



Friction Stir Welding European Qualifications

Project overview

Harmonized Friction Stir Welding Technology Training across
Europe

2017-1-SK01-KA202-035415

Final Conference – 30.10.2019, Portugal

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Co-funded by the
Erasmus+ Programme
of the European Union



Reasons for the project

- Increase in the use of FSW technology on the European market
- Lack of qualified staff for all levels of FSW technology
- Lack of learning materials for FSW technology
- There are some educational courses in the market which do not have unified methodology – they are more like trainings for operating staff lasting only a day or two and they are managed by suppliers – producers of welding aggregates for FSW technology

Harmonized Friction Stir Welding Technology Training across Europe

- Project was supported by the program Erasmus+ in 2017
- Project duration 1.12.2017 – 30.11.2019
- Project partners:



Asociatia de Sudura din Romania



European Federation for Welding,
Joining and Cutting



Instituto de Soldadura e Qualidade



Výskumný ústav zvaračský – vedúci
partner



Institut za varilstvo d.o.o.

Main project activities:

- International project meetings - 4
- Multiplication events – 3 seminars + final conference
- Training of trainers – 1
- Intellectual outputs – O1 - O6

International project meeting:

- 5 international project meetings that took place according to the plan:
 - Bratislava (SK) - 1 / 2018
 - Oeiras (PT) - 6/2018
 - Temešvár (RO) - 12 / 2018
 - Ľubľana (SL) - 5 / 2019
 - Lisabon (PT) - 10 / 2019
- The content was to keep the working schedule, check tasks, prepare working outputs and prepare a thorough working schedule for the following period.

Multiplication events

Three testing seminars took part in Slovakia, Romania and Portugal. During these seminars, the prepared learning materials were tested, and after reviewed and adjusted according to the comments.

The last multiplication event is a today's final conference.

Training of specialists

It took place before the multiplication events. Two specialists from each partner organisation were trained and they have become trainers for others during the above mentioned three testing seminars.

Intellectual outputs:

- **Output 1** - Common State of the Art Report - **VUZ**
- **Output 2** - European Friction Stir Welding Operator (EFSW-O), Specialist (EFSW-S) and Engineer (EFSW-E) Profiles Curricula - **EFWF**
- **Output 3** - National Adaption and Translation of the Curricula - **ASR**
- **Output 4** - National Implementation Guideline for the EFSW-O, EFSW-S and EFSW-E Profiles Curricula - **VUZ**
- **Output 5** - European Recommendations - **EFWF**
- **Output 6** - Operational ECVET Kit - **ISQ**

- **Output 1** Research of current situation in all countries of project partners. As a result of the research, a report was created, which became a groundwork for the preparation of the next project outputs.
- **Output 2** – Learning materials were prepared for a FSW operator, specialist and engineer. They were prepared in all languages of partners and later, they were tested at seminars and reviewed according to comments from the participants. These materials can be used in trainings organized by formal or informal educational institutions.
- **Output 3** – Learning material was adjusted to the conditions of countries of the project partners and translated into their languages therefore this material is prepared to be used in trainings.

- **Output 4** – This output was divided into four independent tasks:
 - Assessment of outputs from national testing seminars (strengths and weaknesses), according to criteria, which had been agreed upon in advance
 - Adjustment and improvement of curriculum / courses / material
 - Drawing up the guidelines
 - Preparation of the final set of tools, which can be used in different contexts

- **Output 5** - In order to enhance the overall impact of FSW-TECH, a document about European recommendations was drawn up. It will function as a groundwork for performing of this training course for EFSW-Operator, EFSW – Specialist and EFSW- Engineer in other European systems of VET. The aim was to create conditions for fast and successful promotion of project results in other European countries, in which similar needs have been identified.

- **Output 6** – A set of learning material ECVET (The European Credit System for Vocational Education and Training) was prepared for study programmes EFSW-Operator, EFSW- Specialist and EFSW- Engineer. The basis of this material is aligned with the EQF and ECVET, containing:
 - Units of learning outcomes
 - Memorandum of understanding
 - Personal transcript

At the end of my speech, please, allow me to express my thanks to all partners for their active and professional cooperation. It would not be possible to bring this project to the successful end without us working as a team. Personally, I would like to praise Rita Bola. She was the soul and driving force of the whole project.

At the same time, I would like to give my thanks to the Slovak Academic Association of International Cooperation Program Erasmus+ for their support whenever necessary.



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