Welding

Course's Identity

- Title: Welding
- Code: 29 B
- Category: Elective (Module B: Materials' Technology)
- Semester: 2nd
- Teaching: Professor D.I. Pantelis – Assistant Professor S. Papaefthymiou
- ***MSc course: Materials Science and Technology***

Short Description

Introduction – History – Various welding methods: classification, quick presentation of all the techniques, seam weld geometries – Thorough study of the following welding techniques: GMAW, Laser, Plasma – Thermal effects – Welding metallurgy – Mechanical behavior of welds – Thermo-mechanical phenomena – Modeling - Types of cracks on welds – Welding defects – Testing of welds (DT and NDT) – Weldability – Quality of welding – Selection of welding materials

Laboratory Exercises

A number of laboratory exercises related to the course content.

Homework

Each student will prepare a case study on a topic related to the Welding Technology; according specifications. The case study contributes to the 50% of the final grade and constitutes a prerequisite for participating in the final written exam.

References

- "Science and Technology of Welding", D.I. Pantelis, V.J. Papazoglou and G. Haidemenopoulos, Ed. Tziola, Thessaloniki, 1st ed. 2017, 552 pages