



PATTERN



FOUNDRY



MACHINING

ABOUT US



İĞREK MAKİNA: RELIABLE PARTNER FOUNDRY

İğrek Makina, founded by A. Osman İğrek in 1946, is a family-owned and managed industrial company in Bursa, Turkey. It aimed to be a leader of the sector through its product variety, capacity, technology and made up of three main divisions:

Pattern production, one of the top performers of its class world wide in production of casting patterns for full mould and lost foam casting method.

Foundry, 70 years of experience in production of gray iron, nodular iron and steel castings (GG-GGG-GS).

Machining, customized solutions and machines for diverse demands of various customers.

The facility upgraded both in volume and lay-out and reached to 40.000 m² of area today. Integrating its production centre with 125 employees including 25 engineers and 20 qualified technicians leading production and quality and 7 experts in administration and planning.

İğrek Makina offers flexible and diverse abilities in supplying heavy industry demands with **good timing, cost and quality**. The quality management system is certified under ISO 9001.

İğrek Makina as a “Reliable Partner Foundry”, is open to serve all sectors and supplies for the following:

Automotive stamping tool & die producers

Machine tool producers

Wind turbine producers

Gear and ring producers

Aerospace, Shipyards, Construction and Defense industries

Cement and mining industries



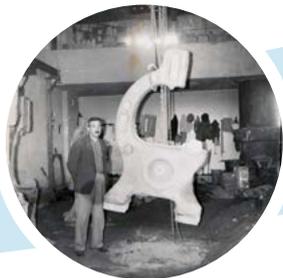


RESEARCH AND DEVELOPMENT

İğrek Makina, to maintain the stability of the quality assurance has developed many collaborations with universities and research institutions. This academical and practical knowledge junction led to outstanding quality improvement for automotive stamping die parts, wind energy turbine parts, machine tool parts and tables from casted materials.

Company is ready for new challenges in extreme customer demands with help of this partnership philosophy.

“Over 70 years of experience in production of gray iron, nodular iron and steel castings.”



1955



1964



1979



1981

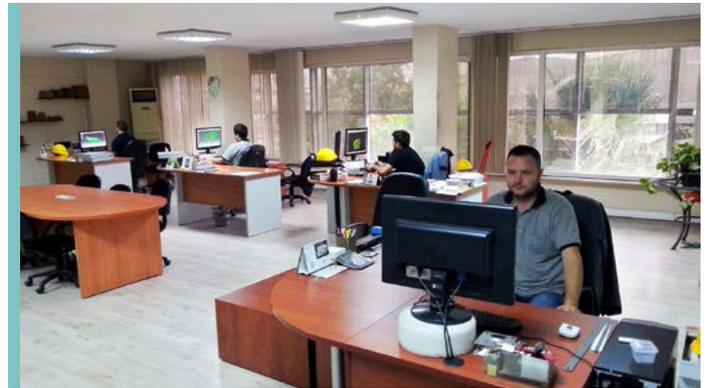
PATTERN



POLYSTYROL PATTERN PRODUCTION FOR FULL MOULD CASTING

İğrek Makina, committed to accompany its customers along their requirements developed pattern production department for FULL MOULD casting with advanced technologies.

The in-house polystyrene pattern production department constituted the backbone of the philosophy of the company, flexible, rapid and high quality patterns built for the best casting part production specially for heavy industry branches like automotive, energy and machine tool production.



Pattern department is specialized production of casting patterns for full mould casting. Production system includes 6 unique CNC milling machines and CAD-CAM support (Catia V5™).

The department collaborates with foundry specialists of the company which results with the optimized designs for having the best quality cast part through the right pattern.

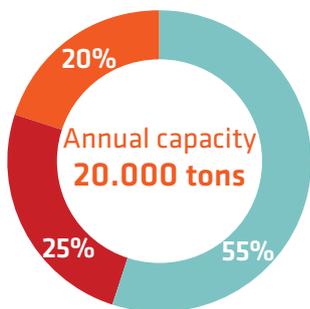




LARGE & COMPLICATED DESIGNS BECOME CAST IRON AND CAST STEEL PARTS

Long experience in business has shaped the investments and development through the years building up the foundry of complex parts ready to deliver in short lead times. Gray, nodular iron and steel alloys are produced by a qualified team of metallurgical experts and well supported metal laboratory.

THE STRENGTH IN NUMBERS



- Gray Iron / Max Part Weight 70 Tons
- Nodular Iron / Max Part Weight 40 Tons
- Cast Steel / Max Part Weight 20 Tons



- Hand moulding process in boxes up to 20 m
- 6 automatic mixers for resin bonded sand
- Thermal and mechanical sand reclamation units
- Mg wire treatment for nodular iron
- 6 Inductotherm™ Electrical induction furnaces:
Liquid metal capacity: 40 tons / hour
Total melting power: 14.000 KW
- Shot blasting with Wheelabrator Berger Cabinet (12 x 5 x 6 m, 7 Turbines)
- Heat treatment and painting utilities

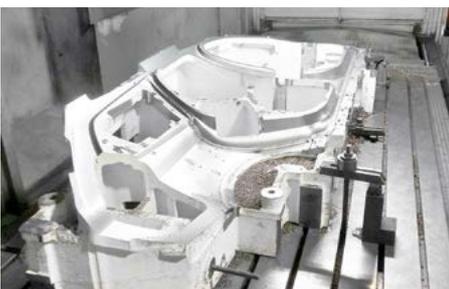
MACHINING



FLEXIBLE & PRECISE MACHINING SERVICES: GRINDING, TURNING AND 2D - 3D MILLING

A high-end facility of CNC machining services is integrated in production and it is completing the cycle of supplying parts that are ready to assemble and use for the customers.

- 10 Bridge type milling machines up to 12 m, 5 Axis Synchronous Machining
- 1 Horizontal Boring and Milling Machine with \varnothing 3 m Rotary Table (12 x 4 x 2 m)
- 3 Vertical Lathes up to 5 m of diameter
- Planar & Angular Grinding machine with 6 x 2 table
- Machining 2D and 3D forms for automotive stamping dies
- Production of machine tool parts and floor plates
- Machining of wind energy turbine castings
- Qualified experts in CAM programming
- Renishaw™ XL80 laser interferometer for periodic calibration of the machines





FULLY EQUIPPED METALLURGICAL LABORATORY, NDT TESTING AND GEOMETRICAL CONTROL

Quality management of İğrek Makina means to satisfy customer needs and expectations accompanied by continuous quality improvement. This functions to assist clients in the development process and during the whole life cycle of products as well as optimizing its own industrial investments.

Expertise in **simulation of flow & solidification** with Solidcast™ software has an outstanding success for the best results in casting quality.



ATOS 3D Scanning and Measuring System for dimensional control of patterns and castings



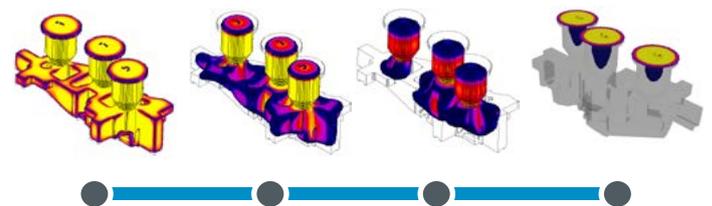
Metallurgical Laboratory with Spectrometer, Hardness, Tensile Strength and Impact Test Devices



Ultrasonic quality control for castings



Magnetic & Dye penetrant testing for castings



Simulation of flow & solidification with Solidcast™



International certifications in providing and managing quality

RELIABLE PARTNER FOUNDRY



CASTING DESIGN
OPTIMISATION



CASTING SIMULATION



RAPID PRODUCTION
OF PROTOTYPE PARTS



HEAT TREATMENT, NDT TESTING
AND REVERSE ENGINEERING



EXPERTISE IN
3D FORM MILLING



EXPERIENCE IN
INTERNATIONAL LOGISTICS

**A SUPPLIER READY TO DELIVER GLOBALLY
FROM CLOSE PROXIMITY**



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