Custom cast iron components for railway applications

Reliability and flexibility for the railway sector

Almost a century of history dedicated to quality

At **Zanardi Fonderie S.p.A.** - an Italian family-owned company **founded in 1931** and now in its fourth generation - we produce castings in **spheroidal graphite iron, austempered spheroidal graphite iron (ADI), and isothermed ductile iron (IDI)** formed in green sand. The line is mainly suitable for medium production series for castings ranging **from 1 kg to 120 kg**. The automatic moulding line measures **900 x 710 x (250 + 350) mm**.

High-performance railway components made of ductile iron: safety, strength, and reliability

We specialize in the manufacture of **components for railway bogies, braking systems, and switches**, designed to guarantee **high performance even in extreme environmental conditions, such as low temperatures**.

Thanks to the use of spheroidal cast iron and austempered spheroidal cast iron, technologically advanced and high-performance materials, we offer **cost-effective solutions that combine mechanical strength, operational safety, and reliability**, meeting the most complex needs of the railway sector.

Certifications

IATF 16949 | ISO 50001 | EMAS | ISO 14001 | ISO 45001

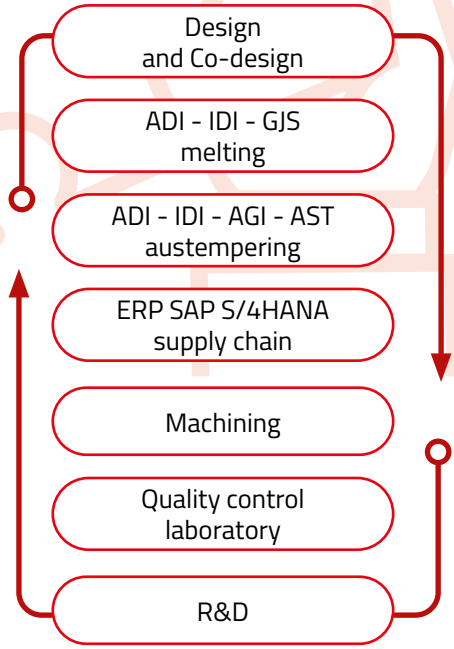
One partner from melting to machining

Zanardi Fonderie's production process takes place in our sole facility in Minerbe (Verona).

We work alongside our customers from the development stage to provide **machined, controlled** and certified solutions that meet the requested product requirements.

Our machining workshop features **two OKUMA5-axis horizontal lathes (MU4000 andB550)**, providing the best-in-class solution for complex machining on the materials we produce.

Specialists in **austempering heat treatment**, including **for third parties**.



Bearing support

Rocker arm support

Plate

Towards mobility of the future

UNIBALL component for the **Digital Automatic Coupling system (DAC)** marks a significant advancement in rail freight technology.

By introducing **Austempered Ductile Iron (ADI EN-GJS-1050-6/C)** as an **alternative to traditional welded S355 steel**, this solution achieves:

- **Weight reduction** of 17% (-2.2 kg) thanks to redesign;
- **Simplified production processes** resulting in reduced time and total cost;
- **Lower environmental impact**, in line with sustainability objectives

This material conversion reflects a broader commitment to building a **more efficient, sustainable, and competitive rail freight system**— key factors in addressing climate challenges and meeting the growing demand for freight transport across Europe.

Scan the QR code to find out more!

Wedge

Housing

Crankcase

Reliability and flexibility
railway sector

01. Durability and reliability even in the most complex applications

02. Reduced production and operating costs

03. Optimized design to reduce waste and speed up production times

04. Alternative to welded and forged steel

05. Design flexibility

Customer centricity

Zanardi Fonderie offers **advanced solutions for the production of spheroidal graphite, austempered and isothermed ductile iron castings, combining design, melting, heat treatment, machining and certification in one facility**. This approach allows us to ensure high quality, rapid delivery times and ready-to-assemble products.

Zanardi Fonderie's know-how and ability to **manage the entire supply chain ensure customer-compliant products**.

Zanardi
Fonderie

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Zanardi Austempering is a brand of Zanardi Fonderie S.p.A.