

iQSim

**Development of Innovation
Multilateral Pilot Project
142719-LLP-1-2008-1-NO-LEONARDO-
LMP (2008-1924)**



Education and Culture DG

Lifelong Learning Programme



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2008 – 2010



Title of the project:

**Innovative Simulator Tools for Quality
Management Production Process
Training in VET**



MEMBERSBODIES of iQSim consortium -I:

- University of Thessaly Greece (UT),
- Magyar Hegesztéstechnikai és Anyagvizsgálati Egyesülés (MHtE),
Hungarian Association of Welding and
Material Testing, HU,
- Klaipeda University,
Faculty of Marine Engineering (KU), LT,



MEMBERSBODIES of iQSim consortium-II:

- Høgskolen i Sør-Trøndelag, (HiST)
Sør-Trøndelag University College,
Faculty of Technology, NO,
- Centrum för flexibelt lärande (CFL),
Centre for Flexible Learning, SE,



What is iQSim briefly ??

➤ **Pedagogical tool for welders training having:**

✓ **methodologically new ideas,**

and

✓ **welding IT simulator services as a new learning tool,**



The basic objectives of project:

- to be comprehensive,
- to raise the welders students' skills,
- to offer besides practical oriented skills in workshop floor useful theoretical know how,
- to help young people who suffer from dyslexia (cca.20-25%),
- to make easier to understand complicated professional dependences if using modern learning like: IT based welding simulator services,



Preliminaries

MECCA project:

- developed the Activity Based Training (ABT) model that follows the industrial production process closely, utilizing work orders and
- ABT may be utilized as a blended learning framework: face to-face on-site training, e-learning solutions, high quality video streaming, and video conferencing



- **What is iQSim:**

iQSim are going to add Quality Management Assurance to the industrial production process training by developing and utilizing interactive online simulators that hide complex mathematical calculations, in combination with further development of Activity Based Training methodologies. *The simulator tools will be used before, during and after the ABT methodologies.*



Basic pedagogical features of iQSim methodologies:

- ✓ cognitive,
- ✓ interactive,
- ✓ visualizing the effect of welding parameter changes, helps to find critical welding parameters,
- ✓ raising new welding related questions,
- ✓ the question: „**WHAT HAPPENS IF**” ... could be many-sided answered,
- ✓ „forcing” for active taking part in the lecture, etc.



Documents developed in the project helping teacher and students – I.

- User Requirement Report
- iQSim welding simulator on-line services
- iQSim - Teacher Use Cases
- iQSim- Quality Manual
- iQSim – PROJECT HANDBOOK



- **Documents developed in the project helping teacher and students – II.**
 - iQSim –User Manual
 - Using Interactive Whiteboards in Simulator Demonstrations
 - Pedagogical Methodologies Report
 - Quality Assurance and Evaluation Plan
 - Evaluation Strategy
 - Evaluation Form
 - Posters



Dissimination activities:

- taking part in welding conferences all over Europe,
- regularly publishing information on iQSim project in welding journal,
- organizing training for trainers, teachers,
- organizing pilot programs in different countries for welding and university students,
- having contract with some institutions for using the results of iQSim program.



SIMULATOR SERVICES in OPERATION

Working languages of iQSim simulator

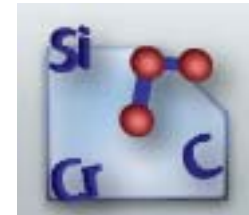


- English,
- Greek,
- Hungarian,
- Litvanian,
- Norwegian,



The operational parts of iQSim welding simulator services - I:

- **Calculating Carbonequivalent:**
- **Deciding form of weldment:**





The operational parts of iQSim welding simulator services - II:

- **Deciding weld geometry:**



- **Deciding welding parameters:**





The operational parts of iQSim welding simulator services - III:

- Deciding heateffected zone (HAZ):



- Deciding costs in Euro:





Now let us try

**iQSim welding simulators services
in operation**



**iQSim students
are satisfied and happy**

