INTERNATIONAL STANDARD

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Earth-moving machinery — Articulated frame lock — Performance requirements

Engins de terrassement — Dispositif de verrouillage de la direction par châssis articulé — Exigences de performance

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10570 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety requirements and human factors*.

This second edition cancels and replaces the first edition (ISO 10570:1992), which has been technically revised.

Earth-moving machinery — Articulated frame lock — Performance requirements

1 Scope

This International Standard defines performance requirements for an articulated frame lock designed to prevent unintended machine articulation of earth-moving machinery as defined in ISO 6165 and with an articulated frame during either shipment or maintenance.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6165, *Earth-moving machinery — Basic types — Vocabulary*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
articulated frame lock
link(s), bar(s), pin(s) or equivalent, including attaching parts and attachment points to the machine frame, designed to prevent unintended articulation of an earth-moving machine with an articulated frame during either shipment or maintenance

NOTE The articulated frame lock is not intended for use while the machine is moving/travelling by its own means.

4 Requirements

4.1 Mounting positions

The articulated frame lock shall be capable of securing the machine in a straight-ahead position and shall be mounted either on the side normally used for access to the operator's station or at the discretion of the manufacturer.

If it is necessary that the machine be articulated so that routine maintenance functions can be performed, the articulated frame lock shall be capable of securing the machine in the articulated position required for such functions.

The articulated frame lock shall be so designed that its mounting is possible without frequent adjustment of the two parts of the machine frame.

4.2 Attachment to machine

The articulated frame lock shall be attached to the machine such that none of its parts become separated from the machine during use or storage.

4.3 Colour

The articulated frame lock link parts shall be coloured red, which colour shall be clearly visible in both the stored and installed positions. However, when the machine is itself red, another, clearly contrasting, colour shall be used.

4.4 Performance test requirements

Performance tests shall be carried out with the steering system in both left- and right-hand articulation.

The articulated frame lock, for all positions, shall not exhibit any permanent structural deformation when submitted to a force equal to twice the maximum force that will be induced by the machine steering system at the upper limits specified by the machine manufacturer.

For articulated-frame dumpers, the articulated frame lock shall withstand a force equal to 1,2 times that induced by the machine steering system.

If the articulated frame lock is needed only during lifting and transportation (as is the case, for example, with scrapers and graders), the required force may be calculated by the manufacturer to be equal to twice the maximum force on the frame lock during lifting and transportation.

Bibliography

[1] ISO 6016:1998, *Earth-moving machinery — Methods of measuring the masses of whole machines, their equipment and components*

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