



Understanding EN 10204: 2004, Type 3.2 Certification

Tailored Remote & On-site Inspections

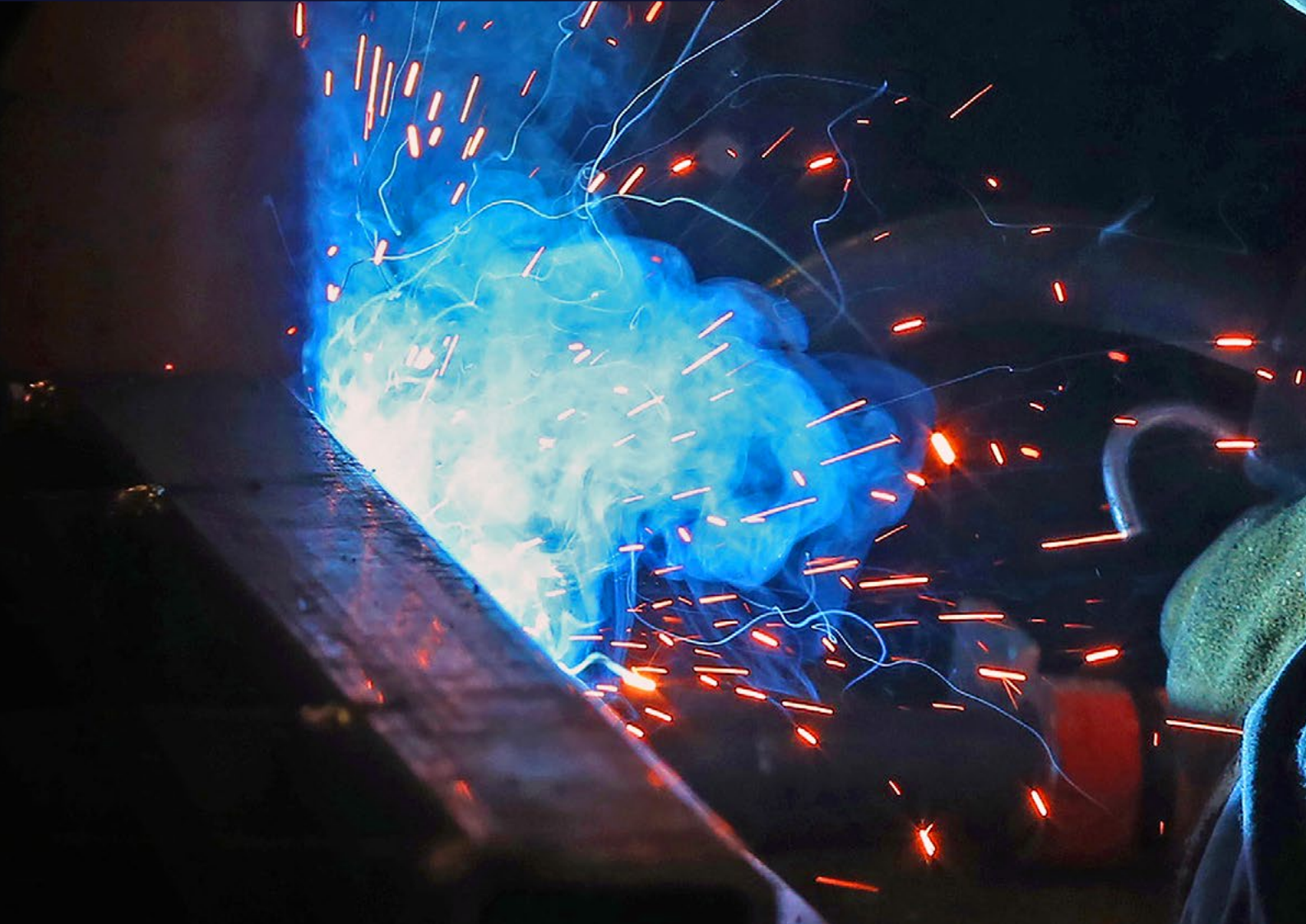


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Overview

With the introduction of EU directives, like the Pressure Equipment Directive (PED), manufacturers are required to prove that the materials they use meet defined chemical and mechanical properties. This requirement led to the authentication of material certification under EN 10204:2004, a European standard for material certification that includes four different certificate types. **Know more. Risk less.**

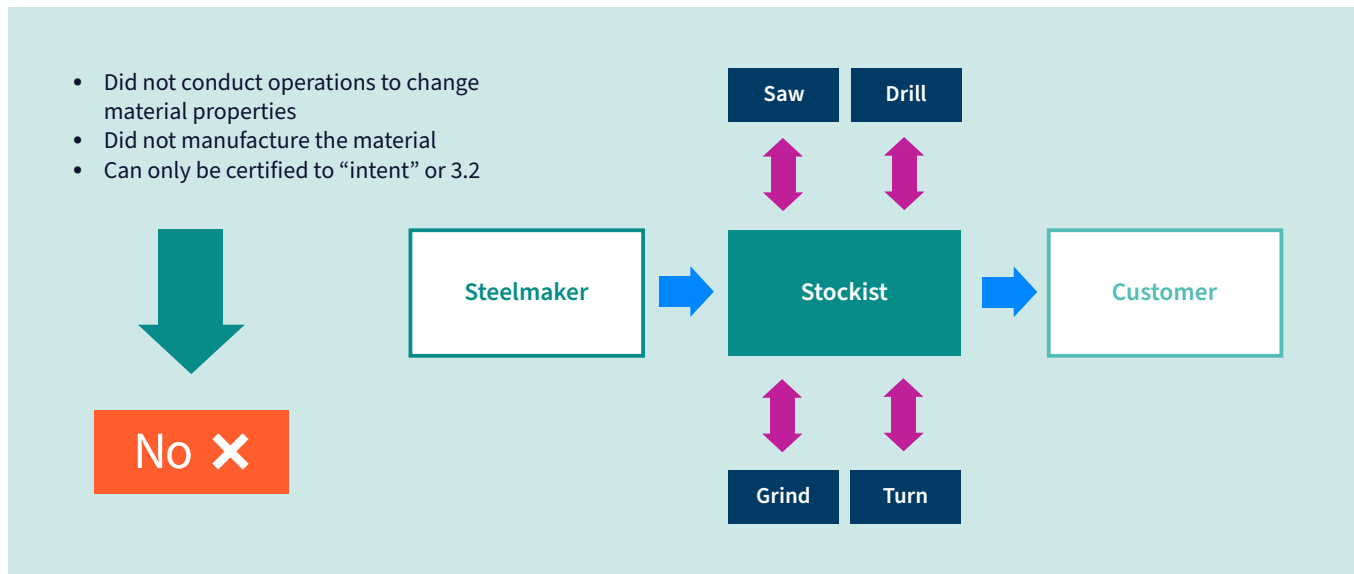
Since the introduction of this standard, other geographies and industries are recognising the value of type 3.2 certification and it is now widely used by oil and gas equipment end-users. Type 3.2 certification offers companies a greater level of confidence in the integrity of the materials they use as they navigate global supply chains that grow more expansive and complex each day.

Applicability

The scope of EN 10204:2004 applies to all metallic products, e.g. plates, sheets, bars, forgings, castings.

Definitions

Is this stockist a manufacturer?



Manufacturer

- Any party that carries out operations affecting the material properties of the finished product.
- Manufacturers the product according to the requirements of the order and to the product specifications.

Examples of manufacturers

Steelmakers, foundries, smelters, forgers, pipe/plate, mills

Stockist

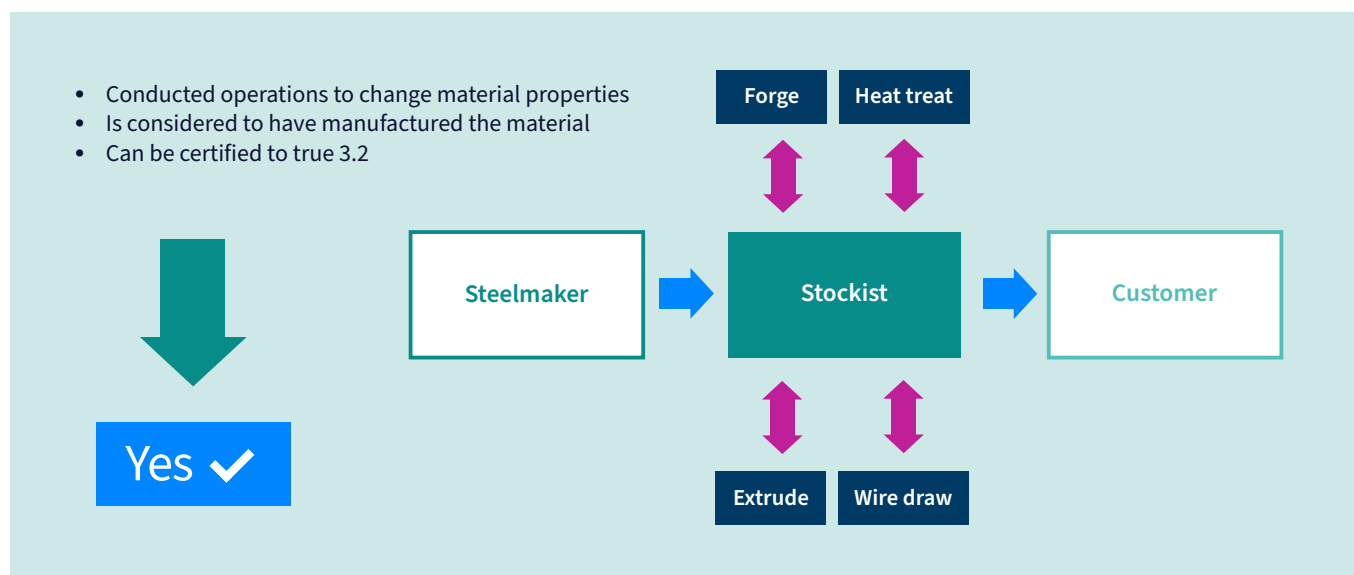
Intermediate material handler/supplier. A stockist, depending on their production route, can be classed as a manufacturer.

Product specification

Written detail of the technical requirements of the order, including references to relevant regulations, standards, or other specifications.

Independent third-party inspection

Fulfills the role of purchaser’s authorised representative or the inspector designated by the official regulations.



Type 3.2 certification

In the 1991 version of EN 10204, a certificate that required independent third-party involvement was called type 3.1. This type of certificate was changed to type 3.2 in the 2004 version of the standard.

EN 10204:2004 describes a type 3.2 certificate (inspection document) as a document prepared by both of the following parties:

1. The manufacturer's authorised inspection representative, independent of the manufacturing department, and
2. Either the purchaser's authorised representative or the inspector designated by the official regulations.

True type 3.2 certification is produced by the manufacturer with supplied test results. Tests are witnessed by a third-party inspector who verifies the material's identification and traceability through object evidence.

Purpose of type 3.2 certification & third-party Inspection

Within the type 3.2 certificate, both parties, manufacturer and purchaser, declare and confirm that the products supplied comply with the requirements of the order and that the required test results have been supplied. The purpose of type 3.2 certification and inspection is to verify:

- **Material traceability** from original cast to delivery to customer.
- **Material properties**, ensuring material is fit for its intended purpose.

Steps to type 3.2. certification

Type 3.2 certification is conducted by a qualified surveyor from an independent third-party inspection agency, like LRQA. The surveyor visits the manufacturer's site to identify the material to be verified. This includes a visual examination, sample dimensional checks and confirmation that the material is traceable back to the ladle chemical analysis, which may be in the form of an EN 10204:2004 type 3.1 certificate. The traceable reference may be the cast or heat number, test number, or some other reference clearly traceable back to the ladle analysis.

The traceable reference is normally marked on the component by the manufacturer via indelible means, i.e. hard stamping, etching, stencilling or other indelible marking. Adequate material is identified by the surveyor for further testing with the traceable identity transferred, including test stamp marking of the original piece.

Documentation is reviewed against specifications for compliance with chemical composition, heat treatment, and non-destructive examination.

The surveyor also visits the test house, which is either a department independent of the production within the manufacturer, or an accredited test facility (nationally or internationally accredited) that is an independent subcontractor.

- Witness the appropriate tests (tensile, impacts, bend tests, hardness etc.)
- Review any applicable metallurgical tests (corrosion, structure etc.) in accordance with the standard or specifications
- Review the results obtained to ensure they meet the requirements

Providing all testing and examinations meet with the specification requirements, the surveyor carries out a final visit to the manufacturer to verify that the material meets the "product specifications as defined in EN 10204:2004, review and countersign their Type 3.2 certificate and inspect and hard stamp (indelibly mark), or the material.

Certification to the “intent of” type 3.2

Often in industry, the purchaser (end-user) will order material from an intermediate material handler or stockist. The intermediate material handler may select material that has only been certified by the manufacturer using a type 3.1 certificate. As defined by EN 10204:2004, this certification has not been validated by an independent third-party inspector. However, it is widely accepted that material covered by type 3.1 certification can be “validated” to what is known as the “intent of” type 3.2 by the intermediate material handler using an independent third-party inspection to validate the material by way of verification tests.

“Intent of” type 3.2 certification must also be conducted by an independent third-party inspection agency, like LRQA. This involves visiting the intermediate material handler to identify the material to be verified. This type of inspection includes:

- A visual examination;
- Sample dimensional checks; and,
- Confirmation that the material is traceable back to the ladle chemical analysis (may be in the form of an EN 10204 type 3.1 certificate).

The traceable reference may be the cast or heat number, test number, or some other reference clearly traceable back to the mill certificate. The traceable reference is normally marked on the component by the original material manufacturer via indelible means, either hard stamping, etching, stencilling, or other indelible marking. Adequate material is identified by the surveyor for further testing with the traceable identity transferred, including test stamp marking of the original piece.

The surveyor also visits the test house, which is either a department independent of the production within the manufacturer, or an accredited test facility (nationally or internationally accredited) that is an independent subcontractor. During this visit, the inspector witnesses all additional material testing that is necessary to confirm compliance with the specification.

Providing all the testing and examinations meet the specified requirements, the surveyor carries out a final visit to intermediate material handler to:

- Review documentation (including the original manufacturer’s type 3.1 certificate);
- Verify that the material meets the product specification and the customer’s purchase order requirements;
- Inspect and hard stamp the material.

The surveyor then applies a certificate to the “intent of” EN 10204:2004 type 3.2, referencing the laboratory test report and the material manufacturer’s type 3.1 certificate.

Any material inspected to “the intent of” type 3.2 must not be passed off to customers as being certified in accordance with true EN 10204:2004 type 3.2.

The acceptability of any certification “to the intent of” type 3.2 should be confirmed with the purchaser, customer or end user before work starts. In some applications a true EN 10204:2004 type 3.2 certificate is required and “intent of type 3.2” certification will not be acceptable.

In both cases described above, LRQA Energy surveyor responsible for the third-party inspection can, at the client’s request, issue inspection certificates that detail the scope of inspection carried out and include a statement that the manufacturer’s EN10204:2004 type 3.2 certificate has been endorsed or stating that the ‘intent of’ EN 10204:2004 type 3.2 has been met, as applicable.



The type 3.2 and “intent of” 3.2 certification process

At LRQA, we conduct both type 3.2 and “intent of” 3.2 certification available on-site and remotely. In accordance with EN 10204:2004, our surveyors can verify material properties and traceability through objective evidence, like witnessing test results.

We have a three-stage inspection process to prepare for a type 3.2 certificate endorsement:

Check material’s identity and stamp piece/area to be used for mechanical testing.

1. **Witness/review mechanical and metallurgical testing.**
2. **Review all client’s documentation against “product specification”, then endorse paperwork and inspect/stamp material for release.**

It’s important to note that companies are different, so different scenarios exist. LRQA has the experience and flexibility to conduct additional inspections and witnessing activities to accommodate each client’s unique scenario and production requirements to ensure traceability. Additional inspection or witnessing can be done in line with customer requirements.

How we can help

As an independent third-party, our role is to ensure the traceability of the material used in the manufacture of critical components, while helping manufacturers comply with relevant codes, standards and regulatory requirements.

From the smallest component to larger fabrications, we help ensure the quality and reliability of the finished product. That assurance extends from material certification to the welders and welding processes used to fabricate safety-critical equipment and structures.

Remote inspection at a fixed modular price

We can now deliver our Type 3.2 inspection and witnessing activities remotely. By removing travel costs and increasing efficiency, we can deliver these services at a competitive, fixed modular price.

The remote option provides a flexible and efficient solution that reduces your planning and preparation time. This gives you access to our world-class inspectors from any location, while maintaining the high standards of an on-site inspection. Our remote inspections comply with the requirements of the relevant accreditation bodies - giving you the confidence in our ability to provide expert guidance and support.

Supply chain assurance

We bring visibility to the supply chain process with vendor site inspection. Sometimes called “second-party inspection”, these inspections are performed at the supplier site and are designed to make sure the buyer gets what they ordered. We can also conduct vendor assessments and audits and offer specialised remote inspection capabilities.

ISO 3834 Certification

ISO 3834 is the international standard for quality requirements for fusion welding of metallic materials. Having an ISO 3834 certificate demonstrates competency in fusion welding processes, which is assessed independently. Compliance with ISO 3834 part 2, 3 or 4, as appropriate, is now mandatory in many EN pressure vessel and construction standards.

Welder and welding operator qualification

LRQA provides independent, third-party witnessing of welder and operator qualification tests. We endorse welder certification according to national, European and internationally recognised standards, including EN ISO 9606, EN 287, ISO 14732, ASME IX and AWS.

Welding procedure qualification

LRQA certifies welding procedures in accordance with many codes and standards. As an ASME Authorised Inspection Agency and EU Notified Body for permanent joining approval, LRQA has the expertise to assist with the qualification of welding procedures according to national, European and internationally recognised standards, including ASME IX, AWS, EEMUA, NORSOK, BS 4515 and the ISO 15614 series.



YOUR FUTURE. OUR FOCUS.

About LRQA:

By bringing together unrivalled expertise in certification, customised assurance, cybersecurity, inspection and training, we've become a leading global assurance provider.

We're proud of our heritage, but it's who we are today that really matters, because that's what shapes how we partner with our clients tomorrow. By combining strong values, decades of experience in risk management and mitigation and a keen focus on the future, we're here to support our clients as they build safer, more secure, more sustainable businesses.

From independent third-party auditing, certification and training; to technical advisory services; to real-time assurance technology; to data-driven supply chain transformation, our innovative end-to-end solutions help our clients negotiate a rapidly changing risk landscape – making sure they're shaping their own future, rather than letting it shape them.

Get in touch

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