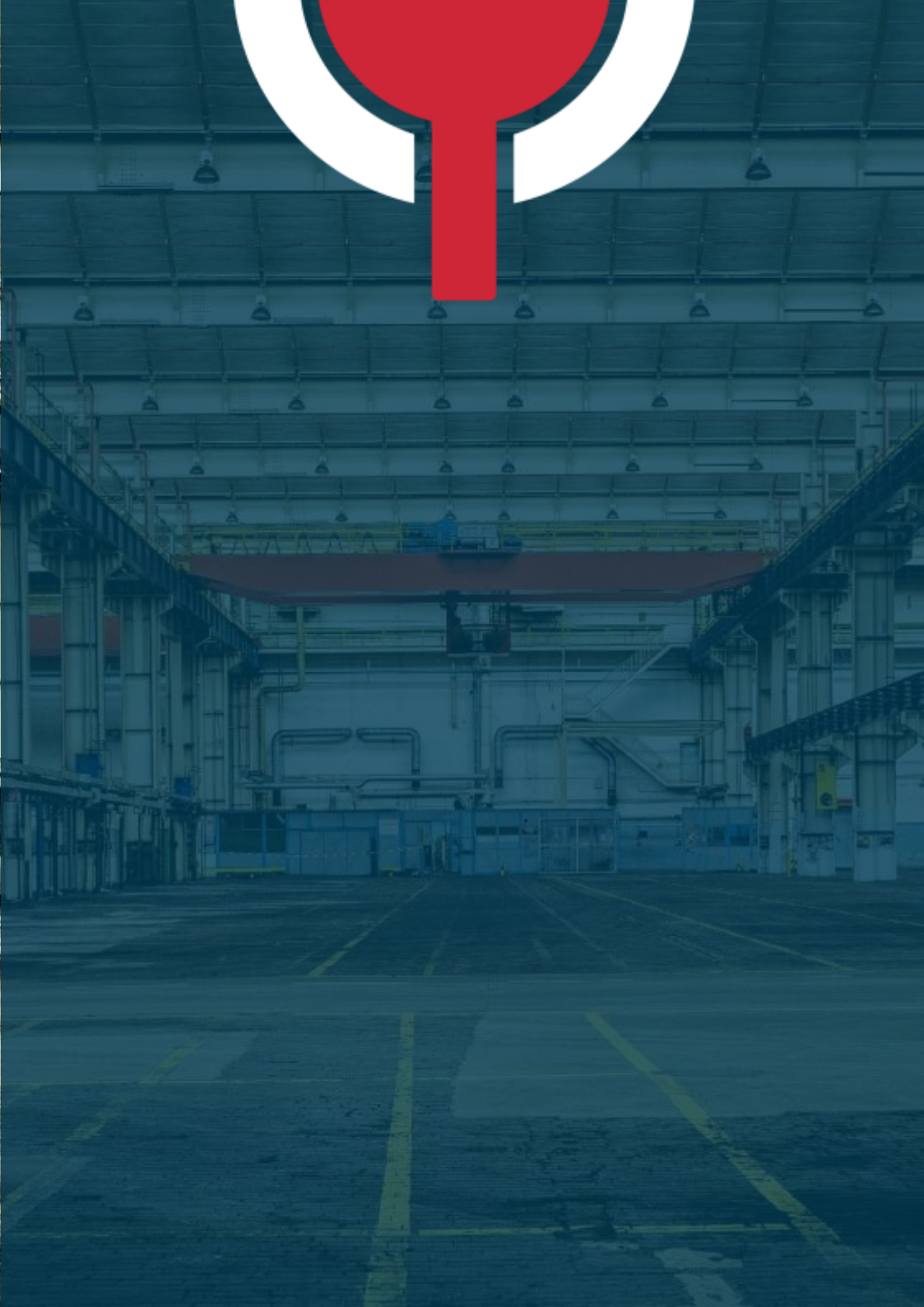


## EARTH MOVING EQUIPMENT PRODUCT TYPES



- Adapters
- Sprockets
- Bucket Edges & Segments
- Cutting Edges
- Tips (Bucket Tooth)
- Track Shoes





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