

PhotonHub Demo Centre

Advanced laser welding

Course Provider

AIMEN Technology Centre,
Spain

Course Overview

Laser welding of metal sheets is an already established technology in the industry, mainly from the automotive sector for applications such as body in white or Tailor Welded Blanks. However laser welding also offers very interesting possibilities for other types of material configurations such as high thickness metal sheets, polymer welding or dissimilar welding.

This one-day hands-on training course provides industry, especially those addressing material processing, with a detailed overview of possibilities brought by lasers in the field of laser welding, and technical aspects that should be considered to select your equipment and setup your process. The course will focus on three hands-on activities; 1) laser welding of polymers; 2) laser welding of dissimilar metallic joints; 3) hybrid laser welding of metals. Course attendees will learn how to setup their processes, considering quality issues from the beginning.

Target Audience

It is desirable but not essential that course attendees have a basic understanding of laser processing of materials. The course is ideally suited to those planning to develop new welding processes, establish in-house or outsource manufacturing using laser processes.

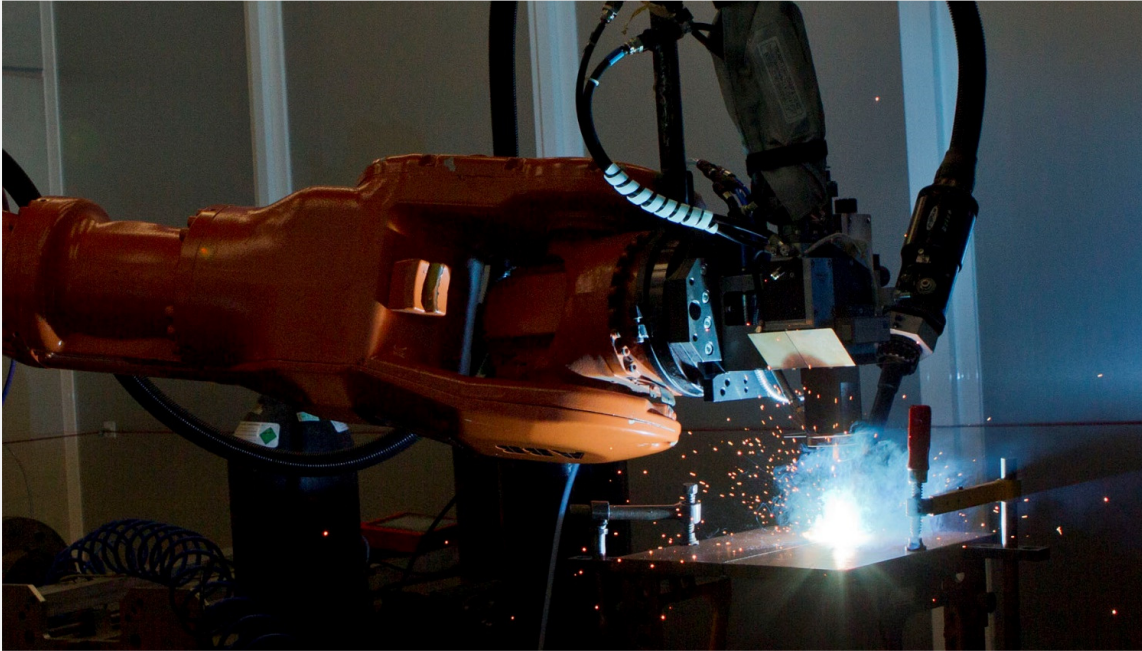
Expected Outcomes

- 1) Understanding of key features of laser welding in different scenarios
- 2) See the fabrication processes in representative environment (hands-on activity)
- 3) Understand the quality aspects related to the process (hands-on activity)
- 4) Considerations to select the adequate equipment for your process

Course Schedule

Time	Demo Activity
09:00 – 10:30	Course Introduction & Laser welding processes (lecture)
11:00 – 12:30	Demo 1: Laser welding of polymers (hands-on)
12:30 – 14:00	Demo 2: Dissimilar metal welding (hands-on)
15:30 – 17:00	Demo 3: Laser-arc hybrid welding of metals (hands-on)
17:00 – 17:30	Follow-Up Questions & Close

Course Trainers



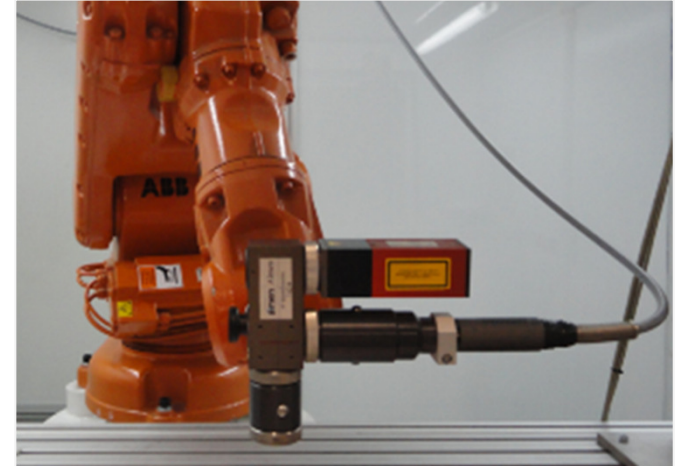
Course Director: Ambroise Vandewynckèle

Course Manager: Rosa Arias

Demo 1: Felix Ares

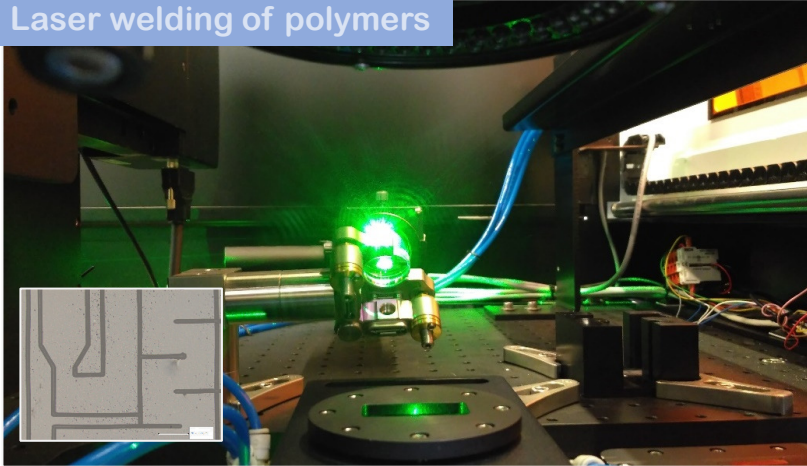
Demo 2: Rosa Arias

Demo 3: Eva Vaamonde

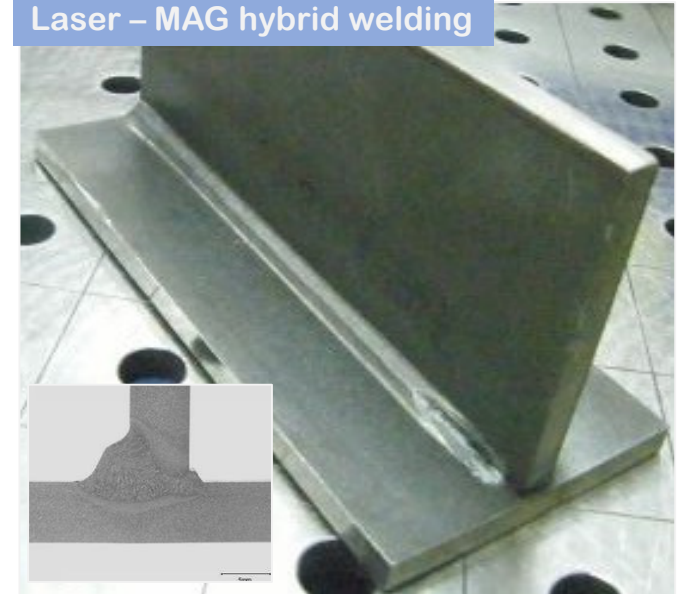


Course Demonstrators

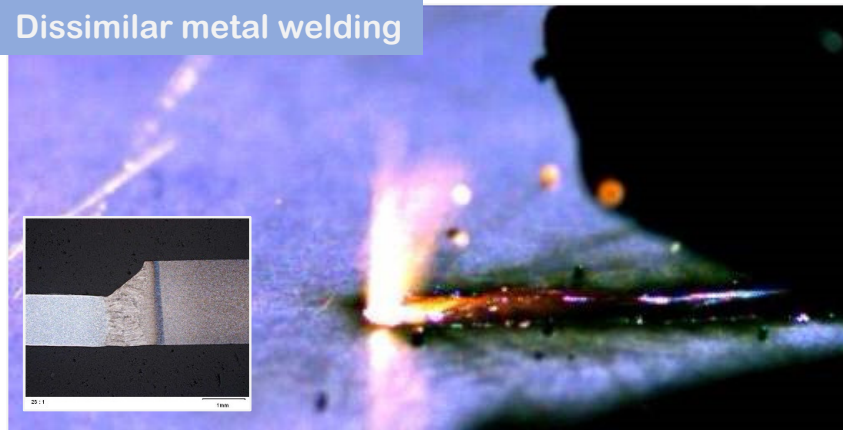
Laser welding of polymers



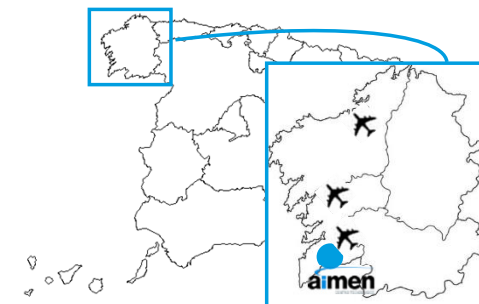
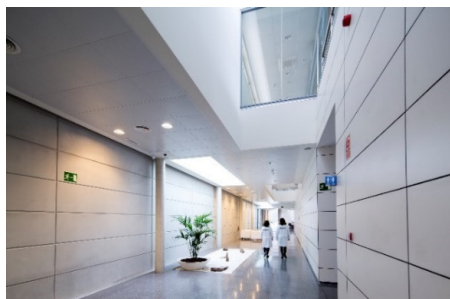
Laser – MAG hybrid welding



Dissimilar metal welding



Course Location, Schedule & Cost



- Course Schedule (March, June, November – exact dates to be confirmed)
- Number of people (Groups of 6 people per course)
- Course Cost (250€)

Further Information

- promero@aimen.es
- www.aimen.es
- www.photonhub.eu/euphotonicsacademy

Keywords

Laser welding, Metals, Polymers, Dissimilar joints, Laser arc hybrid welding, Process monitoring, Quality control, Automation, High speed imaging, Optics, Laser safety, Machine vision, Robotized Processes.

Relevant Technology & Application Domain

Technology: Laser Based Manufacturing