



International

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Cranes and hoists — Selection of wire ropes, drums and sheaves

Appareils de levage à charge suspendue et treuils — Choix des câbles, tambours et poulies

ISO 16625

**Second edition
2025-02**



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This document was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 3, *Selection of ropes*.

This second edition cancels and replaces the first edition (ISO 16625:2013), which has been technically revised.

The main changes are as follows:

- rope selection has been based on working cycles as opposed to the previous time-based concept;
- different proofs of competence for running ropes (static, fatigue, multilayer spooling) and stationary ropes (static, fatigue) have been incorporated;
- the substantial innovation of this document lies in a new mathematical approach for the proof of fatigue strength of running steel wire ropes. A new reference point has been introduced as a characteristic value for the fatigue strength, from which the S-N curves of the fatigue strength of steel wire ropes at different D/d-ratios are described;
- additional annexes have been introduced:
 - [Annex A](#) (normative) Number of relevant bending cycles;
 - [Annex B](#) (informative) Determination of the maximum tensile force in the ropes of multi-rope grabs (holding and closing);
 - [Annex C](#) (informative) Comparison of the minimum design factor according to ISO 16625:2013 and safety level according current version;
 - [Annex D](#) (informative) Selection of a rope by minimum design factor Z_p ;
 - [Annex E](#) (informative) Assumed number of hoist ropes I_r during life of a crane.

This document is intended to be used together with the ISO 4301-1 or other applicable part of the ISO 4301 series, ISO 4309, ISO 8686-1 or applicable part of the ISO 8686 series.

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