



# EWF 25<sup>TH</sup> ANNIVERSARY

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# WELC ME



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# International Qualifications in the Welding Sector European Welding Federation - case study

**Conference on International Sectoral Qualifications  
15th November,  
Congress Cantwer Tagus Park, Oeiras**

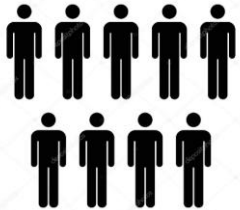
# Welding is:

- A special process that joins materials, using different techniques, consumables and power sources.
- An area of continuous innovation and fast-changing technology
- Constantly developing solutions for new materials, new applications, and improved quality, safety, environmental and sustainable performance
- Often applied to safety critical systems; weld failure can have severe societal, environmental and economic impacts



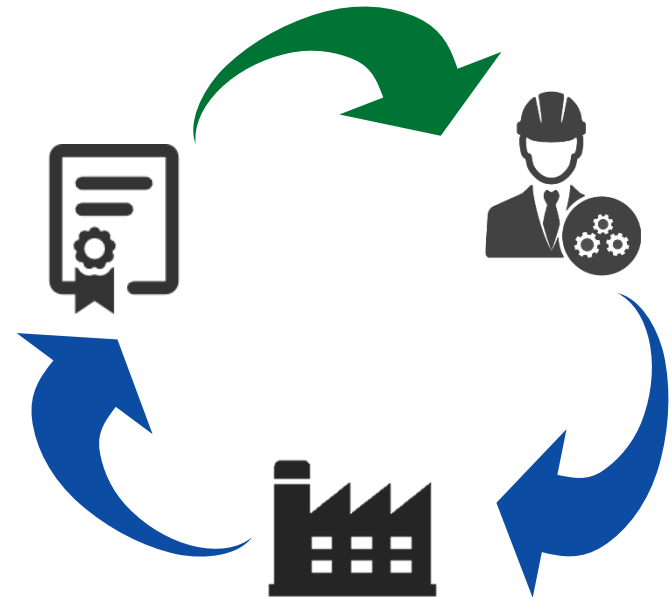
# Relevance of the Welding Sector

- **SOCIETY** - cross-sectoral technology used for the manufacture of a huge variety of Engineering products
- **GLOBAL ECONOMY** – employment of welding professionals; the special process requires special competence
- **SAFETY** - welding failure can led to serious consequences (catastrophic loss of life and destruction)



# Ensuring Quality Requirements

- Repairing an unacceptable weld can cost five to six times more than the cost of welding it correctly the first time.
- Companies have to assure the competence of their welding personnel.
- This competence is achieved through specialist education and training and maintained through certification





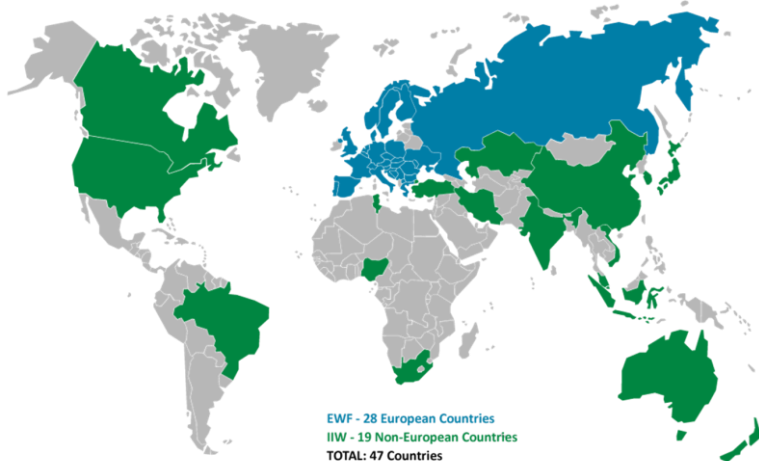
# The importance of Harmonisation

- **Welding and Joining technologies are areas with specific qualification needs;**
- **Standards are applied to ensure personnel competence supports industry quality requirements;**
- **Welding professionals have to be competent to perform their tasks and responsibilities (e.g. ISO 9606 for Welders and ISO 14731 for Welding Coordinators);**
- **EWF Guidelines set the minimum education and examination requirements for the knowledge and skills relevant to a wide range of welding engineering roles.**



# EWF Qualification System

## Welding Institutes of the European Community



1992



**Mission: Updated and harmonised training and qualification in the field of welding & joining technology.**



# EWF - Areas of Activity



**Training Personnel in Welding, Joining & Cutting**



**Qualification of Personnel in Welding, Joining & Cutting**



**Certification of Personnel  
Certification of Companies**



**Collaboration Projects**



**Technical Information**








**Technical Products**





# The Challenge of Harmonisation

## Harmonised Qualification System:

-  from project management to workshop level
-  used in 46 countries
-  referred in CEN and ISO Standards
-  based in training guidelines
-  based in harmonised examination database

Success driven by  
recognition of “quality” of  
the system by  
stakeholders

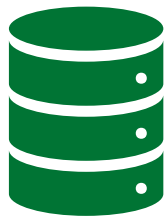


**25 Years** of experience in international qualification of personnel for the manufacturing industries



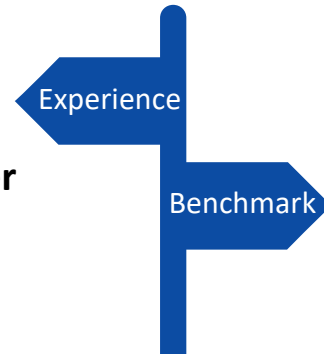
# The Challenge of Quality

## Quality Assurance System based on:



Rules/Requirements for Authorised  
Nominated Bodies (ANBs)  
Rules/Requirements for Authorised  
Training Bodies (ATBs)  
Harmonised Assessors Training and Peer  
Review

**Experience to be  
benchmarked to other  
professions.**



**25 Years** of experience in international qualification of personnel for the manufacturing industries



# Training Guidelines

## Professional Qualification

### Qualification Levels / Guidelines:

- **IWE/EWE** – Engineer
- **IWT/EWT** – Technologist
- **IWS/EWS** - Specialist
- **IWP/EWP** – Practitioner
- **IWIP/EWIP** – Inspection Personnel (3 levels)
- **IW/EW** – Welder (3 levels, 4 processes)
- **IWSD** – Structures Designer (2 levels)
- Distance Learning
- **International/European Mechanized, Orbital and Robot Welding** (2 levels)

### Qualification Levels/Guidelines:

- **EAE/EAS/EAB** – Adhesive Bonding
- **EWS-RW/EWP-RW** – Resistance Welding
- **ETSS/ETSP/ETS** – Thermal Spraying
- **European Laser Processing Personnel**
- **EN 1090** – Dedicated Knowledge for (R)WC-S/B
- **Railsafe** – Aluminothermic; Arc Welder

### Special Courses at “Specialist” Level:

- Reinforcing Bars
- Weld Imperfections for NDT Personnel
- Macro and Micro Examination
- Heat treatments
- MMA EW – Diver Welder
- Risk Management in Welding Fabrication

**REVISED EVERY TWO YEARS FOR UPDATING ACCORDING TO THE CHANGE OF SKILLS NEEDED.**



# 25 years of International Qualifications

**ONE**  **FORTY SIX**  
**SYSTEM** **COUNTRIES**

MORE  
THAN  
**650**  
AUTHORISED  
TRAINING  
CENTRES

**52**   
**COURSES**  
QUALIFICATIONS  
& CERTIFICATIONS

MORE  
THAN

**300.000**  
INDUSTRIAL PERSONNEL QUALIFIED



 **23**  
TRAINING  
GUIDELINES



# Visibility



## Training & Qualification

- ✓ CEDEFOP
- ✓ EU DG Education and Culture
- ✓ EU DG Employment



- ✓ Member of EFFRA
- ✓ Recognized stakeholder of EA
- ✓ Liaison organization of CEN/TC 121

## Standardization



## Technology/ Innovation

- ✓ Additive manufacturing sub platform, in “Manufuture”
- ✓ Collaboration with EU DG RTD
- ✓ Managing the “Joining” sub Platform, in “Manufuture”

- ✓ Support the studies on the “Impact of Welding” in 2009 and 2013
- ✓ White Paper on Joining Education, Welding Education and Additive Manufacturing Skills
- ✓ Publications in welding magazines and journals

## Awareness





# Looking into the future

respond to industry's professional profile requirements

provide courses that leverage current technological trends

monitoring the unfolding trends that are shaping Europe's and the world's manufacturing

work side-by-side with the European leaders, which are defining the region's industrial future

enhancing digital integration in learning, teaching, training and youth work at various levels

EWF SYSTEM  
CHALLENGES

FUTURE

**THANK  
YOU  
FOR YOUR CONTINUOUS  
SUPPORT**



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