

# **The Role of Quality Management Systems in the Harmonization of Schemes for Personal Qualification – European and World-wide**

**Report for the  
International Forum for Personal Certification  
on September 26. 2007 in Sao Paulo  
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# **Steps to Unification of Qualification**

- 1. Common standards for education  
and examination**
- 2. Implementation**

# **Qualification – the Benefit**

- **Achievement and status for the individual**
- **Inspire client confidence**
- **Save money by reducing mistakes**
- **Satisfy European / international standards**
- **Provide a competitive edge**

# **Achieving Uniformity of Qualification – the Options**

➤ **Recognition**

➤ **Harmonization**

# **Examples of Achieving Uniformity through Recognition**

- **Washington Accord – for engineering degrees world-wide**
- **Fédération Européen d'Association Nationales d'Ingénieurs – for engineering degrees in Europe**
- **European Council of NDT (EN 473)**
- **Confederation European d'Organisme de Controle (CEOC) for welder (EN 827)**

# **IIW Harmonized Education and Qualification**

- **International Welding Engineer – IWE**
- **International Welding Technologist – IWT**
- **International Welding Specialist – IWS**
- **International Welding Practitioner – IWP**
- **International Welding Inspector – IWI**
- **International Welder – IW (4 processes)**

# **Example - Steps to International Welding Engineer**

- **Access to the course**
  - **Engineering degree**
- **Successful completion of the course**
  - **446 h of training and education**
- **Success in the examination**
  - **min. 8 h written and 1 h oral**

# **IIW Rules of Implementation are based on:**

- **ISO 45013 – Certification of personal**
- **ISO 9000 ff – Quality Management Systems**

# Tasks of ANBs

- **Assessment and approval of training and education courses**
- **Conduct of examination**
- **Issuing diplomas**

# Rules of ANBs

- **Impartial body**
- **Competent staff**
- **Control of all functions by a quality management system**
- **Subject of internal audit**

# **International Harmonized Examination**

- **Developing of a multiple choice test data bank**
- **Implementation of min. 50% multiple choice tests from the data bank**
- **Minimum requirements for the written, oral and practical examination**