Erasmus+ Programme – Strategic Partnership
Project Nr: **2016-1-RO01-KA202-024508**

"A Digital Training Toolbox for Fostering European Experts in Welding Technologies" – eu-WELD

eu-WELD - Training needs and competences for an European Welding Expert

Introduction to euWELD project	**The euWELD project (www.camis.pub.ro/euweld) - "A Digital Training Toolbox for Fostering European Experts in Welding Technologies", developed under ERASMUS+ grant, aims to develop a digital training toolbox for European experts in welding technologies.**
Why a survey?	**This feedback, to be collected from all partner countries will enable the euWELD team to gather important data related to existing programs, certifications, courses, related to the welding field. Furthermore, it will gather data related to the possible requirements of a European Welding Expert, in terms of competences, skills, employee requests, etc.** **This survey is designed to minimize the time required from your end – it is estimated that you would need about 15-20 minutes to fill-in. All information provided is treated with confidence.** **Whilst thanking you in advance for your time, we look forward to your valued feedback.** The euWELD team.

Country where the questionnaire has been filled in:

ROMANIA ☐	**SLOVENIA** ☐	**MALTA** ☐	**HUNGARY** ☐	**UNITED KINGDOM** ☐	**Other ……**

A. RESPONDENT PROFILE DATA

1 - Gender

- Male
- Female

2 - Age

- 20-29
- 30-39
- 40-50
- over 50

3 – Years of experience in welding technologies

- 1-5
- 6-10
- 11-15
- over 15

4 – Educational studies level

- gymnasium/"A" level studies
- secondary
- vocational school/Further education college
- short term higher education
- long term higher education

5 – Position within the organisation where you are employed

- Director
- Board of Directors Chairman
- Researcher
- Commercial
- Administrative
- Technician

- Other

B. DATA REGARDING THE RESPONDENT'S RELATION WITH THE WELDING TECHNOLOGY EXPERT POSITION

6 – Are you a welding technology expert (welding inspector, welding engineer or welder)?

- Yes
- No

7 –Do you know any welding technology experts (WTE) ?

- Yes, the WTE works in the same organization with me
- Yes, the WTE works in another organization and we seldom collaborate
- Yes, the WTE works in another organization and we often collaborate
- No

8 – Are you aware of the responsibilities/activities that the WTE carries out as a manager in the welding technology field?

- Yes
- No

9 – How important do you find the role of a welding technology expert within your organization? (1 "unimportant" > 4 "very important")

☐1 ☐2 ☐3 ☐4

10 – From what you know, in order to become a welding technology expert you need to follow certain courses?

- I don't know
- Yes

11 – Do you consider that, in order to become a welding technology expert, a nongovernmental organization should organize courses in correlation with the international standards?

- Yes
- No

12 – Do you think it is important to have a common definition, at European level, for the welding technology expert?(1 "unimportant" > 4 "very important")

☐1 ☐2 ☐3 ☐4

13 – Do you believe that a welding technology expert from another European country can be engaged in your organisation? (1 "unlikely" > 4 "very likely")

☐1 ☐2 ☐3 ☐4

C. FUSION WELDING TECHNOLOGY EXPERT COMPETENCES

14. From your experience, how important do you find the following competences in order to become a fusion welding technology expert (FWTE)?

14.1. Regarding the products manufacturing documentation:

14.1.1. The FWTE must have knowledge of the components representation on the work drawing (sketches, views, sections, etc.) ? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.2. The FWTE must have knowledge of the representation of machine parts (gears, screw threads, shafts, etc.)? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.3. The FWTE must have knowledge of permanent and removable mechanical assemblies representation (riveted, welded, threaded, etc.) ? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.4. The FWTE must have knowledge of how to apply the data from the technical documentation for the components manufacturing (technological sheets, fabrication process plan, work drawing, etc.)? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.5. The FWTE must have knowledge of the properties of metallic materials (steel, cast iron, copper and copper alloys, aluminum and aluminum alloys, etc.) ? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.6. The FWTE must have knowledge concerning the manufacture of metallic materials? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.7. The FWTE must have knowledge of the main types of metallic parts (bars, blanks, profiles, etc.)? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.8. The FWTE must have knowledge regarding the design of welded structures? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.9. The FWTE must have knowledge of the national legislation on welded structures design and construction? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.10. The FWTE must have knowledge of the European legislation on welded structures design and construction? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.11. The FWTE should be able to work in teams with the colleagues and create appropriate working groups? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.1.12. The FWTE should be able to transfer knowledge and experience with the colleagues? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2. Regarding the fusion welding processes:

14.2.1. The FWTE should have knowledge regarding the oxy-gas welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.2. The FWTE should have knowledge of the manual metal arc welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.3. The FWTE should have knowledge of the shielded gas welding with refractory electrode process (TIG)? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.4. The FWTE should have knowledge of the shielded gas welding with consumable electrode process (MIG/MAG/FCAW)? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.5. The FWTE should have knowledge of submerged arc welding process (SAW)? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.6. The FWTE should have knowledge of electroslag welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.7. The FWTE should have knowledge of laser welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.8. The FWTE should have knowledge of plasma welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.9. The FWTE should have knowledge of electron beam welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.2.10. The FWTE should have knowledge of different metallic materials weldability? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.3. Regarding pressure welding processes:

14.3.1. The FWTE should have knowledge of resistance welding processes? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.3.2. . The FWTE should have knowledge of friction welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.3.3. The FWTE should have knowledge of diffusion welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.3.4. The FWTE should have knowledge of cold pressure welding and ultrasonic welding process? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.4. Regarding the quality control of welded products:

14.4.1. The FWTE should have knowledge of the types of imperfections that may occur in welded joints? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.4.2. The FWTE should have knowledge of different non-destructive control methods for welded joints? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.4.3 The FWTE should have knowledge of different destructive control methods for welded joints? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.4.4. The FWTE should have knowledge of the specific norms of health and safety for welding processes? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4

14.4.5. The FWTE should have practical knowledge of the welding equipment? (1 "not at all" > 4 "mandatory")

☐1 ☐2 ☐3 ☐4