



**NACI Requirement for the Application of MS Certification Bodies  
In the Field Of Fusion Welding**

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### **Changes History**

<b>Clause Numbers</b>	<b>Revision No</b>	<b>Revision Date</b>	<b>Summary of changes</b>
<b>Cover</b>	0	–	–
<b>Pages</b>	0	–	–
<b>Clause 1</b>	1	Jul.2019	Adding ISO 3834-2, ISO 3834-3 and ISO 3834-4 standards
Table 1	1	Jul.2019	some changes in education and experience
Clause 6.5	1	Jul.2019	Adding clause 6.5.2



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## 1. Objectives

The purpose of these procedures is to describe the NACI Requirement for the Application of MS Certification Bodies in the Field of Fusion welding according to ISO 3834.

The present document defines the methods relevant to the assessment, certification and periodic surveillance of Management Systems conforming to the ISO 3834-2, ISO 3834-3 and ISO 3834-4 standards. This document applies both when the requirements of the ISO 3834 Standard are transposed as an integral part of a Quality Management System complying with the ISO 9001 Standard

This document specifies requirements and guidance for bodies providing audit and certification of fusion welding of metallic materials, in addition to the requirements contained within ISO/IEC 17021-1. It is primarily intended to support the accreditation of certification bodies providing fusion welding of metallic materials certification. Certification Bodies (CBs) seeking accreditation to provide Fusion Welding of Metallic Materials certification services will be required to fulfil the requirements of ISO/IEC 17021-1 and those of this document. This requirement document is not a replacement to the required reference to the ISO/IEC 17021-1 standard and applicable mandatory documents. CBs seeking accreditation from NACI will be accredited against the requirements of ISO/IEC 17021-1. NACI will give recognition of technical competence of the CB in certifying organization(s) according to ISO 3834 standard.

## 2. Scope

These procedures are applicable to all functions within NACI.

## 3. Responsibilities

The Management Representative is responsible for compliance to these procedures by all involved. The NACI President will supervise effective implementation of these procedures.

## 4. References & Regulations

- ISO/IEC 17011: 2017 Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies
- NACI-M00 Accreditation manual
- NACI-P10 Accreditation application & assessment procedures
- ISO/IEC 17000 Conformity assessment — Vocabulary and general principles.
- ISO/IEC 17021-1 Conformity Assessment – Requirements for bodies providing audit and Certification of management systems.

- ISO 3834 Fusion Welding of Metallic Materials.
- IAF MD 1 Certification of Multiple Sites Based on Sampling.
- IAF MD 2 Transfer of Accredited Certification of Management Systems.
- IAF MD 3 Advanced Surveillance and Recertification Procedures.
- IAF MD5 Determination of Audit Time of Quality and Environment Management System.
- IAF MD 10 Management of Competence.
- IAF MD 11 Audit of Integrated Management Systems

## 5. Terms & Definitions

All definitions related to the normative documents listed in clause 4 above apply. In addition, the terms and definitions below apply specifically:

**5.1 NACI:** National Accreditation Center of Iran

**5.2 CAB:** Conformity Assessment Body

**5.3 ISO 3834:** Welding processes are used in various industries. In engineering (vehicles, agricultural equipment, pressure vessels ...), in construction (steel structures, bridges...) and partly in other industries (e.g. metallurgy, energy, manufacturing). The quality of the welding processes cannot be easily verified, therefore, they are considered as special processes, as stated by ISO 9001. A series of standards ISO 3834 does not replace ISO 9001, but it is a tool to use for the welding process. Emphasis is placed on the qualifications of the staff, equipment used, procedures and records of welding. A series of standards ISO 3834 provides guidance on the establishment and maintenance of a functioning quality management system of fusion welding of metallic materials.

## 6. Procedure

6.1 The **principles** from ISO/IEC 17021-1, Clause 4 apply.

6.2 The **General requirements** from ISO/IEC 17021-1, Clause 5 apply

6.3 The **Structural requirements** from ISO/IEC 17021-1, Clause 6 apply

### 6.4 **Resource requirements**

6.4.1 Competence of personnel

The requirements from ISO/IEC 17021-1, Clause 7.1 apply.

6.4.2 Personnel involved in the certification activities

6.4.2.1 The requirements from ISO/IEC 17021-1, Clause 7.2 apply.

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6.4.2.2 In addition to the requirements of 7.2.4, the certification body shall have a process to ensure that all personnel involved in the certification activities of fusion welding of metallic materials have education, knowledge and skills, and experience as contained in the table 1 (Personnel involved in the certification activities) below.

Title	Education	Knowledge and Skills	Experience
Auditor /Lead Auditor	Hold at least an Related Engineer Degree	Annex A of ISO/IEC 17021-1 and ISO/IEC 17021-3	Additional requirement: Direct or related experience of more than 4 years in Welding within the last 3 years.  Management System Auditing experience with consideration of related technical area
Technical Expert	Hold at least an Welding Technical Engineer or IWE diploma	Certified Welding Inspector	Direct or related experience of more than 4 years in welding
Conducting the application review to determine audit team competence required, to select the audit team members, and to determine the audit time.		Annex A of ISO/IEC 17021-1	
Reviewing audit reports and making certification decision.		Annex A of ISO/IEC 17021-1	

6.4.3 Use of individual external auditors and external technical experts  
The requirements from ISO/IEC 17021-1, Clause 7.3 apply.

6.4.4 Personnel records  
The requirements from ISO/IEC 17021-1, Clause 7.4 apply.

6.4.5 Outsourcing  
The requirements from ISO/IEC 17021-1, Clause 7.5 apply.

## **6.5 Information requirements**

6.5.1 The requirements from ISO/IEC 17021-1, Clause 8 apply.

6.5.2 In addition to the requirements of 8.2.2 Certification bodies shall include:

- ISO 9001:2015 in relation to ISO 3834-X: 20XX
- Standards of Welding and related processes
- Standards of Basic Materials groups
- Responsible welding coordinators

## **6.6 Process requirements**

### 6.6.1 Pre-certification activities

The requirements from ISO/IEC 17021-1, Clause 9.1.1 to 9.1.3 apply.

### 6.6.2 Determining audit time

6.6.2.1 The requirements from ISO/IEC 17021-1, Clause 9.1.4.1 apply

6.6.2.2 In addition to the requirements of 9.1.4.2 Certification bodies shall allow auditors sufficient time to undertake all activities relating to an initial audit, surveillance audit or recertification audit.

6.6.2.3 Certification body shall identify the audit time of the Stage 1 and Stage 2 initial audit and of surveillance and re-certification audits for each applicant and certified client.

6.6.2.4 The certification body shall consider table 2 below and the following factors when determining audit time:

- Field of Activities; (e.g. design, cutting, fabrication, erection, heat treatment and ...)
- Products range and type of materials;
- Number of welders;
- Responsible welding coordinator(s);
- Welding coordination personnel;
- Type of welding processes;
- Welding material group;
- Number of Sub-contractor(s);
- Multiple site.

6.6.2.5 The duration of a management system certification audit should typically not be less than 80% of the audit time or more than 20% of the audit time in table 2 below calculated when the six factors stated above are consider. This applies to initial, surveillance and recertification audits.

6.6.2.6 The effective number of personnel consists of all personnel involved within the scope of certification including those working on each shift. When included within the scope of certification, it shall also include non-permanent (e.g. contractors) and part-time personnel expected to be on site at the time of certification audit.

6.6.2.7 The requirements from IAF mandatory document MD5 (determination of audit time of quality and environment management system), applies with the utilization of table 2(Audit time) of this technical requirements.

Effective number of Personnel	Audit time Stage 1 + Stage 2 (days)	
	Stage 1	Stage 2
1-25	0.5	1
26-100	0.5	2
>100	0.5	4

The requirements from ISO/IEC 17021-1, Clause 9.1.4.3 to 9.1.4.4 apply

### 6.6.3 Multi-site sampling

The requirements from ISO/IEC 17021-1, Clause 9.1.5 apply.

Temporary sites that are covered by the organization's management system for fusion welding of metallic materials shall be subject to audit on a sample basis to provide evidence of the operation and effectiveness of the management system.

The requirements from IAF Mandatory document MD1 (certification of Multiple Sites Based on Sampling), Clauses 0 to 5.4 apply. The Certification Body needs to justify and document the rationale for any sampling it decides to implement during the certification of the management system. This shall demonstrate how the same level of confidence in the conformity of the management system across all the sites listed can be obtained.



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#### 6.6.4 Multiple management systems standard

The fusion welding of metallic materials audit can be combined with audits of other management systems. This combination or stand alone is possible provided it can be demonstrated that the audit satisfies all requirements for certification of the fusion welding of metallic materials. Evidence that all the elements of ISO 3834 shall appear clearly, and be readily identifiable, in the audit reports. The quality of the audit shall not be adversely affected by the combination of the audits

#### 6.6.5 Planning audit

In addition to the requirements of 9.2.2.1.1 when required, the audit team may be complemented by technical experts who can demonstrate specific competence in a field of fusion welding of metallic materials appropriate to the audit. Note should be taken that technical experts cannot be used in place of fusion welding of metallic materials auditors but could advise auditors on matters of technical adequacy in the context of the management system being subjected to audit.

The requirements from ISO/IEC 17021-1, Clauses 9.3 to 9.9 apply.

#### 6.6.7 Management system requirements for certification bodies

The requirements from ISO/IEC 17021-1, Clause 10 apply.

### 7. Rated Documents

7.1 Document control procedures **NACI-P01**

7.2 Records control procedures **NACI-P02**

7.3 Accreditation application & assessment procedures **NACI-P10**

### 8. Forms & Records

8.1 Impartiality & confidentiality form **NACI-F141**

8.2 Document distribution form **NACI-F104**

### 9. Recipients

Records master list form **NACI-F105** for recording & keeping all records related to these guidelines.

### 10. Withdrawn Documents

NA



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