

## CUSTOMER INFORMATION

### COMMENTS RELATING TO CHANGES IN EN 10025 PARTS 2-6, EDITION 2019- HOT ROLLED PRODUCTS OF STRUCTURAL STEELS

Revision 1, September 2020, 7 pages

**Keywords:** EN 10025, Constructional Steelwork

This document is intended to provide customers with some details on the new versions in the EN 10025 series of Standards with an edition date of 2019. It begins with a short explanation of how the series of standards is structured and subsequently shows the most important changes compared to the previous versions. Firstly, overall changes are described and then the changes in steel grades and dimensions in the individual parts of the standards are shown.

This is intended to be purely and contains only the most important changes regarding steel ordering.

This information is intended for our customers in the fabrication and distribution sector. For this reason, the following information only covers flat products.

We hope to contribute to the prompt application of this standard.

For further information, we are entirely at your disposal.

Marketing and Technical Support Constructional Steelwork

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### 1. The new concept of the EN 10025 standard - Hot rolled products of structural steels

The concept of EN 10025-2 to -6 has been changed compared to the previous version of this standard.

Each of the new parts 2-6 is now an independent standard regarding technical delivery conditions including the drawings, preparation of samples and test pieces, test methods, marking and packaging in the old version these aspects were covered in part 1).

For a short transition period, the standards EN 10025-1:2004 and EN 10025-2:2019 to EN 10025-6:2019 will be valid simultaneously. The revised version of EN 10025-1 has to meet the requirements of the Construction Products Regulation (CPR) and will therefore only be published later.

For applications under the CPR, the relevant part 2 to 6 (version 2019) and part 1 (version 2004) must be used together.

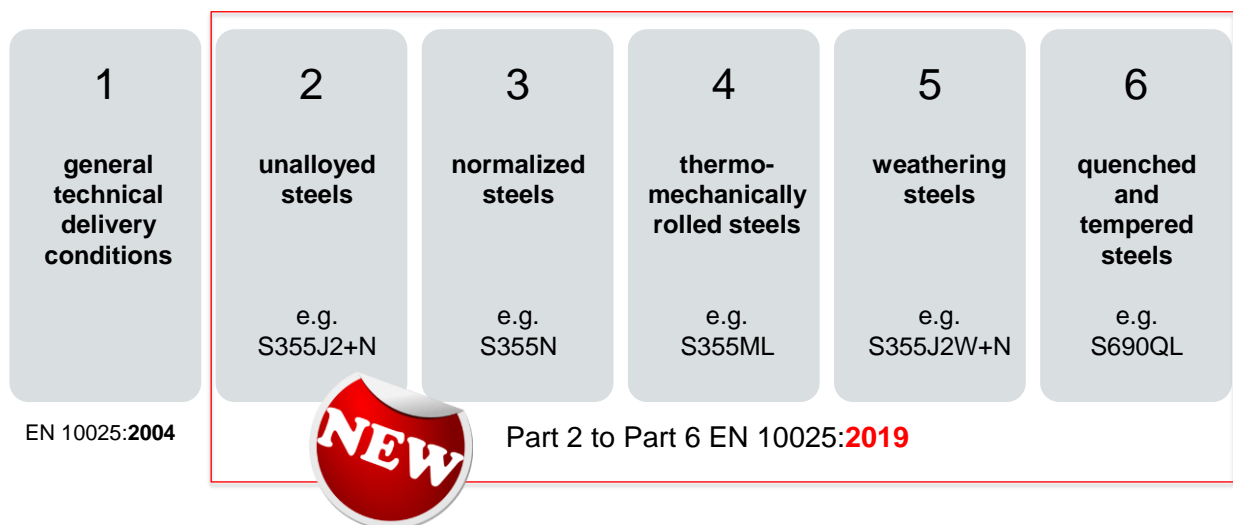


Figure 1: Overview of the new structure of EN 10025

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### 2. General, overall changes in parts EN 10025-2 to -6:2019

Parts 2-6 of the EN 10025 edition 2019 contain changes that are the same in the different parts. These general changes are summarized in the following chapter.

#### 2.1 Handling of the CE marking

One of the overall changes is the handling of the CE marking.

In future, the following will be applied: Unless otherwise agreed, steel grades (with the exception of steel grades S185, E295, E355 and E360) will always be supplied with the CE marking.

- ➔ Dillinger steel grades already have the new CE certification and can be supplied in accordance with the new EN 10025.

The original CE certificates are available on our homepage or under the following link:

For Dillinger: <https://www.dillinger.de/d/downloads/download/8136>

For Dillinger France: <https://www.dillinger.de/d/downloads/download/8130>



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**Bescheinigung der Konformität der werkseigenen Produktionskontrolle**  
**0769 – CPR – VAS – 00584 – 4**

Gemäß der Verordnung (EU) Nr. 305/2011 des Europäischen Parlaments und des Rates vom 9. März 2011 (Bauproduktenverordnung - CPR), gilt diese Bescheinigung für die Bauprodukte

**Warmgewalzte Baustahlprodukte zur Verwendung in Metallbauwerken oder in Metall-/Betonverbundbauwerken**

Technische Lieferbedingung	Warmgewalzte Stahlbleche gemäß EN 10029 in Dicken bis	Werkstoff
EN 10025-2	30 mm	S235 JRC; J0C; J2C; S275 JRC; J0C; J2C; S355 JRC; J0C; J2C; K2C
	400 mm	S235 JR; J0; J2; S275 JR; J0; J2; S355 JR; J0; J2; K2
EN 10025-3	250 mm	S275 NML; S355 NML; S420 NML; S460 NML
EN 10025-4	150 mm	S275 MML; S355 MML; S420 MML; S460 MML; S500 MML
EN 10025-5	150 mm	S235 J0W; J2W;
		S355 J0W; J2W; K2W; J4W; J5W; S420 J0W; J2W; K2W; J4W; J5W; S460 J0W; J2W; K2W; J4W; J5W
EN 10025-6	125 mm	S890 Q; QL; QL1; S960 Q; QL; QL1
	200 mm	S460 Q; QL; QL1 bis S690 Q; QL; QL1

in Verkehr gebracht unter dem eigenen Namen oder der eigenen Marke und hergestellt im Herstellwerk durch

**AG der Dillinger Hüttenwerke**  
Werkstraße 1, 66763 Dillingen / Saar, Deutschland

Diese Bescheinigung bestätigt, dass alle Bestimmungen über die Bewertung und Überprüfung der Leistungsbeständigkeit, beschrieben im Anhang ZA der Norm

**EN 10025-1:2004**

unter System 2+, angewendet werden und

**die werkseigene Produktionskontrolle alle darin vorgeschriebenen Anforderungen erfüllt.**


Diese Bescheinigung wurde erstmals am 14. September 2015 ausgestellt und bleibt gültig, solange weder die harmonisierte Norm, das Bauprodukt, die AVCP Methoden noch die Herstellbedingungen in dem Werk wesentlich verändert werden, außer wenn sie von der notifizierten Zertifizierungsstelle für die werkseigene Produktionskontrolle ausgesetzt oder zurückgezogen wird, längstens jedoch bis 1. Dezember 2024.

Karlsruhe, 2. Dezember 2019

Leiter der Zertifizierungsstelle




Univ.-Prof. Dr.-Ing. T. Ummerhofer



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**Bescheinigung der Konformität der werkseigenen Produktionskontrolle**  
**0769 – CPR – VAS – 00584 – 5**

Gemäß der Verordnung (EU) Nr. 305/2011 des Europäischen Parlaments und des Rates vom 9. März 2011 (Bauproduktenverordnung - CPR), gilt dieses Zertifikat für die Bauprodukte

**Warmgewalzte Baustahlprodukte zur Verwendung in Metallbauwerken oder in Metall-/Betonverbundbauwerken**

Technische Lieferbedingung	Warmgewalzte Stahlbleche gemäß EN 10029 in Dicken bis	Werkstoff
EN 10025-2	30 mm	S235 JRC; J0C; J2C; S275 JRC; J0C; J2C; S355 JRC; J0C; J2C; K2C
	180 mm	S235 JR; J0; J2; S275 JR; J0; J2; S355 JR; J0; J2; K2
EN 10025-3	180 mm	S275 NML; S355 NML; S420 NML; S460 NML
EN 10025-4	110 mm	S275 MML; S355 MML; S420 MML; S460 MML; S500 MML
EN 10025-5	150 mm	S235 J0W; J2W;
		S355 J0W; J2W; K2W; J4W; J5W; S420 J0W; J2W; K2W; J4W; J5W; S460 J0W; J2W; K2W; J4W; J5W

in Verkehr gebracht unter dem eigenen Namen oder der eigenen Marke durch die

**AG der Dillinger Hüttenwerke**  
Werkstraße 1, 66763 Dillingen / Saar  
und hergestellt im Herstellwerk

**Dillinger France**  
3032, Rue du Comte Jean – CS55317, 93979 Dunkerque Cedex 1, Frankreich.

Diese Bescheinigung bestätigt, dass alle Bestimmungen über die Bewertung und Überprüfung der Leistungsbeständigkeit, beschrieben im Anhang ZA der Norm

**EN 10025-1:2004**

entsprechend System 2+ angewendet werden und dass

**die werkseigene Produktionskontrolle alle darin vorgeschriebenen Anforderungen erfüllt.**

Diese Bescheinigung wurde erstmals am 14. September 2015 ausgestellt und bleibt gültig, solange weder die harmonisierte Norm, das Bauprodukt, die AVCP Methoden noch die Herstellbedingungen in dem Werk wesentlich verändert werden, außer wenn sie von der notifizierten Zertifizierungsstelle für die werkseigene Produktionskontrolle ausgesetzt oder zurückgezogen wird, längstens jedoch bis 1. Dezember 2024.

Karlsruhe, 2. Dezember 2019

Leiter der Zertifizierungsstelle



Univ.-Prof. Dr.-Ing. T. Ummerhofer

Figure 2: CE certificates Dillinger and Dillinger France for the steel grades of the new EN 10025

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### 2.2 Changes concerning the Si content

For grades with controlled Si content which are intended to be used, for example, for hot-dip galvanizing, the maximum carbon equivalent values are increased as follows:

- for Si ≤ 0.04 % increase of CEV values by 0.02 (old standard 0.030%)
- for Si ≤ 0.25 % increase of CEV values by 0.01.

This change applies to grades S275 and S355 from part 2, as well as to all steel grades from parts 3, 4 and 6. It can be found in chapter 7.2.5 for part 2 and in chapter 7.2.4 for parts 3, 4, 6.

### 2.3 Changes in the chapter on hot-dip galvanizing (Option 5 - Chemical composition for hot-dip galvanizing)

Steels with required chemical composition for hot dip galvanizing can be supplied by using option 5. According to option 5, the purchaser and manufacturer must agree on the steel composition (ladle analysis) for silicon and phosphorus with required values as mentioned in EN ISO 14713-2:2009, Table 1, column 2.

The categories presented in Table 1 are possible and replace the old classes 1, 2, 3 (see Table 2).

*Table 1: New table with three categories A, B, D with subsequent analysis limits from the 2019 edition.*

<b>NEW Table EN 10025:2019</b>		
Category	Si	Si + 2.5P
<b>A</b>	≤ 0.03	≤ 0.09
<b>B</b>	0.14 ≤ Si ≤ 0.25	-
<b>D</b>	0.25 < Si ≤ 0.35	-

*Table 2: Old table with three classes 1, 2, 3 with subsequent analysis limits from the 2004 edition.*

<b>OLD Table EN 10025:2004</b>			
Class	Si	Si + 2.5P	P
<b>1</b>	≤ 0.030	≤ 0.090	-
<b>2</b>	≤ 0.35	-	-
<b>3</b>	0.14 < Si ≤ 0.25	-	≤ 0.035

These changes concern parts 2-4 and part 6 in chapter 7.4.3.

EN ISO 1461 should be used to define coating requirements.

Further guidance can be found in EN ISO 14713-2.

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### 2.4 Quantity for mechanical properties test unit

The proof of the mechanical properties of the plates, such as tensile strength, yield strength, impact energy and elongation, must be carried out once per melt and 60 t (old standard: per melt and 40 t).

This modification can be found in part 2-6 in section 9.1.2.

### 2.5 Changes concerning the options

In the new parts 2-6 new options were added, options were transferred or deleted.

The new option 33 can be used if the customer explicitly does not want CE marking according to EN 10025-1:2004.

The changes in option 5 can be found above (2.3. Changes in chapter on hot-dip galvanizing).

Option 3 for the verification of the impact test at other test temperatures was transferred to option 24.

Option 9 (the testing of surface quality and dimensions must be carried out by the customer at the production plant) and option 21 (grain size verification for products in nominal thicknesses  $\leq 6$  mm made of steels of quality groups J2 and K2) were deleted.

This change can be found in part 2-6 in chapter 13.

The new Appendix B (except for Part 5 Appendix D) gives a tabular overview of which options of EN 10025-2 to -6:2019 are possible in the different parts.

## Appendix B List of Options

Number of Option	Options	Part 2	Part 3	Part 4	Part 5	Part 6
....	...	-	x	x	-	-
33	No application of CE-marking according to EN 10025-1:2004	x	x	x	x	x
....	...	x	x	x	x	x

Figure 3: Illustrative presentation of the new Annex B

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### 3. Overview of the new steel grades and thickness ranges in the parts EN 10025-2 to -6:2019

The most important changes in comparison with the previous parts of EN 10025:

#### Part 2: unalloyed structural steels

- Increase of the maximum nominal thickness to 400 mm for JR and J0 (instead of  $\leq 250$  mm).  
→ Possible with Dillinger.

#### Part 3: normalized steels

- No significant changes.

#### Part 4: thermomechanical rolled fine-grained structural steels

- new steel grade S500 M/ ML with maximum CEV 0.48.  
→ With Dillinger even with improved CEV values possible.
- Increase of the maximum nominal thickness to 150 mm for all grades (instead of  $\leq 120$  mm).  
→ All Dillinger TM steel grades are available in thicknesses up to 150 mm.

#### Part 5: weather-resistant structural steels

- new grades S420 and S460 up to 150 mm (in the old standard higher strength steels were not possible)
- new impact energy requirements for all steel grades (except S235):  
K2 → 40 J (-20 °C)  
J4 → 27 J (-40 °C)  
J5 → 27 J (-50 °C)
- delivery conditions: "+N", "+AR" or "+M" are possible (old standard +M not possible)  
→ Consequently, it will be possible in future to benefit from the advantageous delivery condition +M for weather-resistant steels as well. Our brand steels for this purpose: DIWETEN 355+M and DIWETEN 460+M.

#### Part 6: flat products made of steels with higher yield strength in quenched and tempered condition

- new nominal thickness for S460 to S690 :  $\leq 200$  mm
- new nominal thickness for S890 and S960:  $\leq 125$  mm
- Ni content  $\leq 4.0$  % (instead of 2.0 % in the old version)  
→ Available already today at Dillinger

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### 4. Handling of the old and new EN 10025 standard at Dillinger

#### 4.1 CE- certification of Dillinger steel grades

Dillinger can already supply all steel grades in the new maximum plate thicknesses and/or with the new impact energy requirements of the new EN 10025 standard (2019 edition) with CE marking.

Our DI-MC, DILLIMAX and DIWETEN brand steels are also available with CE certification by means of a double certification with the equivalent steel grade of EN 10025, e.g. DI-MC 355 B/S355M.

#### 4.2 Dated standard reference vs. undated standard reference in steel ordering process and in specifications

Steel grades of EN 10025 can now be ordered from Dillinger in accordance with the new edition. However, it is still possible to order according to the 2004 edition. If desired, double certification according to both editions is also available, under the precondition that the steel grades are included in both standards.

In the future, if only the standard, i.e. EN 10025-X, is mentioned during orders or in specifications, Dillinger will always supply according to the new EN10025 edition 2019.

In case of an explicit reference to the edition, i.e. EN 10025:2004, Dillinger will continue to deliver according to the old standard.

We kindly ask our customers to consider this in particular for their specifications and to make changes if required.

#### 4.3 Future handling of national editions of the new EN 10025 series of standards, edition 2019

In future, when a steel grade is ordered from Dillinger after a national version of the new EN 10025 series, the steel grade will be declared in the documents according to the corresponding higher-level European standard.

National and European versions are identical in respect of content and design. This is defined in the CEN (Centre Européen de la Normalisation) Rules of Procedure in Part 3, Annex ZC, so that no differences are permitted between the national standards of the individual CEN member states and the European standard in accordance with these specifications is identical with the corresponding DIN-EN, NF-EN, BS-EN, UNI-EN, etc.

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Dillingen, September 2020

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