



**Zanardi**  
F o n d e r i e



# “Lightweight professional” course



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation



## Lightweight professional

### Course structure

“Lightweight professional” course, converted into 100% online formula due to COVID-19 emergency, has been divided in three steps:

- Learning on your schedule: learn self-paced anytime and anywhere (from 16th September)
- Online live tutorials: interact with tutors and peers during predefined online live tutorials (14th and 15th October)
- Online certification exam: take your online certification from any location (16th October).

### Learning on your schedule.

From 16th September will be held the e-learning part of the course. The topics are:

- Basics of Cast Irons
- Foundry processes for Cast Irons
- Heat treatment of Cast Iron and production of Austempered Ductile Iron (ADI)
- Comparison among different types of Cast Irons - Comparison with steels
- Guidelines for Cast Irons selection
- Environment, sustainability and LCA (Life Cycle Assessment)
- Process and properties modelling for Cast Irons

### Online live tutorials

From 14th to 15th October, as a replacement of classroom lessons, will be held the second part of the online course. The topics covered during the second online part are:

- Mechanical behaviour
- Overview of real foundry
- Fatigue design of cast iron components
- Notch effects in fatigue of cast irons
- Strain-based fatigue of cast irons
- Fracture mechanics
- Case History #1: at the end of these three days, an important customer of Zanardi Fonderie will present a real successful case history of ADI components realized in view of Lightweight.

### Online certification exam

At the end of the course, will be online exam.

- 16th October: final online exam

### Online meeting on Zoom between professors and students

This course provides also 4 meeting on Zoom, two of them during e-learning step and other two during second online part.

- 16/09: General introduction to the course and to the whole structure of the e-learning module (Learning on your schedule)
- 30/09: Discussion and debate about questions and doubts of the students (Learning on your schedule)
- 14/10: to ask the participants if they have questions about the e-learning and to introduce the online part (Online live tutorials)
- 15/10: exercises, questions and general repetition (Online live tutorials)



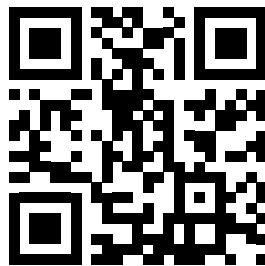
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# Lighten the Future, respect the Environment

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[zanardifonderie.com](http://zanardifonderie.com)



Minerbe 37046 (VR), ITALY

**Sede legale e ingresso visitatori:** Via Nazionale 3

**Ricevimento merci e personale per interventi:** Viale del Commercio 4

TEL +39 0442 647311 - FAX +39 0442 640589

VAT IT00822690236

