40 years of expertise in laser safety and laser technologies, serving your most critical challenges.

Inspection of Laser-Welded Metal Joints

Ref: AC2-2

That’s it, your production is about to start – but of course there are always a few adjustments to make!

To help you implement inspections and, above all, interpret them, discover and learn the knowledge that will enable you to correct variations in your welding process.
The “Mastering Laser Welding” training course combined with this specialisation allows you to achieve the grade of Laser Welding Specialist.

Practical information

DATES (INTER-COMPANY / IN-HOUSE)
• 1–2 October 2026

ORGANISATION
IREPA LASER - Strasbourg / Illkirch

DURATION
1.5 days (10.5 hours)
PRICES
1420€ excl. VAT

TECHNICAL/TEACHING LEAD:
Teaching: Franck RIGOLET | Technical: Frédérique MACHI
DO YOU HAVE A DISABILITY?
Contact our disability officer at referent.handicap@irepa-laser.com

Key information

PREREQUISITES
Grade of Laser Welding Technologist (“Mastering Laser Welding” training course)

ACCESSIBLE LASER CLASSES
/

CERTIFICATION
Teaching equipment:
• Preparation laboratory
• Observation laboratory (stereo microscope, microscope, profilometer, Vickers hardness)
Validation:
• Assessment of learning outcomes and course certificate
Note:
The grade of Laser Welding Specialist will be awarded after achieving the grade of Laser Welding Technologist and 1 specialisation offered in our catalogue.
The grade of Laser Welding Expert will be awarded after achieving the grade of Laser Welding Technologist and 2 specialisations offered in our catalogue.

TECHNICAL/TEACHING LEAD:
Teaching: Franck RIGOLET | Technical: Frédérique MACHI

Training objectives

- Be able to define the non-destructive and destructive testing methods suited to your process.
- Be able to use standardised terminology.
- Be able to identify all surface defects.
- Be able to locate metallographic sampling areas.
- Be able to carry out a metallographic inspection.
- Be able to draft an inspection specification.

Target audience

- Project and/or product managers.

- R&D managers.
- Technical managers.
- You are already a Laser Welding Technologist (“Mastering Laser Welding” training course) and wish to develop your product and your skills further.

Programme

Day 1

Non-destructive testing suited to laser welding
• Visual
• Dye penetrant testing
• Magnetic particle and eddy current testing
• Ultrasound
• Radiography
• Tomography
• Thermography
• Leak detection

Implementing basic NDT
• Visual
• Dye penetrant testing

Identifying defects
• Surface defects
• Internal defects

Metallographic inspections
• Sampling location
• Sampling conditions
• Preparation
• Unetched examinations
• Metallographic etching
• Interpretation

Impact of operating parameters
• Analysis and modification of parameters

Drafting inspection specifications
• Approach
• Documentation

Case study
• Practical exercise