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

Becoming a Manual Laser Welder Safely

Ref: AL.2-9

Over the past few months, manual laser welding has revolutionised an entire area of work for boilermakers, metalworkers and other welded-fabrication trades. Welders were quickly confronted with this new process without really understanding how the laser beam interacts with the material or what the key parameters might be.

Although the process is quick to learn, it requires specific safety conditions for the welder and their surroundings. Serious accidents have already been recorded in France, while messages on social media show a great deal of confusion.

The aim of this training course is to put a welding laser into practice in order to understand its particular features compared with traditional welding, and to comply with safety regulations.

▶ Becoming a manual laser welder safely – Episode 1

▶ Becoming a manual laser welder safely – Episode 2

▶ Becoming a manual laser welder safely – Episode 3

▶ Becoming a manual laser welder safely – Episode 4

Practical information

DATES (INTER-COMPANY / IN-HOUSE)
• 14–15 October 2026
• 17–18 December 2026

ORGANISATION
IREPA LASER – Strasbourg / Illkirch

DURATION
1.5 days (10.5 hours)

PRICES
1550€ 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
General technical knowledge

ACCESSIBLE LASER CLASSES
/

CERTIFICATION
Teaching equipment:
• Training illustrated by numerous practical exercises on manual laser welding equipment
• Slide presentation and practical application of laser safety
Validation:
• Validation of PERL safety knowledge (laser-exposed person, Level 2), in line with French Labour Code requirements – (CoNSOL qualification)
• Welding validation on a practical case
• Training certificate issued

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

Training objectives

- Understand the technology used and the specific features of manual laser welding.
- Be autonomous in setting up and carrying out laser welding.
- Visually identify defects and know how to remedy them.
- Be able to operate a manual laser welding machine while observing the essential safety rules.

Target audience

- Welders using conventional processes.
- Persons designated to weld with a handheld laser.

Programme

Day 1

Lasers and Technology

• What is a laser?
• Lasers used in welding

Equipment used in manual laser welding

• Know the laser technology and accessories used in manual welding
• Fields of use – Advantages and limitations

Safety in manual laser welding

• Legal obligations when introducing laser technology into a workshop
• What are the real risks?
• What personal and collective protective measures need to be put in place?

Welding with the manual laser process

• Principle of laser welding
• Influence of parameters
• Welding work in various configurations

Reading a DMOS (welding procedure specification, WPS)

• Visual inspection of welded parts and interpretation of defects