



ENIQ REPORT

Study on Maintenance of Inspection Qualifications pending
Changes of Input Data

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Technical Area 8

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Executive Summary

The European Methodology for Inspection Qualification [1] consists of a framework to enable each country to establish its own detailed practices to match the specific national requirements (regulatory, plant type, resources, etc.). Whilst being successful in achieving this objective, the inevitable specific nature of the qualification processes has introduced differences between countries in approach to both establishment of qualifications and maintenance. Changes to source documentation, equipment configuration or software programmes all lead to potential need to update qualifications.

This report documents a benchmark review of approaches undertaken in different jurisdictions to maintain validity of qualifications under changes. The summary tables (in the form of an Excel spreadsheet only accessible to ENIQ members) provide the opportunity to both compare and contrast approaches used by jurisdictions. This allows users of the ENIQ methodology to be aware of the approaches, taken and provide opportunity for alignment, enhancement and harmonization across organizations.

Index

Executive Summary	1
1. Introduction.....	3
2. Scope of Work	3
3. Results of the Questionnaire.....	4
References.....	5
Appendix: Questionnaire.....	6

1. Introduction

The European Methodology for Inspection Qualification (ENIQ) [1] was initially designed as a framework that would enable each country to establish its own detailed practices that match the specific national requirements (regulatory, plant type, resources, etc.). Whilst being successful in achieving this objective, the inevitable specific nature of the qualification processes has introduced differences between countries in their approach to both establishment of qualifications and the maintenance of the qualifications. For example, changes to source documentation, equipment configuration or software programmes all lead to potential requirements to update qualifications.

This report includes the results of an exercise undertaken as a benchmark review of approaches in differing jurisdictions to maintain validity of qualifications under various changes. The summary tables (in the form of an Excel spreadsheet only accessible to ENIQ members) provide the ability to both compare and contrast approaches used in differing jurisdictions. The report allows users of the ENIQ methodology and others to be aware of differing approaches taken and potentially to consider alignment across different organizations as a means to harmonize the approaches taken.

The primary purpose of this document is to present the results of the questionnaire allowing representatives of ENIQ to see how countries are using the methodology for maintenance of qualifications.

The qualification requirements, guides and regulatory expectations recognise that all parts of an NDT system can affect its performance. Equipment, techniques, procedures, as well as NDT personnel, should thus be included in the qualification process.

The extent and type of required qualifications varies from country to country. Nevertheless, the most important similarity is that in all countries the licensee has the full legal responsibility for the safety of its plants and must take all measures that are necessary to maintain safety. Responsibilities for inspection qualification activities in any country must be consistent with its legal system and regulatory practices.

Appropriate actions that can follow from review of this document could include closer co-operation between the qualification bodies (QBs) in terms of systematic exchange of experience. This could also extend to discussion with respective countries' regulatory authorities to consider options for further harmonization of approaches.

2. Scope of Work

ENIQ has developed a questionnaire with the objective to summarize approaches utilized by countries to maintain qualification under changing conditions. The aim of this project is to clarify and summarize the commonalities and differences in qualification maintenance approach between countries.

Following is a list of questions in comparison between the member's country requirements and another country's requirements of inspection qualification. Completing the questionnaire will result in a gap table that can assist in optimal maintenance of qualifications in each jurisdiction, considering local prevailing experience.

- The first action is to answer the questions based on your own national requirements. This will then form a template for future activities.
- The second action is to compare responses with other answer sets and determine if there are benefits from alternative approaches in terms of efficiency, degree of control or harmonization between countries.
- In the third column actions can be described that can be considered to improve alignment, efficiency or compliance to your country requirements.

Appendix 1 contains the full questionnaire.

3. Results of the Questionnaire

Fifteen Countries replied to the questionnaire and the responses have been summarised in a spreadsheet. The responses are separately available to ENIQ members, as noted below.

The spreadsheet sections are as follow:

- General requirements that lead to the need for update of qualifications:
 - Do qualifications expire?
 - Under what conditions?
- Specifics of changes
 - Editorial
 - Mechanical changes
 - Software changes
 - Code or Standard changes
- Graduation of changes
 - Are there methods of graduated requalification?
 - Is there a graduated process?
 - Is this different from a new qualification?
 - Can a certificate be valid even with changes?
- Accountability for Changes
 - Who prepares support documents?
 - Who updates the documents?
 - Who owns the requalified procedure?
 - What is the role of the QB in the requalification?
 - How are changes to Inspection Specifications and to the applicable standards impacted?
 - How are requirements for requalification of procedures defined?

The format of the spreadsheet permits each organisation to compare how countries are managing maintenance of qualifications. One way of performing such a comparison can for example be by placing the user's country first and then using a code (Green/Yellow/Red) to highlight degree of similarity to approach.

The spreadsheet containing individual countries' responses on the questionnaire are available via SNETP FLEXX. The collected responses are for information purposes only, and individual organizations should be contacted for formal verification.

References

- [1] *The European Methodology for Qualification of Non-Destructive Testing – Issue 4*, ENIQ Report no. 61, The NUGENIA Association, 2019.

Appendix: Questionnaire

Section One - General		
Question	National requirements	Similar to others or different?
Does the qualification of a procedure and its corresponding certificate ever expire?		
What circumstances require re-issue of a procedure qualification certificate?		
Which circumstances require revision of a document? (Clarification: Documents include IP, TJ, Instructions)		

Section Two - Specific Changes		
Question	National requirements	Similar to others or different?
How are editorial changes handled?		
How are mechanical equipment changes handled?		
How are software changes handled?		
How are changes of regulatory code or standards requirements handled?		

Section Three - Graduation of Changes		
Question	National requirements	Similar to others or different?
Are there methods of graduated requalification?		
Is a full review required for requalification, or is there a graduated process?		
For submission of a requalification request, is there a different process than a new qualification?		
Are there circumstances where a certificate can be used even though support information has changed? (Clarification: If some of the referenced docs have changed, can the user still use the certificate if they have evidence on hand that the changes do not affect the certificate validity?)		

Section Four - Accountability for Change		
Question	National requirements	Similar to others or different?
What organisations are responsible for preparing the support documentation for a requalification?		
What organisations are responsible to update document for requalification?		
How is the owner of the qualified procedure affected after requalification? (Clarification: Is the ownership affected by the requalification?)		
What is the role of the QB when inspection procedures are revised?		
How is the requalification approached if a different organization is requalifying an existing procedure?		
Summarise the role of the QB in relation to changes to the Inspection Specification.		
Beside the ENIQ Methodology what other standards (e.g. ASME, RS EM, etc.) are used as part of the re qualification process?		
How are the requirements for re-qualification of procedures defined?		

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ABOUT ENIQ AND NUGENIA

The **European Network for Inspection and Qualification (ENIQ)** is a utility driven network working mainly in the areas of qualification of non-destructive testing (NDT) systems and risk-informed in-service inspection (RI-ISI) for nuclear power plants (NPPs). Since its establishment in 1992, ENIQ has issued over 60 documents. Among them are the “European Methodology for the Qualification of Non-Destructive Testing” and the “European Framework Document for Risk-Informed In-Service Inspection”. ENIQ is recognised as one of the main contributors to today’s global qualification guidelines for in-service inspection.

ENIQ is the Technical Area 8 of NUGENIA, one of the three pillars of the Sustainable Nuclear Energy Technology Platform (SNETP) that was established in September 2007 as an R&D&I platform **to support technological development for enhancing safe and competitive nuclear fission in a climate-neutral and sustainable energy mix**. Since May 2019, SNETP has been operating as an international non-profit association (INPA) under the Belgian law pursuing a networking and scientific goals. It is recognised as a European Technology and Innovation Platform (ETIP) by the European Commission.

The international membership base of the platform includes industrial actors, research and development organisations, academia, technical and safety organisations, SMEs as well as non-governmental bodies.



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