5 Classification of grades

Steels covered in this document are classified according to their structure into:

— austenitic steels,

— austenitic-ferritic steels,

— ferritic steels,

— martensitic steels,

— precipitation hardening steels.

See also EN 10088-1:2023, Annex C.

6 Requirements

6.1 Steelmaking process

Unless otherwise agreed at the time of enquiry and order, the steelmaking and manufacturing process for steels conforming to this document shall be at the discretion of the manufacturer.

6.2 Delivery condition

The products shall be supplied in the delivery condition agreed at the time of enquiry and order by reference to the conditions given in Table 7 and, where different alternatives exist, to the treatment conditions given in Tables 8 to 19 and 25 (see also Annex B).

6.3 Chemical composition

6.3.1 The chemical composition requirements given in Tables 2 to 5 apply in respect of the chemical composition according to the cast analysis.

Elements not quoted ("-") or not listed in these tables shall not be intentionally added to the steel without the agreement of the purchaser except for finishing the cast. All precautions shall be taken to avoid the addition of such elements from scrap and other materials used in production which would impair mechanical properties and the suitability of the steel.

6.3.2 The product analysis may deviate from the limiting values for the cast analysis given in Tables 2 to 5 by the values listed in Table 6.

6.4 Chemical corrosion resistance properties

For austenitic, austenitic-ferritic and ferritic stainless steels, the specifications in Tables 8, 9 and 10, referring to resistance to intergranular corrosion as defined in EN ISO 3651-2 applies (see also 7.4.6).

NOTE 1 EN ISO 3651-2 is not applicable for testing martensitic and precipitation hardening steels.

NOTE 2 The corrosion resistance of stainless steels is very dependent on the type of environment and can therefore not always be clearly ascertained through laboratory tests. It is therefore advisable to draw on the available experience of the use of the steels.