



DILLINGER HÜTTE GTS

DICUT

HEAVY PLATES WITH IMPROVED LASER CUTTING PROPERTIES

Specification DH-E53-B

Edition October 2000

DICUT steels are structural steels with improved laser and plasma cutting properties. They offer advantages with regard to cutting speed, regularity and quality of cut.

Product description

DICUT steels are available in accordance with the steel grades of EN 10 025 and EN 10 113-3 indicated in the following table. Other grades are available upon inquiry.

Grade	thicknesses (mm)	widths (mm)	lengths (mm)
EN 10 025			
DICUT S235 (JR, J0, J2)	8 to 30*	up to 2400 mm**	up to 8000 mm**
DICUT S275 (JR, J0, J2)			
DICUT S355 (JR, J0, J2, K2)	8 to 25*		
EN 10 113-3			
DICUT S355 (M, ML)	8 to 30*		
DICUT S420 (M, ML)			
DICUT S460 (M, ML)	8 to 20*		

* other thicknesses upon inquiry

** higher widths and lengths upon inquiry

Chemical composition

DICUT steels are guaranteed with a very low silicon content ($\text{Si} \leq 0,04\%$).

This low silicon content leads to improved quality of cut and a minimisation of burs on the cut edges. The low sulphur and phosphorus contents of the DICUT steels also have a favourable effect on the quality of cut.

The DICUT steels' chemical composition complies with the requirements of the specified standard.

Delivery conditions

The following delivery conditions apply in accordance with the specified standard:

EN 10 025: Normalising rolling (**N**)

EN 10 113-3: Thermomechanical rolling (**M**)

Identification

To avoid a deterioration of the laser cutting properties (pollution of the cutting oxygen), the traditional colour marking is not applied. The following information is written with special ink which does not have a negative effect for laser cutting on one end of each plate:

- Manufacturer's sign
- DICUT and steel grade
- heat number
- plate number

To avoid a local deterioration of the quality of cut DICUT plates are delivered without steel stamping unless otherwise agreed.

Fabrication properties

The general fabrication properties are the same as for the standard grades.

Due to their special chemical composition, their improved properties of both surfaces, their improved flatness and the homogeneity of their mechanical properties, DICUT steels lead to an improved quality of cut.

For plasma cutting and flamecutting DICUT steels also offer advantages compared to the standard grades.

We point out to the fact that besides an optimized plate design, precise adjustment of the cutting machine and the appropriate fabrication technique are of fundamental importance for a good result of the laser cut.

General technical delivery requirements

Unless otherwise agreed, the general technical delivery requirements in accordance with EN 10 021 apply.

Tolerances

DICUT plates are delivered with an improved flatness which leads to higher precision of the cut. This flatness is in accordance with EN 10 029 with tolerances of 5 respectively 8 mm measured over 1000 mm respectively 2000 mm plate length.

Thickness tolerances are in accordance with EN 10 029 class A, unless otherwise agreed.

Surface quality

DICUT plates have an improved surface quality on both surfaces. This leads particularly to enhanced productivity for laser cutting.

Packaging, transport and stockage

To maintain the quality of DICUT plates after stockage on site the plates are delivered in hydrophobic paper package. The contents of each package are indicated on a label on the packet. The transport is performed on lorries or covered goods waggons.

To avoid any oxydation we recommend to stock the plates in a covered hall if possible without humidity and to close the paper package after taking out individual plates.

General notes

If special requirements, which are not listed in this material specification, are to be met by the steel due to its intended use or processing, these requirements are to be agreed before the order.

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