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**Hot-rolled steel sheet in coils of higher  
yield strength with improved formability  
and heavy thickness for cold forming**

*Tôles fortes en acier laminées à chaud à limite d'élasticité et aptitude au  
formage accrues, en bobines, pour formage à froid*



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## Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 20805 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 12, *Continuous mill flat rolled products*.

This second edition cancels and replaces the first edition (ISO 20805:2005), which has been technically revised.

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# Hot-rolled steel sheet in coils of higher yield strength with improved formability and heavy thickness for cold forming

## 1 Scope

**1.1** This International Standard applies to continuous hot-rolled steel sheet of higher yield strength with improved formability. The steel is killed, made according to a fine-grain practice and has a suitable chemical composition, which includes microalloying elements, to provide improved formability. The steel can be treated to achieve inclusion control. The product is intended for applications where parts are to be fabricated requiring better formability than is provided by normal high-yield-strength steel sheet. It is generally used in the as-delivered condition. This product is commonly produced on a wide strip mill.

Because of the combination of higher strength and improved formability, it is possible to obtain savings in mass along with better weldability (see 4.4).

**1.2** This product is commonly produced in the range of thicknesses greater than 6 mm to 25 mm, and widths of 600 mm and over, in coils. Hot-rolled sheet less than 600 mm wide can be slit from wide sheet and will be considered as sheet.

**1.3** This International Standard does not cover steels intended for boilers or pressure vessels, or steels designated as commercial quality, drawing quality or structural quality, or steels rolled to cold-reduced products, or steels designated as weathering steels, having increased atmospheric corrosion resistance, or those products rolled on a plate mill.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### microalloying elements

elements, such as niobium, vanadium, titanium, etc., added singly or in combination to obtain higher strength levels combined with better formability, weldability and toughness as compared with non-alloyed steel produced to equivalent strength levels