UDC 621.873.3 : 624.96.014.2.002 DEUTSCHE NORM November 1984

Cranes
Steel structures
Principles of design and construction

DIN 15 018 Part 2

Krane; Stahltragwerke; Grundsätze für die bauliche Durchbildung und Ausführung

Supersedes April 1974 edition.

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

DIN 15 018 Part 1 and Part 2 have been published following an abridged procedure as specified in DIN 820 Part 4, in the form of corrected editions. This method of proceeding, as well as the corrections that have now been made, were notified and explained in the *DIN-Mitteilungen* (DIN News) 61, 1982, volume No. 8, pages 496 to 498.

It would have been inadvisable to revise the content of the standard at the present time, in view of the general approval which has greeted its publication, and mainly because of the current discussions on the national basic standards relating to steel structures (DIN 18 800); furthermore, the efforts of ISO/TC 96 to achieve an internationally approved ruling with regard to the loads and load combinations which are to be assumed for the verification by calculation of the performance characteristics of cranes had to be borne in mind.

The principal corrections, including those which have arisen from the processing of the comments received, are described in the Explanatory notes.

Contents

Continued on pages 2 to 9

Beuth Verlag GmbH, Berlin 30, has exclusive sale rights for German Standards (DIN-Normen)
01.86

DIN 15 018 Part 2 Engl. Price group 7
Sales No. 0107

1 Field of application

This standard applies to the steel structures of cranes of all types, and also to mobile steel structures for continuous conveyors, with the exception of vibrating conveyors. It does not cover to craneways, excavators, ropeways and wagon tipplers.

2 Standards and documents referred to

The following standards and documents shall be complied with unless otherwise specified in this standard.

DIN 4115	Lightweight and tubular steel construction in building; rules relating to approval, design and construction
DIN 8563 Part 2	Quality assurance of welding operations; requirements regarding the firm
DIN 8563 Part 3	Quality assurance of welding operations; fusion-welded joints in steel; requirements, evaluation groups
DIN 15018 Part 1	Cranes; steel structures; verification and analyses
DIN 17100	Steels for general structural purposes; quality specifications
DASt-Richtlinie (DASt guideline) 009	*Empfehlung zur Wahl der Stahlgütegruppen für geschweißte Stahlbauten* [1]) (Recommendation on the selection of steel quality groups for welded steel structures)
DASt-Richtlinie (DASt guideline) 010	*Anwendung hochfester Schrauben im Stahlbau* [1]) (Use of high strength bolts in structural steelwork)

Reference is also made in the text of the present standard to the following standards or to certain parts thereof.

DIN 124	Round head rivets; nominal diameters 10 to 36 mm
DIN 127	Barbed or plain spring lock washers with rectangular cross section
DIN 128	Curved or crinkle type spring washers (high compression load spring washers)
DIN 302	Countersunk head rivets; nominal diameters 10 to 36 mm
DIN 407 Part 1	Symbols for rivets, bolts and hole diameters used in steel structures
DIN 601	M 5 to M 52 hexagon head bolts; product grade C (modified version of ISO 4016)
DIN 609	Hexagon fit bolts with long threaded dog point
DIN 660	Round head rivets; nominal diameters 1 to 9 mm
DIN 741	Wire rope grips for rope terminations for light duty applications
DIN 997	Tracing dimensions for steel sections and steel bars
DIN 998	Hole pitches in unequal angle steels
DIN 999	Hole pitches in equal angle steels
DIN 1080 Part 1	Terms, symbols and units used in civil engineering; principles
DIN 1080 Part 2	Terms, symbols and units used in civil engineering; statics
DIN 1080 Part 4	Terms, symbols and units used in civil engineering; steel construction; composite steel construction and steel girders in concrete
DIN 1142	Wire rope grips for rope terminations to meet safety requirements
DIN 1912	Symbolic representation of welded, soldered and brazed joints
DIN 1913 Part 1	Covered electrodes for the welding of unalloyed and low alloy steel; classification, designation, technical delivery conditions
DIN 2078	Steel wires for wire ropes
DIN 2310 Part 1	Thermal cutting; concepts and nomenclature
DIN 2310 Part 3	Thermal cutting; oxygen cutting, bases of process, quality, dimensional deviations
DIN 3092	Metallic wire rope cappings in rope sockets; safety requirements and testing
DIN 3093 Part 1	Wrought aluminium alloy compression clamps; blanks made from flat oval tubing with uniform wall thickness; technical delivery conditions
DIN 3093 Part 2	Wrought aluminium alloy compression clamps; compression joints using blanks with uniform wall thickness; types, correlation
DIN 3093 Part 3	Wrought aluminium alloy compression clamps; compression joints using blanks with uniform wall thickness; manufacture, quality requirements, testing
DIN 6914	Hexagon bolts with large widths across flats for high tensile bolting in steel structures [2])
DIN 6916	Round washers for high tensile bolting in steel structures
DIN 6917	Square washers for high tensile bolting of I sections in steel structures
DIN 6918	Square washers for high tensile bolting of channels in steel structures
DIN 6935	Cold bending of steel flat products
Supplement 1 to DIN 6935	Cold bending of steel flat products; values of compensation factors v for calculating the flat length
DIN 7968	Hexagon fit bolts for steel structures
DIN 7989	Plain washers for steel structures
DIN 7990	Hexagon bolts with hexagon nuts for steel structures
DIN 8551 Part 1	Edge preparation for welding; groove forms on steel, gas welding, manual arc welding and gas-shielded arc welding
DIN 8557 Part 1	Filler metals for submerged-arc welding; welding of unalloyed and alloy steels; designation, technical delivery conditions
DIN 8559 Part 1	Filler metals for gas-shielded arc welding; wire electrodes and filler wires for gas-shielded metal arc welding of unalloyed and low alloy steels
DIN 8560	Qualification testing of welders for welding steel
DIN 8565	Protection against corrosion of steel structures by thermal spraying of zinc and aluminium; general principles
DIN 18364	Contract procedure for construction work. Part C: General technical speci-

[1]) *Stahlbau-Verlag*, Köln.

[2]) Termed "high strength friction grip bolts" in this standard.