



Gedik Casting

Since 1967...

SAND CASTING - INVESTMENT CASTING



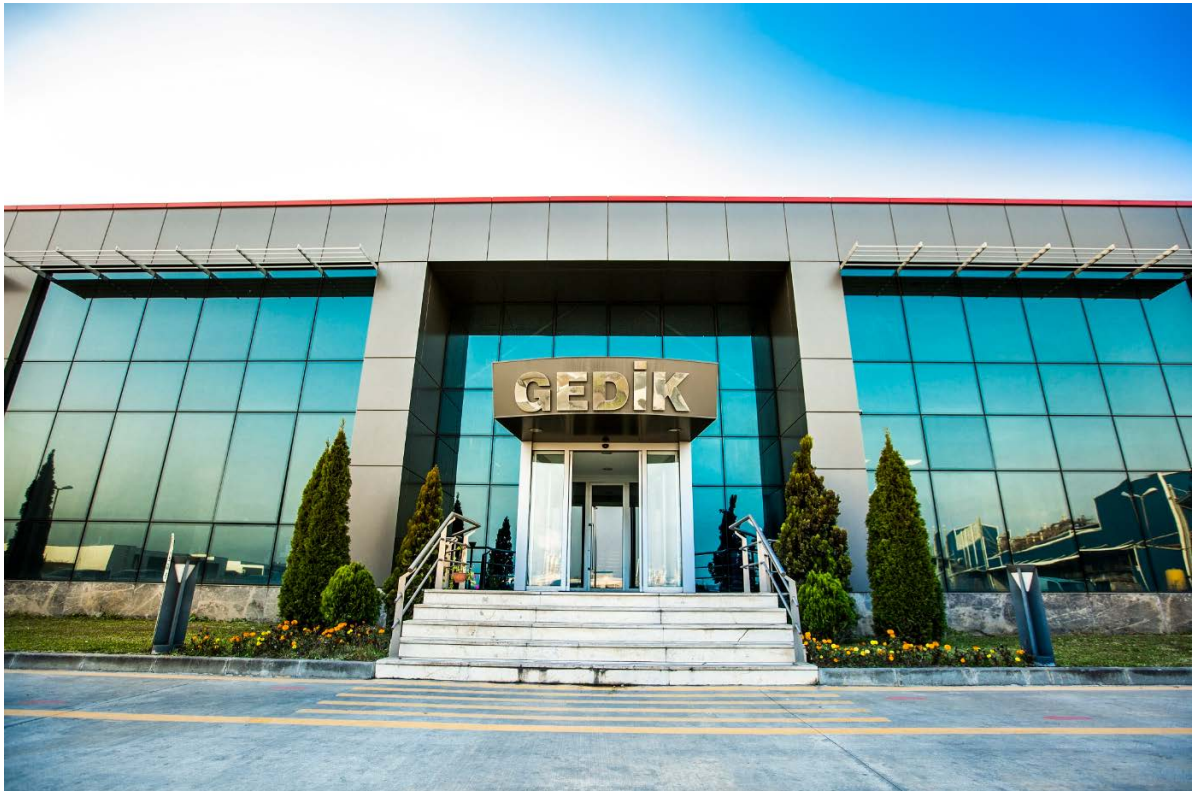
Gedik Casting and Valve

Gedik Casting and Valve, a subsidiary of Gedik Holding, which is active in Sand Casting, Investment Casting and Valve sectors since 1967 . The company is the biggest integrated firm of Turkey in casting and valve sectors with its 25,000 m² closed area manufacturing facilities located in Hendek/Sakarya. The headquarter of the company is based in Pendik/Istanbul.

Gedik Casting and Valve, meets the demands of a wide range of sectors including automotive, machinery, defence industry, energy and construction by casting a great number of materials such as cast iron, ductile iron (sphero), steel, stainless steel, duplex stainless, bronze, aluminum and copper alloys.

Gedik Casting and Valve is a prominent and reliable partner of its customers both in domestic and international markets, since 1967. The TERMO brand named valves for oil and gas, steam, water, and seawater applications are successfully used in various projects

Gedik Casting and Valve aiming at fully meeting the demands and expectations of its customers will decisively continue its progress in the direction of "Business Excellence" by the aid of experienced and dynamic manufacturing, sales and after-sales personnel and computer-aided R&D works.

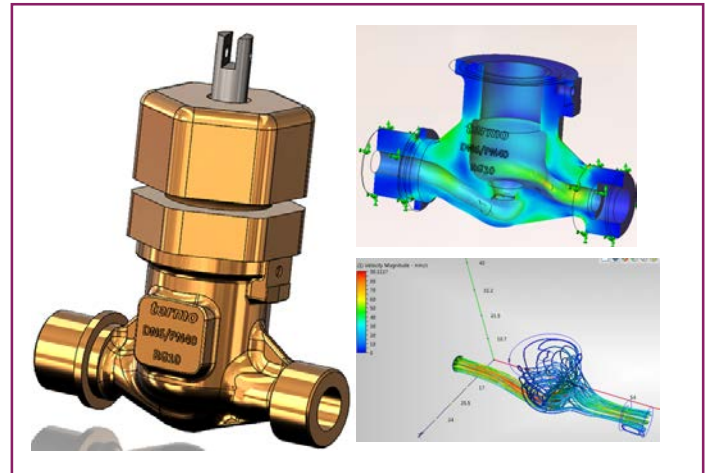


Casting Design & Analysis

Siemens UG/NX, Solidworks 3D drawing softwares
Solidcast, NovaCast casting simulation software
Inhouse 3D FDM printers for wax and prototypes
using MatterControl software

Inhouse Test Capabilities

- Optical Spectrometer
- Tensile Strength Test
- Charpy V-Notch Test
- Microstructure Inspection
- Hardness Test



Inhouse NDT Capabilities

- Ultrasonic Testing
- Radioscopic Testing
- Radiographic Testing (X-Ray & Gamma Ray)
- Magnetic Particle Testing
- Liquid Penetrant Testing

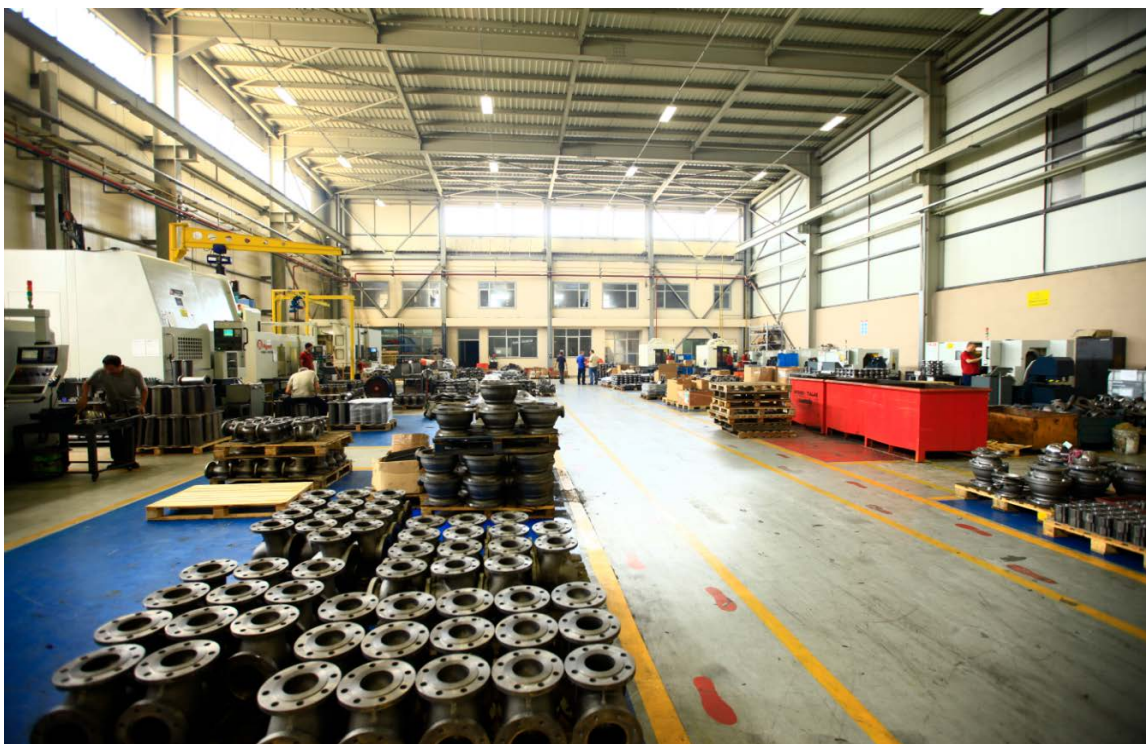
Other Activities

- Heat Treatment
- Machining
- Coating
- Painting



Inhouse Measurement Control Capabilities

- Carl Zeiss - Contura G2 type CMM
- Profile Projection
- Surface Roughness Measurement
- Coating Thickness Measurement



Termo Valve Manufacturing Facilities

Gedik Casting and Valve provides a wide range of reliable and cost efficient solutions to its customers with both cast iron, bronze, stainless steel, duplex stainless, low alloyed and carbon steel casting capabilities.

Cast Iron Section Capabilities

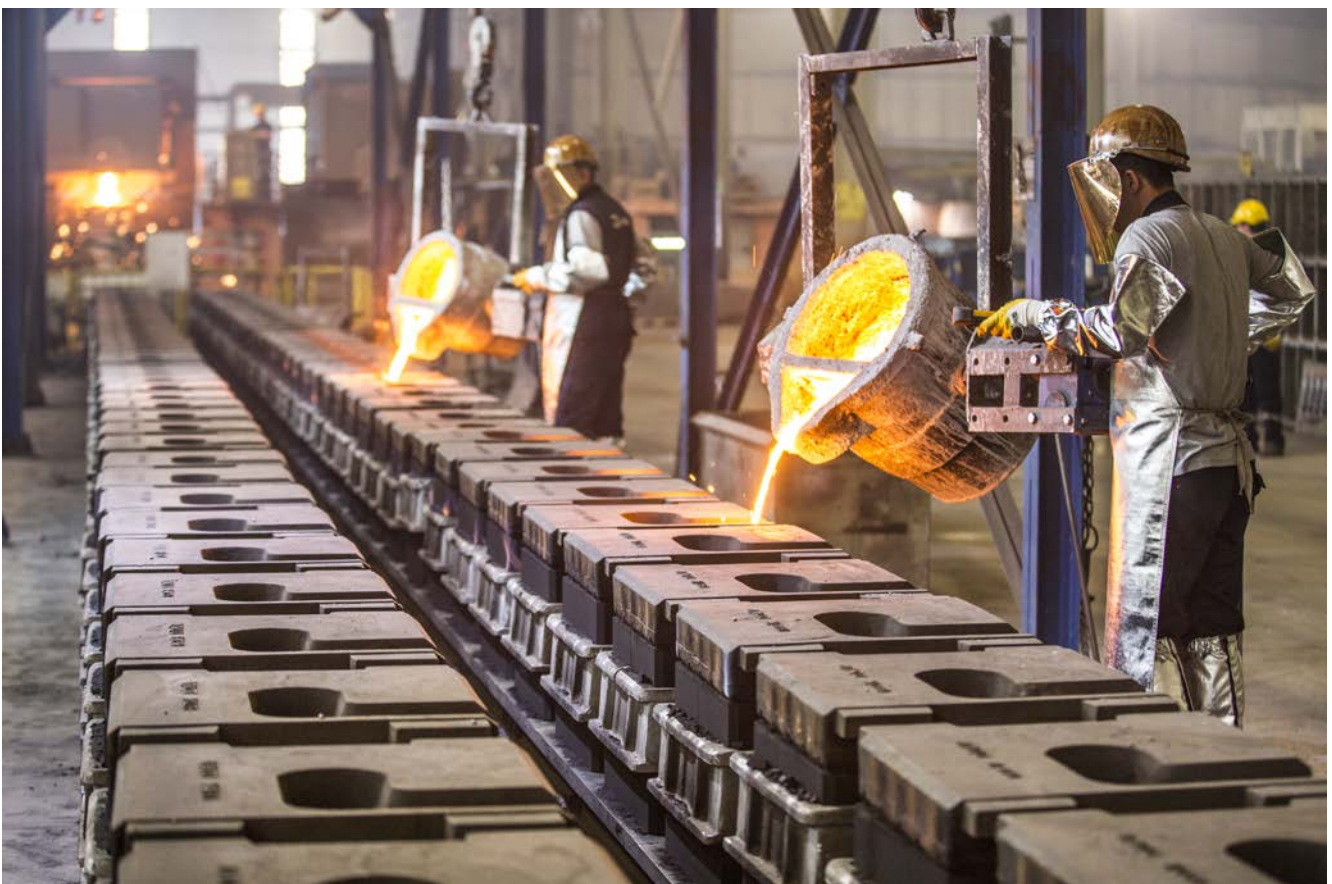
- 10.000 tonnes annual capacity
- Sinto FBO3 Molding Line (500 x 600 x 250/250mm) - 120 molds/hour capacity
- Sinto FBOX3 Molding Line (500 x 600 x 250/250mm) - 200 molds/hour capacity
- 2x 3 tonnes melting capacity induction furnace

Steel, Stainless Steel and Bronze Section Capabilities

- 3.000 tonnes annual capacity
- FTL Molding Line with 6 stations (1100 x 1100 x 450/450mm)
- 2x 2 tonnes melting capacity induction furnace
- 2x 500 kg melting capacity induction furnace

Sectors

- Automotive
- Pump and Valve Industries
- Machine Industry
- Construction
- Ship Building industry including Navy Ships
- Food Industry
- Defence



Fields of Activities

- Sand Casting
- Investment Casting
- Valve Production



Certifications



○ AD2000-W0 Certification acc. to PED



○ ISO-9001:2018 Quality Assurance Certification



○ DNV-GL Material Manufacturer Certificate



○ ISO 16949 Quality Assurance Certification



○ Ukraine Sepro



○ Russian EAC



○ DNV-GL Material Manufacturer Certificate



○ AD2000-HP0 Certification

Cast Parts



Pump Casing – 1.4508 - 45kg



Seperator Walls – 1.4462 – 80kg



Main Frame – GGG40 - 135kg



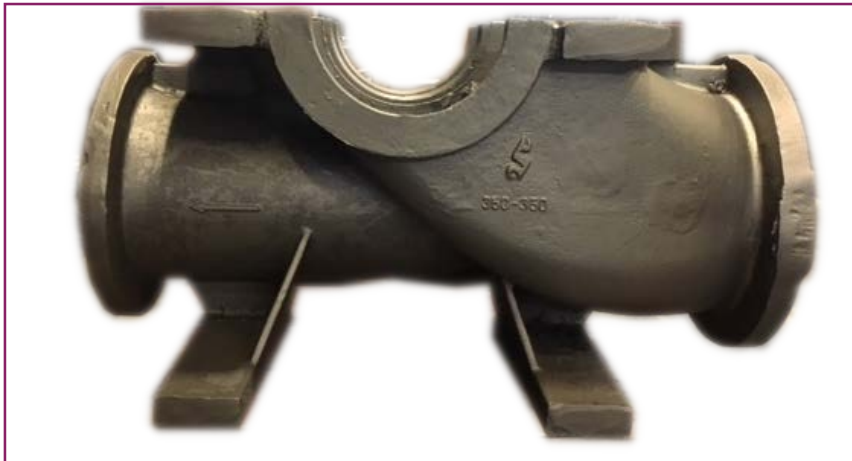
Exhaust Manifold – SAE-J2582 - 2kg



Vibration Suppressor – GGG40 - 5kg

Valves for Navy Ships





Duplex Stainless Steel Pump Casing – 1.4462 – 2,5Tonnes



Duplex Stainless Steel Pump Cover – 1.4462 – 1,2Tonnes



Globe Angle Valve Body – Bronze RG10 – 800 kilograms

Investment Casting Technology has become known in Turkey by Gedik Casting and Valve in 1982 and it has been widely used in many industries for developing high-tech and complex products.

Today Gedik Casting and Valve is still serving to its customers with highly qualified and experienced engineers and with the aid of modern production and quality control equipments as well as using simulation tools.

Capabilites

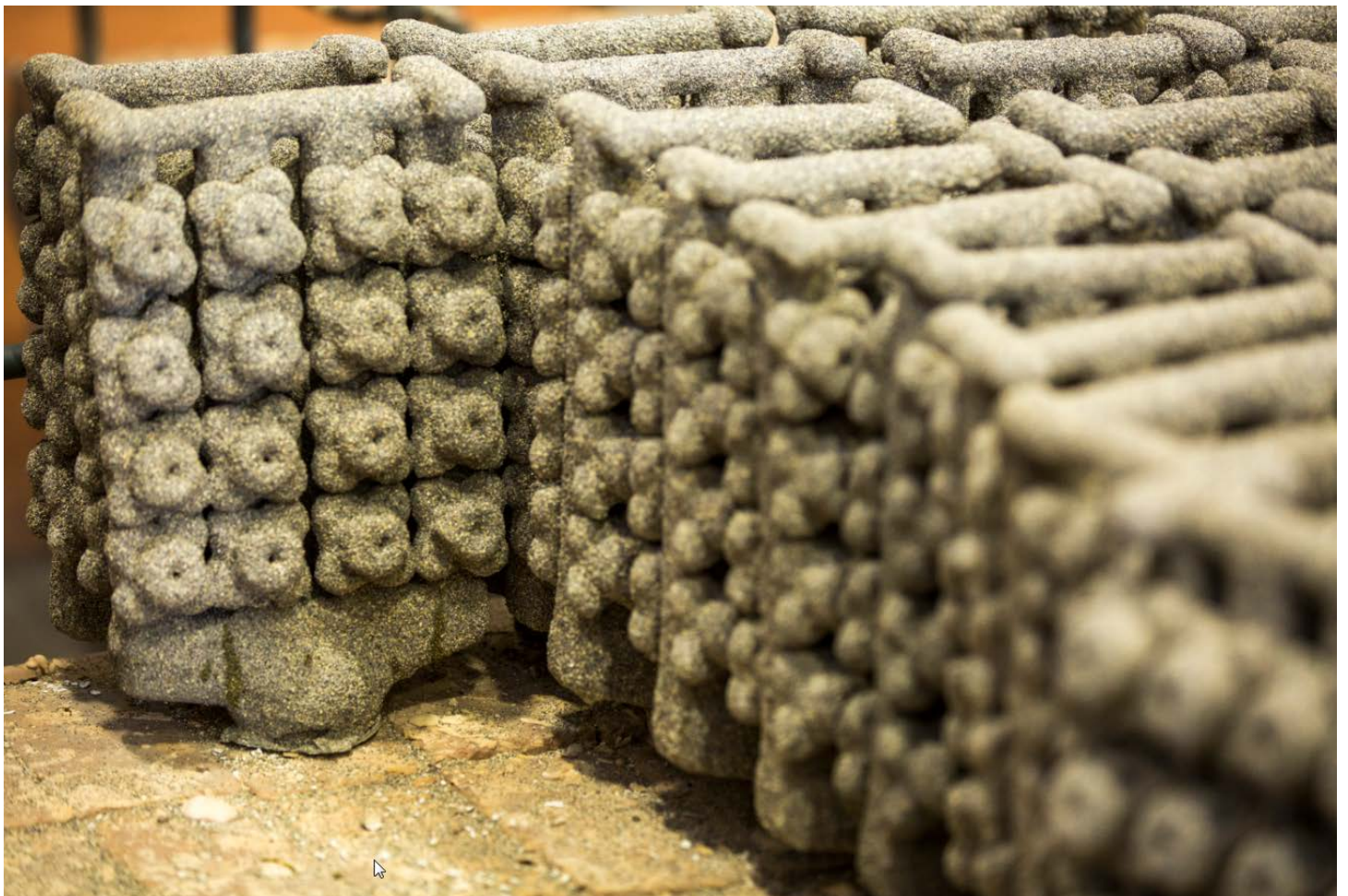
- 1.000 tonnes annual capacity
- 2x 150 Kg melting capacity induction furnace
- 2x 250 Kg melting capacity induction furnace
- 1x 100 Kg melting capacity electrical melting furnace for aluminium casting

Materials

- Low and high alloy carbon steels
- Stainless steels
- Super alloys
- Copper and copper alloys
- Aluminium alloys

Sectors

- Defence industry
- Firearms industry
- Automotive industry
- Pump and Valve industries
- Textile industry
- Machine industry
- Medical industry
- Food Proc. and Chemical industry
- Electric and Power equipment
- Tools and tool holders



Examples of Investment Casting Parts



Star Pin – 1.5919 – 0,5kg



Device Holder – AISI316 – 0,7kg



Trigger – 1.7225 – 0,15kg



Fan – AISI316 – 6kg



Body – AISI316 – 2,4 kg



Vacuum Seat – AISI316 – 5,2kg



Heater Body GR3 – 1.4848 - 5kg



SeperatorCone - 1.4462 - 5kg



Ratchet – 1.7225 – 0,24kg



Mould Body – GS45 - 30kg



Safety Pin – GS45 - 30kg



Valve Disc – AISI316 - 8kg



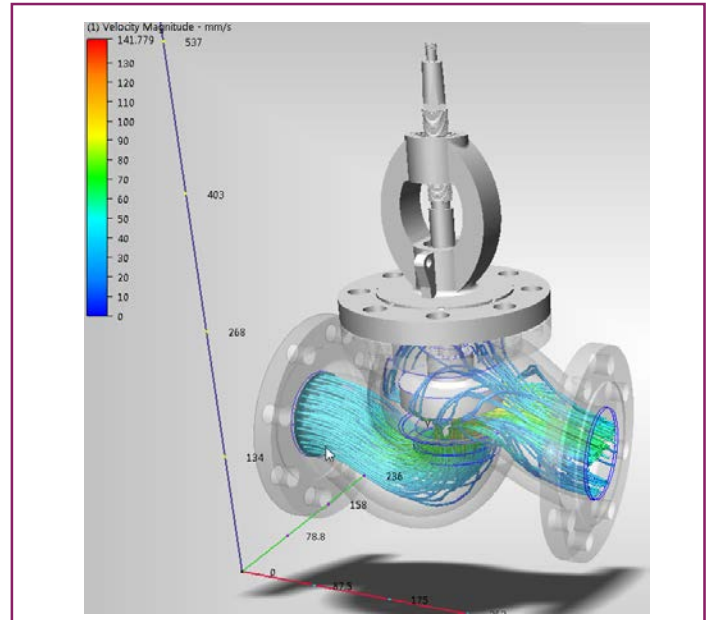
Manhole Set – AISI316 - 6kg



Pressure Chamber – AISI316 - 20kg

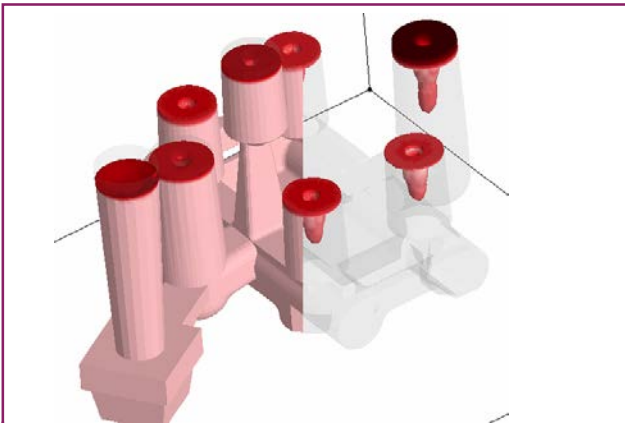
We use Casting Simulation Software before we make pattern equipment and dies in order to eliminate casting defects. We design gates, risers and test them out before making initial casting. We can see how part will solidify and this helps us to shorten lead times, produce higher quality products

Simulation of flow characteristics at operation conditions allows us to understand the behaviour of fluid flow inside the valve. Also pressure and stress simulations gives us the operation behaviour that enables to find optimum shape and casting design

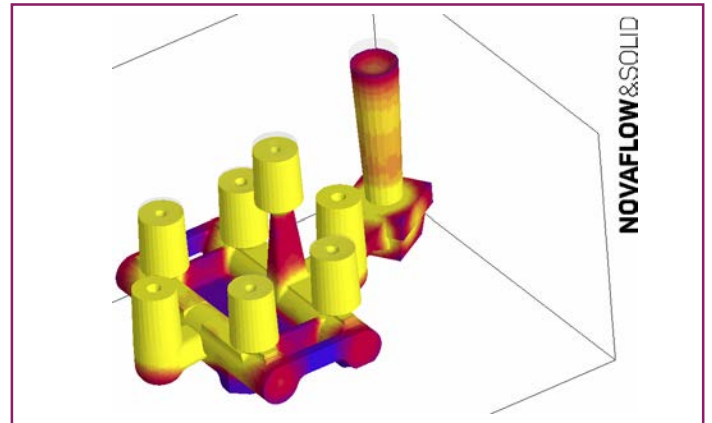


Flow Analysis (CFD)

Simulation images of Casting Parts



Shrinkage and defect prediction on an Armoured Personnel Carrier track



Temperature distribution during solidification period of an Armoured Personnel Carrier track

Continuity and traceability of the simulation results in production

| | | METOD FORMU | | Doküman No: FR-001 Form Tarihi: 08.07.2017 Revizyon No: 02 Revizyon Tarihi: |
|-------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--|
| Müşteri / Customer: | Termo Vana | Form Numarası / Form Number: | MFD00057 | |
| Parça İsmi / Part Name: | DM600 PN50 Çelik Gövde Vana Gövdesi | Form Tarihi / Form Date: | 05.30.2017 | |
| Üretim Bölümü / Production Number: | | Bölge / Area / Group Weight: | 1559 Kg | |
| Parça Kodu / Part Code: | TV02024000 | Net Ağırlık / Net Weight: | 1776 Kg | |
| Malzeme / Material: | MS10 | Yazdırma / Print Weight: | 1646 | |
| | | | | |
| Kullanılan Birimler / Unit (mm) | Kullanılan Birimler / Unit (mm) | Kullanılan Yarı Elemanlar / Part (mm) | Kullanılan Yarı Elemanlar / Part (mm) | |
| 4 / Num / 001.6 (Eşleşlik) | | 11 / Silindirik Sağgözetim / Ø100x40 | | |
| 8 / Num / 0100.9-300 (Ø100x100x300) | | | | |
| 1 / Num / 0100.7-300 (Ø100x100x300) | | | | |
| 2 / Num / 010.7 | | | | |
| 3 / Num / 0100.8-11 (Ø100x110x110) | | | | |
| Yapılan / Prepared By: | Uygulama / Applied By: | Onay / Approved By: | | |

Methoding forms gives engineers all info for risers and gatings

| | | METOD FORMU | | Doküman No: FR-001 Form Tarihi: 08.07.2017 Revizyon No: 02 Revizyon Tarihi: |
|------------------------------------|-------------------------------------|------------------------------|------------|--|
| Müşteri / Customer: | Termo Vana | Form Numarası / Form Number: | MFD00057 | |
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| | | | | |
| Cekim Bilişi: | Mikroşerit Bilişi: | Kullanılacak Ölçümler: | | |
| Açıklamalar / Explanations: | | | | |

Methoding forms also provides info for solidification and shrinkage prediction

| Alloy Type | Standart No. | DIN | AISI |
|--------------------------------|-----------------|------------------|-------------------------------|
| Cast Iron Alloys | | | |
| Grey Cast Iron | 0.6015 - 0.6030 | GG15 - GG30 | EN GJL 150 - EN GJL 300 |
| Ductile Iron | 0.7040 - 0.7070 | GGG40 - GGG70 | EN GJS 400-15 EN GJS 700-2 |
| | 0.7043 | GGG40.3 | EN GJS 400-18 |
| Steel Alloys | | | |
| | 1.0402 | C22 | 1020 |
| | 1.0511 | C40 | 1040 |
| Carbon And Low Alloy Steels | 1.0601 | C60 | 1060 |
| | 1.6511 | 36CrNiMo4 | 4340 |
| | 1.7218 | 25CrMo4 | 4130 |
| | 1.7225 | 42CrMo4 | 4140 |
| | 1.6523 | 20NiCrMo2 | 8620 |
| Case Hardening Steels | 1.7131 | 16MnCr5 | 5115 |
| | 1.8519 | 31CrMoV9 | |
| Martensitic Stainless Steels | 1.4016 | X6Cr17 | 430 |
| | 1.4021 | X20Cr13 | 420 |
| | 1.4301 | X5CrNi1810 | 304 |
| Austenitic Stainless Steels | 1.4305 | X8CrNiS189 | 303 |
| | 1.4401 | X5CrNiMo17122 | 316 |
| | 1.4404 | X2CrNiMo17132 | 316L |
| Precipitation Hardening Steels | 1.4581 | X5CrNiMoNb1810 | - |
| | 1.4542 | X5CrNiMo174 | 17-4PH |
| | 1.2067 | 100Cr6 | L1 |
| Tool Steels | 1.2080 | X210Cr12 | D3 |
| | 1.2343 | X38CrMoV5-1 | P11 |
| | 1.4845 | X8CrNi25-21 | 310S |
| Heat Resistant Steels | 1.4848 | GX40CrNiSi25-20 | HK |
| | | | |
| Nickel Base Alloys | | | |
| C263 | 2.4672 | G-NiCr20Co20MoTi | |
| Hastelloy X | 2.4608 | G-NiCr21Fe18Mo | |
| IN718 | 2.4668 | G-NiCr19Fe18Nb | |
| Cobalt Base Alloys | | | |
| HS6/Stellite 6 | | | |
| HS31/Stellite 31/X-40 | 2.4682 | | |
| Aluminium Base Alloys | | | |
| Aluminium Alloys | 3.2371 | G-AISi7Mg | A356 |
| | 3.2381 | G-AISi10Mg | A360 |
| | 3.2573 | G-AISi8Cu | A380 |
| Copper Base Alloys | | | |
| Copper and Copper Alloys | 2.1096 | G-CuSn5ZnPb | C83600 |
| | 2.1052 | G-CuSn12 | |
| | | G-CuAl10Fe | C95200 |
| | | | C8100 |

With its “TERMO” branded valves and armatures the company is a leading supplier of industrial plants, power plants, chemical, oil and shipbuilding industries for their heating and cooling, steam, superheated steam, hot oil, natural gas and all kinds of chemical fluid applications.

“TERMO” branded valves and armatures having technologically and functionally advanced design features are manufactured in compliance with all the prevailing national and international standards such as ISO 9001:2008, TSE, CE, PED 97/23/EC, AD 2000-W0, AD 2000-HP0, API, Bureau Veritas, Turkish Lloyd, DNV-GL, RINA, GOST, SEPRO.

Product Range

- Globe Valves
- Bellows Sealed Globe Valves
- Piston Valves
- Ball Valves (DIN, API)
- Butterfly Valves
- Gate Valves
- Check Valves
- Strainers
- Flowscopes
- Steam Traps
- Safety Valves
- Pressure Reducing Valves
- Fire Hydrants
- Special Bronze Valves for Ship Building Industry



DN600 PN10 Butterfly Valve with DI Body and Bronze Disc



DN600 PN6 Angle Globe Bronze Valve



Steel Globe Valves



Ball Valves



Fire Hydrant

World's choice with
100% Turkish Standards

 **gedik Welding**

Gedik Welding which had been established in 1963, is one of the largest manufacturers in Europe with an export network and capacity in over 80 countries under its internationally registered trademarks GeKa® and GeKaTec® welding consumables, GeKaMac® brand of welding machines and also generates robotic solutions and welding automation equipments under the brand name of GeKaRobot.®



www.gedikwelding.com

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VOCATIONAL SCHOOL PROGRAMS

- | | | |
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Gedik Educational Foundation

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www.gedikegitimvakfi.org.tr

Gedik Test Center

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