DICUT

Heavy plates with improved laser cutting properties

Specification DH-E53-D, edition April 2016[1]

DICUT steels are structural steels with improved laser 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 and qualities of EN 10025-2 and EN 10025-4 indicated in the following table. Other grades and qualities are available upon inquiry.

Grades and qualities EN 10025-2	Thicknesses [mm]	Widths [mm]	Lengths [mm]
DICUT S235 (JR, J0, J2)	8 up to 30[a]	up to 2 400 mm[b]	up to 8 000 mm[b]
DICUT S355 (JR, J0, J2, K2)	8 up to 25[a]		
EN 10025-4			
DICUT S355 (M, ML)	8 up to 30[a]		
DICUT S420 (M, ML)	8 up to 20[a]		

[a] other thicknesses upon inquiry
[b] higher widths and lengths upon inquiry

Chemical composition

DICUT steels are characterized by a low silicon content (Si ≤ 0.25%). 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 10025-2: Normalising rolling **(N)**
EN 10025-4: Thermomechanical rolling **(M)**

[1] The current version of this material data sheet can be found on http://www.dillinger.de

Identification of plates

To avoid a deterioration of the laser cutting properties (pollution of the cutting oxygen), only the following necessary information is written on one end of each plate:

- steel grade (DICUT)
- heat number
- number of mother plate and individual plate
- the manufacturer's symbol
- inspection representative's sign

Processing

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 flame cutting DICUT steels also offer advantages compared to the standard grades.

We point out 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 10021 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 10029 class S (special tolerances on flatness).

Thickness tolerances are in accordance with EN 10029 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 storage

To maintain the quality of DICUT plates after storage on site the plates are delivered in hydrophobic 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 oxidation we recommend to stock the plates in a covered hall if possible without humidity and to close the package after taking out individual plates.

General note

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.

The information in this specification is a product description. This specification is updated at occasion demands. The latest version is available from the mill or as download at www.dillinger.de.

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