



# **Custom steel and ductile iron castings**

Acearia Frederico Missner, located in the municipality of Luiz Alves, state of Santa Catarina, is a custom steel and ductile iron foundry. It is characterized by not having its own product range since it offers solutions according to requirements and specifications received from its customers.

AFM serves a number of markets that demand medium and high complexity castings in steel alloys for structural application.

Founded in 1971, it accumulates great technical knowledge, having a qualified team to work in tune with its customers, developing customized solutions. The company's attitude is to seek medium and long-term goals, prioritizing confidentiality and sustainability in its relationship with its customers.

### Quality

AFM's quality management ensures to meet the requirements agreed with its customers, works with domestic and international standards and invests heavily in information management, process controls and traceability of activities. Its structure includes a destructive and non-destructive laboratory and a dimensional laboratory for parts and tooling. Since 2000, its quality management system has been ISO 9001 certified.



## **Sustainability**

With an eye on the future, AFM is constantly seeking the perpetuity of its business through innovation and technology in processes, investment in human capital and continuous search for solutions to meet the demands of its customers and the market. Aiming to reduce the consumption and disposal of sand in the production of molds, AFM has a Sand Regeneration System in line with the best worldwide practices, being able to reduce its consumption and disposal by 90%. It has an environmental management system and works continuously to reduce waste.

Aligned with the purpose of reducing environmental impacts, AFM has a small hydroelectric plant, which supplies part of its energy consumption. Its guideline is the continuous training of its employees, with a scholarship program, seeking to train professionals capable of meeting the demands for innovation and competitiveness.

#### **Technical department**

It works with CAD and CAM tools such as SolidEdge® and NX CAM® and has a resource for simulating the solidification and filling process from MagmaSoft®. These tools support the activities of a technical team prepared to work in partnership with its customer's; engineering, exploring solutions in terms of geometry, sanity and reliability.



#### **Products & Services**

**Pattern Shop:** It has a complete structure for the design and construction of patterns for all foundry processes.

**Foundry:** It works with a no-bake and cold-box molding system. It has molding lines to meet different configurations of parts and demands. Its main molding line is automated, attributing a high degree of standardization in the manufacture of parts between 20 and 500 kg of weight. It has modern induction melting furnaces, with a production of 3000 kg of molten metal per hour.





**Heat treatment:** The electric and gas heat treatment furnaces of high performance and homogeneity are fitted with water tanks and a fan structure for forced air-cooling. All furnaces have a monitoring system with graph generation. The control system is calibrated, auditable and benchmarked at planned intervals. AFM is able to meet high heat treatment requirements, reaching class 3 of the AMS 2750 aerospace standard.



**Machining:** AFM has a machining structure and a dimensional laboratory to meet demands for finished parts.

# AFM is a foundry of custom castings who offers solutions in the following material classes:

- Carbon steels:
- Low-alloy and alloy steels;
- Heat-resistant steels;
- Stainless steels;
- Wear-resistant steels;
- Special alloys;
- Ductile iron.

#### **Market sectors:**

Agricultural machinery, construction equipment, mining, power generation, road implements, steel plants, railways, subways, petrochemical, naval and offshore, food, paper and cellulose.