iQvet
D4.2

Innovative Quality VET Professional Teacher Training Program

Magyar Hegesztéstechnikai és Anyagvizsgálati Egyesülés (MHtE), Budapest, Hungary

Béla Gayer, Managing director

Béla Gayer is a mechanical engineer,a nuclear power plant and welding engineer, the Hungarian representative of the European Welding Federation, and the director of MHtE

The VET Provider, MHtE

Our credo is the commitment to welding and materials testing, respect and, to this end, the representation of Hungarian national professional interests in national and international forums.

We carry out our activities:

- representation of the interests of the members of the profession,
- providing services in the field of welding and materials testing,
- through the Welding and Materials Testing Foundation, where we also fulfil our duties by providing support and sponsorship.

Our mission is defined by our love of the profession. To this end, we ask for the support and cooperation of all our readers.

OUR CHALLENGES

The MHtE Academy organises training and qualification of the European Welding Inspection Programme (EWIP).

The training and qualification is carried out in accordance with the requirements of the IAB-041 directive. After passing the exams, the trainees receive an International and European Diploma.
The students will be sufficiently prepared to be able to carry out the tasks of supervision, inspection and technical acceptance of the manufacture and assembly of welded structures, and to apply the theoretical and practical knowledge of welding supervision.

The training is supervised by the Authorised National Body (ANB) set up by the Hungarian Welding and Materials Testing Association. The MHtE Academy is authorised to organise training.

OUR EDUCATION QUALITY

Nowadays, the need for innovative, work-based learning and teaching methodologies is rapidly increasing in the industry. To fulfill this need, the teachers in VET schools must be trained to develop a professional toolbox for new teaching methodologies.

OUR SOUTIONS

Work-based learning (WBL) is an up-to-date educational strategy, providing real-life work experiences through actual examples from the industry. With WBL the students can improve their technical and problem-solving skills through working on an actual task, which likely to appear during in their future professions.

In the case of the Welding Inspector course, the WBL technique is recommended to be adopted by the following way. The students, who engage in the program, will need to work on a task, bringing their own ideas and their own solution, with the background of the competence unit materials.

The teacher is handing out a real technical drawing of a welded product, such as a pressure vessel, storage tank, pipeline, steel structure, etc., coming from an industrial stakeholder. The students are need to go through steps, defined in the competence units, and give their own ideas about the solution individually.

THE ROAD AHEAD

In the **iQVet project** our plan is to set up 10 **competence units** to the welding inspector course. The competence units are following each other in their content. The acquisition of the competence unit materials is necessary to solve a real-life problem.

Personal interviews, face-to-face

CU1: Introduction, prior knowledge

CU2: Contract, design

CU5: Economy

CU7: Destructive testing

CU8: Surface protection

CU10: Exam

Online teaching and monitoring, through an LMS

CU3: Inspection plan

CU4: Production documentation

CU6: Non-destructive testing

CU9: Delivery documentation

Hands-on practical examples, work-based learning in the classroom or on-site

In each of the CUs the students will be encouraged to work in groups, as they engage in **collaborative problem-solving.** Each student will bring different approaches, experiences and previous knowledge (including silent knowledge) into a problem-solving process.

OUR MAJOR BENEFIT

After the successful completion of the welding inspector course the students will be able to independently design inspection plans on different welded structures, such as pressure vessels, pipelines, etc.

The students will also gather practical experience through the **real-life examples.** Also, they will be able to learn and perform exams through a learning management system.

In the folowing courses MHtE will plan to implement flipped-learning methdology, first in the teaching of different non-destructive testing methods in the module of Inspection and Testing. For this task online videos have been made. The students can watch the video materials in remote form, and wil justify their knowledge in on-site examinations.

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