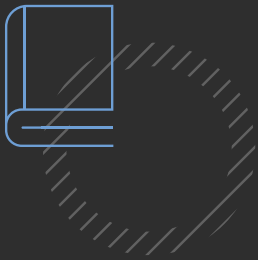


# Design, Systems, | Laboratory



SERVICES THAT ZANARDI AUSTEMPERING  
CAN SUPPLY TO THE MARKET:



01

Contract Austempering  
heat treatment

02

Design, co-Design,  
research and expertise

03

Laboratory and certification  
of the material

# 01

## Contract Austempering heat treatment

Austempering heat treatment has been carried out internally since 2001.

3 AFC-Holcroft UBQA 36" x 72" x 36" furnaces Heat treatment, from austenitisation to quenching in a salt bath, takes place in an area insulated against the external environment. The austenitisation stage occurs in a controlled environment.

Internal dimensions of the heat treatment baskets: **840 x 1705 x h890 mm**

Heat treatment installed capacity: **10.000 tons**

Weight range: **from 1 kg to 1000 kg**



# 02

## Design, co-Design, research and development

Foundry experience in support of customer foundries to define the most suitable chemical composition.

Technical support during design, thanks to our experience and to the software we work with:

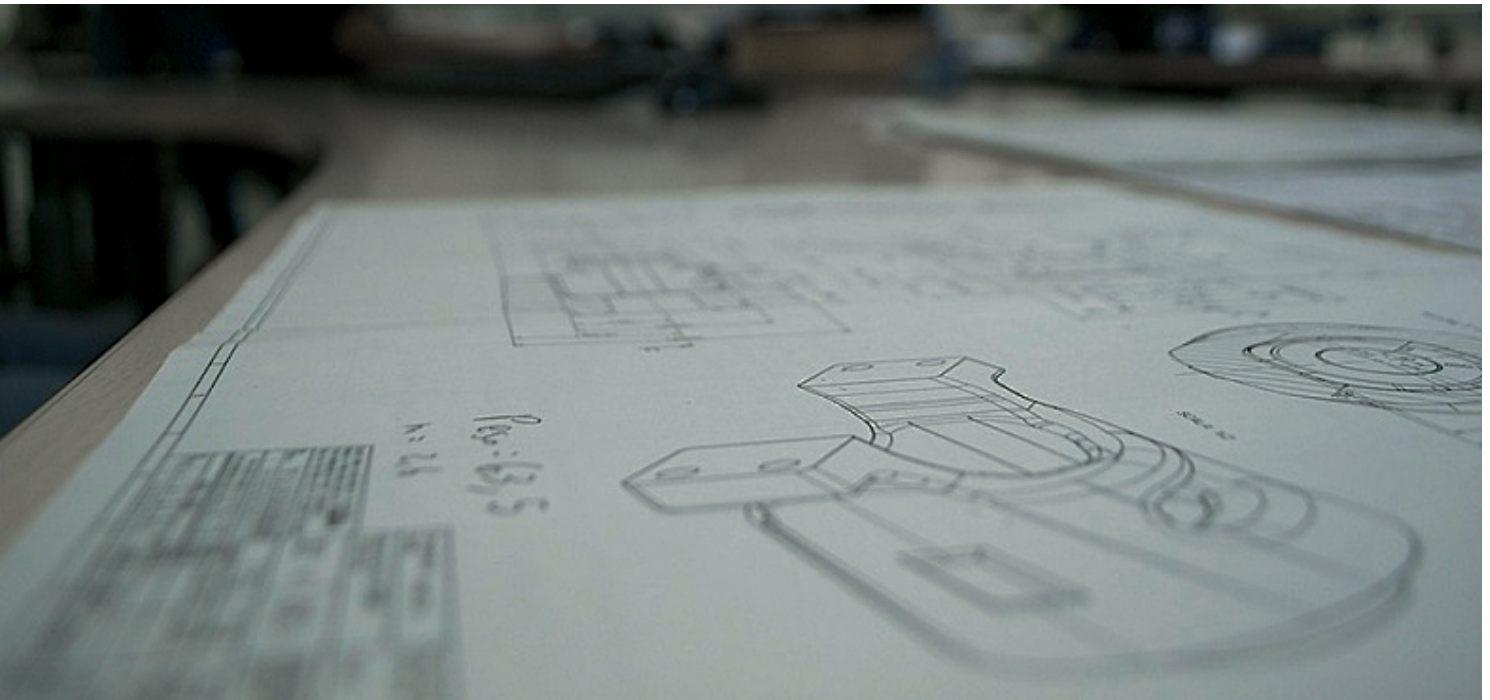
- **PoE CAD**
- **MagmaSoft**

Skills in mechanical characteristics of austempered materials, to support the development of new components in ADI.

Know-how and internal instrumentation for our research activities on austempered materials, such as:

- **Rotating bending fatigue**
- **Axial fatigue**
- **Plain Bending fatigue**

In collaboration with: WZL/RWTH Aachen University, Technische Universität München, University of Trento, University of Padua, EIT Raw Materials.



# 03

## Audit and certification of the material

Drawing up of certificate 3.1B for material certification

### Micrographs

- Optical microscope;
- SEM;

### Mechanical characteristics

- Machines to carry out traction tests;

### Hardness range

- Durometer to identify hardness values;

### Resilience

- Charpy pendulum to measure resilience at  $-40^{\circ}$ .

