

**About
EQC
India**

Équipe Qualité Consultants (EQC India) comprises of a team of quality professionals engaged in providing quality management and welding services for the infrastructure sector and manufacturing units.

EQC's areas of Operation of are:

- Supplier assessment, audits and development
- Review and approval of Quality Plans and Field Quality Plans
- Field Quality Audits
- Consultancy for PED certification/ CE Marking
- Welding Qualifications as per ASME and EN/ISO
- ISO: 9001-2015, ISO: 14001-2015 implementation
- Quality Improvement Studies
- Documentation & Implementation of ISO: 3834 Series for Quality requirements for fusion welding of metallic materials EN: 15085-2/ BS EN 1090
- **Responsible Welding Coordinator (RWC Services)**
- Technical Support and Training on Codes and standards on Steels including Chinese, Russian, Indian, EN and ASME codes.
- Technical Support, Consultancy & Training on Welding Technology, NDT, Industrial Painting, Dynamic Balancing & Engineering Materials.

EQC India was started in 2009 to provide value added to Industry.



Inspiring Quality Since 2009

*In the present issue of **Qualité Endeavour**, we cover the key requirements of **ISO: 3834, Quality Requirements for Fusion Welding of Metallic Materials**.*

*Welding is considered as a 'Special Process', which means that its quality cannot be readily verified and its successful application requires specialist management, personnel and procedures above and beyond those that are considered for general quality systems such as **ISO 9001**. These requirements have led to a number of developments, notably the publication of **ISO 3834; 'Quality requirements for fusion welding of metallic materials'**. Appointment of **Responsible Welding Coordinator (RWC)** is a key requirement of the standard and we described the specified role of RWC in this newsletter.*

*We also cover in the standard an update on the popular management systems. **ISO 45001 for OHSAS** is under finalisation after more than five years of review and is expected to be released by **March 2018**. Replacing **OHSAS 18001**, the new standard has been developed by a committee made occupational health and safety experts from across the world.*

Happy Reading!

Please do send in your comments & suggestions for improvement of the newsletter.

Editor, 1st October 2017



ISO 3834 – Minimum Requirements for Certification

S. No	Description of Requirements	Qualification Requirement	Remarks
1	Responsible Welding Coordinator (RWC)	Qualified IWE/ IWT as per ISO 14731	Atleast one per location
2	Welding Coordinator (Deputy)	Qualified	Atleast one per location
3	Welding Procedure Specification (WPS)	As per ISO: 15609	For each material/ process/ size/ joint etc combination
4	Welding Procedure Qualification Record (WPQR)	Qualified WPQR as per ISO: 15614	For each WPS. Tests to be conducted in NABL lab.
5	Certification of welders/ welding operators	Qualified as per ISO: 9606/ 14732	Also check for job knowledge. Tests to be conducted in NABL lab.
6	Welding Inspector/ QC Personnel	To be competent for Inspection & testing of welding production	Sufficient number of personnel should be available
7	NDE Personnel	Qualified as per ISO: 9712	All applicable NDE techniques to be covered
8	Quality Records	Minimum as per Clause 18 of ISO: 3834-2	List to be maintained. All functions to be covered.
OTHER IMPLIED REQUIREMENTS			
1	Quality System Manual	To cover all clauses of ISO: 3834	Existing ISO: 9001 (QMS) manual can be updated. QMS compliance to be ensured.
2	Internal Audits	Same as for ISO: 9001-2015	To cover all ISO: 3834-2 clauses.
3	Management Review Meeting	Same as for ISO: 9001-2015	To cover all ISO: 3834-2 requirements.

Note: ISO 3834 implementation is a basic requirement for certification to EN 15085 and BS EN 1090. Additional requirements are required to be complied with for certifications to EN 15085 and BS EN 1090. Specification EN 15085-Railway Applications- Welding of Railway Vehicles and Components is in four parts and adopts a similar approach with respect to the classification of railway components and the quality assurance systems for the control of manufacture as BS EN 1090. Fabricators are required to be independently third party certified and to comply with either ISO 3834 Part 2, Part 3 or Part 4 depending on the certification level (execution class in BS EN 1090).

Responsible Welding Co-ordinator (RWC)

Welding is a special process, which requires the coordination of welding operations in order to establish Confidence in welding fabrication and reliable performance in service. The tasks and responsibilities of personnel involved in welding-related activities (e. g. planning, executing, supervising and inspection) should be clearly defined.

ISO 14731 states that welding coordination is the sole responsibility of the manufacturer and the manufacturer shall appoint at least one Responsible Welding Coordinator (RWC). Welding coordination responsibilities must be allocated to one or more specific job roles defined by the manufacturer. Assessment of fusion welding quality against the requirements of ISO 3834, EN 15085 and EN 1090 (CE Marking) will seek to establish that welding coordinators are competent to fulfill their allocated responsibilities.



The International Welding Engineer (**IWE**), International Welding Technologist (**IWT**) and International Welding Specialist (**IWS**) are the recommended minimum requirements for education, examination and qualification of welding coordination personnel (RWC).

Role of Responsible Welding Coordinator (RWC) includes ensuring all criteria are fulfilled in the production and implementation of written procedures and the qualification of welding procedures. It is a requirement that fabricators must appoint an RWC and it is the responsibility of the RWC to ensure that all criteria involved with welding as a 'special process' are met. RWC's suitability to undertake the role is assessed by the individual company's accrediting body through an interview process.

The following activities should be considered while defining the role of RWC:

<ol style="list-style-type: none"> 1. Review of Client requirements and offer preparation 2. Subcontracting 3. Approval of welders and welding operators 4. Maintenance of Equipment 5. Production Planning 6. Qualification of the Welding Procedures 7. Fusion welding system documentation and Work Instructions 8. Handling of Welding Consumables 9. Parent Materials 	<ol style="list-style-type: none"> 10. Inspection and Testing Before Welding 11. Inspection and Testing During Welding 12. Inspection and Testing After Welding 13. Post-weld Heat Treatment 14. Handling of Non-conformances 15. Corrective Actions 16. Calibration and Validation of Measuring, Inspection and Testing Equipment 17. Identification and Traceability 18. Quality Records 19. Coordination with certification body
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EQC's extensive experience in welding systems will lead to improvements in the fabrication process leading to increase in productivity and reduction of costs. We can also help improve quality of welded products to the level required to enter new markets.

MANAGEMENT SYSTEMS UPDATE

TITLE		Update
ISO :9001-2015 Quality management systems -- Requirements		ISO: 9001-2015 turned two (2) this September. Less than 10% of the companies have upgraded/ obtained certification to the revised standard by end of 2016. Most organisations are expected to changeover in the next four quarters.
ISO :14001-2015 Environmental management systems - Requirements with guidance for use		ISO: 14001-2015 turned two (2) this September. Less than 8% of the companies have upgraded/ obtained certification to the revised standard by end of 2016. Most organisations are expected to changeover in the next four quarters.
ISO : 45001 Occupational health and safety management systems - Requirements with guidance for use		ISO 45001, like all ISO's management systems standards will follow ISO's Annex SL high level structure and text (HLS) and this means the 4 clauses in OHSAS 18001 becoming 10 clauses in the new ISO 45001. Other key features of the standard would be covered in our next newsletter.
ISO :17025-2005 General requirements for the competence of testing and calibration laboratories		Revision activity is currently in progress with publication slated for Q1, 2018, followed by a three year transition to full implementation of the revised standard. Key changes are alignment with 9001-2015, process approach, stronger focus on IT and risk-based thinking.

Équipe Qualité Consultants also provides consultancy and customized training for QA, QC/ Inspection/ Welding/ Engineering / Power Professionals/ Fabricators in the following areas:

1. Welding Coordination Personnel	2. Welding Qualifications as per ASME IX
3. Welding Qualifications as per EN/ISO	4. Engineering Materials - Steels
5. Welding Certification as per ISO: 3834	6. Railway Certification as per EN: 15085-2
7. ISO:9001, ISO: 14001 & OHSAS 18001	8. Factory Production Control (FPC) for CE
9. QA/QC for Chinese Power Equipment	10. Industrial Painting Systems

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