

ISO 3834

Quality Requirements for
FUSION WELDING

JC AUDITORS

www.jcauditors.com

 info@jcauditors.com

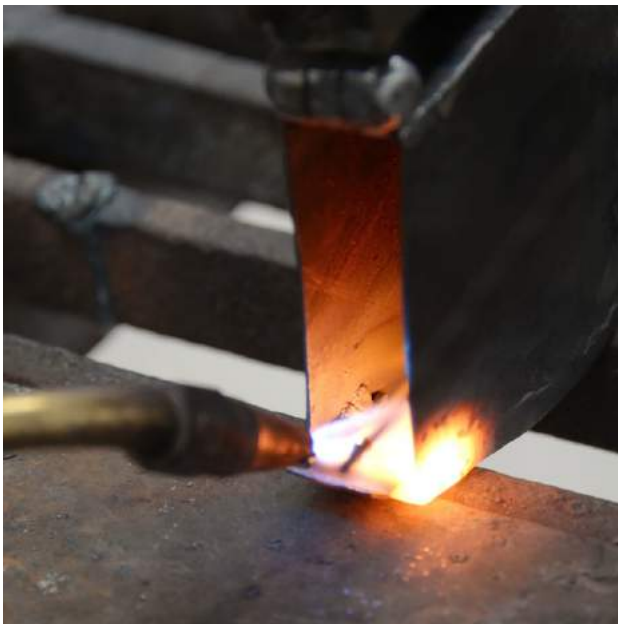
 +27 33 342 0529

 +27 82 858 9995

UNDERSTANDING ISO 3834

WHAT IS ISO 3834?

The international standard, ISO 3834 – defines the Quality Requirements for Fusion Welding of Metallic Materials, both for those who carry them out and for those who evaluate them. ISO 3834 integrates perfectly with other regulations, divided into 6 parts, and is regarded as the welding quality requirement benchmark of the 21st century and certified compliance means global recognition of a company's capabilities, guaranteeing customers the conformity of products and processes. By defining the quality standards to be respected, it provides a solid basis for assessing the ability of a manufacturer in the welding process.



Whilst the most well-known standard is ISO 9001, which outlines the requirements of quality standards, ISO 3834 sets the standards for welding quality and is complementary to ISO 9001. ISO 3834 identifies all factors that could affect welding quality. It does not specify quality standards for the finished product only but also for every stage of the work in progress. ISO 3834 prescribes that welding services and component suppliers have to ensure a systematic approach to welding by continuously improving and applying process management in the manufacture, repair and maintenance of components. Overall, organizations can increase customer satisfaction and competitiveness, ensure greater reliability and ensure a longer equipment life span, as well as improved health and safety standards



THE NEED FOR ISO 3834

DOCUMENTED QUALITY SYSTEM

A documented quality system also referred to as a weld process control system, enables you to monitor, document and demonstrate that you are meeting all the processes, technical specifications and performance standards required for fusion welded products. Records of any non-conforming products, processes or materials are kept to make any requisite improvements.

ISO 3834 builds a weld process control system into welding management to ensure quality, optimize manufacturing costs, and reduce expensive repairs and rework. A weld process control system is a structured approach that covers all phases of the welding process.

WHY CHOOSE ISO 3834

Many companies globally, are ISO 9001 certified. However, where a special process such as fusion welding is used, ISO 9001 fails to demonstrate the specialist capability required by a company to manufacture products according to the necessary quality standard.

ISO 3834 certification overcomes this shortfall by controlling the entire lifecycle of the welding process, from design right through to inspection. All aspects that could affect weld quality are considered. This type of approach is essential because it is impossible to undertake complete verification of a welded joint without destroying it.

Unfortunately, inspection after completion does not guarantee weld serviceability. As such, quality must be built into the welding process, right from the very beginning.





SEAMLESS INTEGRATION

An integrated system provides a clear, uniform image of your entire organisation, how they impact each other, and the associated risks and it becomes easier to adopt new systems in future.

INTEGRATE STANDARDS

ISO 9001 is the world's most popular standard and makes provision for implementing practices aimed at quality management to ensure customer satisfaction. ISO 3834 complements this standard by providing the technical aspect, where ISO 9001 falls short. This allows for integration, and choosing JC auditors as a certification body, allows seamless integration, being a one stop shop.

An Integrated Management System is relevant to any organization, regardless of their industry.

By implementing an Integrated Management System, the entire workforce is brought together to achieve a single goal that can impact multiple areas of your organization.

ADVANTAGES OF INTEGRATION

- Reduce costs
- Minimise downtime of key systems
- Reduce external audits
- Reduce conflict
- Increased performance
- Employee and customer satisfaction
- Continuous improvement

JC AUDITORS' ACCREDITED CERTIFICATES ARE INTERNATIONALLY ACCEPTED IN TERMS OF THE INTERNATIONAL ACCREDITATION FORUM (IAF) AGREEMENT

ISO 3834 ADVANTAGES

KEY BENEFITS OF ISO 3834

- Improve your company's credibility & identity locally & globally
- Reduced or mitigated risk
- Continual improvement
- Improved procedures & processes
- Enhanced customer satisfaction
- Increases your company's marketability
- Reduced cost and overheads
- Assurance of built-in weld quality and consistency of welded materials



THE IMPORTANCE OF ISO 3834

ISO 3834 provides the manufacturer with a higher level of confidence in the ability to consistently achieve and maintain compliance with regulatory requirements. It can also help to minimize defects and failures which might adversely affect public/worker safety and damage a manufacturer's reputation & marketability.

The purpose of the standard is primarily aimed at improving the quality of welded products produced by fabricators so that sound welds are produced on a consistent basis thus helping local fabricators become more competitive in both the local and global marketplaces. Acquiring ISO 3834 certification, immediately confirms a fabricator's competency level to end-users.



ISO 3834-1

Provides criteria for the selection and use of ISO 3834. Manufacturers should select the appropriate level of quality requirements by primarily considering the safety-critical nature of the products manufactured and the extent of dynamic loading the product will be exposed. In addition the complexity of the manufacturing process, range of products manufactured and range of materials used together with weldability issues should be considered when selecting the level of quality requirements the manufacturer wishes to claim conformance to.

Defines the Comprehensive Quality Requirements which should be selected for the manufacture of products where there are significant safety factors with high static and dynamic loadings and the materials are designed for high performance applications. The manufacturing process also requires high levels of control and testing with extensive Non-Destructive Testing and Post Weld Heat Treatment. Manufacture of boilers, pressure equipment and welding of exotic materials would be examples where the manufacturers should comply to this requirements level. The Pressure Equipment Regulations and SANS 347 requires manufacturers to be certified as per ISO 3834 Part 2 requirements.

ISO 3834-2**ISO 3834-3**

Defines Standard Quality Requirements which can be selected by manufacturers which produce products that are still of a safety critical nature, but the manufacturer uses readily weldable materials and limited control and testing is required. Manufacturers of structural steel would be an example of which would be well suited to Standard Quality Requirements as these manufacturers will generally use limited welding processes and products are manufactured from carbon steel only.

Defines Elementary Quality Requirements which is suited to mass produced welded products of simple construction where there are minimal safety concerns and the mechanical loads on the welds are low. Typical products that could be manufactured to this level of quality requirements are furniture components and home appliances.

ISO 3834-4**ISO 3834-5**

References documents with which it is necessary to conform, in order to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4. In any control system, there is a need for documentation.



WHY CHOOSE JC AUDITORS

JC AUDITORS IS A ONE STOP SHOP FOR ALL YOUR CERTIFICATION NEEDS

ABOUT US

ISO certifications by JC Auditors are recognized globally. We work with clients and develop specific solutions. Our goal is to provide professional, efficient and simplified ISO and SANS certification solutions, enabling clients to achieve their business goals.

We are a Proudly South African company that utilizes a team of professional auditors & industry experts who are customer focused with a forward thinking approach.

JC Auditors have conducted in excess of 5000 audits over the last 15 years. We are tried & trusted, upholding ethics and adding value.

CONTACT US



+27 33 342 0529



info@jcauditors.com



www.jcauditors.com



+27 82 858 9995



OUR SERVICES

ISO 9001 • ISO 3834 • ISO 14001 • ISO 45001 • ISO 22000 • ISO 39001 • ISO 13485 • SANS 1395 (RTMS)

ONLINE, ON-DEMAND ISO 3834 TRAINING IS AVAILABLE