INTERNATIONAL STANDARD

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Self-propelled machinery for forestry — Roll-over protective structures — Laboratory tests and performance requirements

Machines forestières automotrices — Structures de protection au retournement — Essais de laboratoire et exigences de performance

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 8082 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 15, *Machinery for forestry*.

This second edition cancels and replaces the first edition (ISO 8082:1994), which has been technically revised.

Introduction

Special forestry machinery needs a roll-over protective structure (ROPS) standard of its own that specifies the relevant machine types from the enormous variety of forestry machines.

The requirement levels and testing procedures of this International Standard are the same as those of ISO 3471 [1]. In this revised edition, longitudinal loading has been included in the test procedure, the machine types to which the tests are applicable have been specified, and a new bolt and nut class, as well as the − 20 degrees temperature class for Charpy V-notch impact strength, have been added. Specification of the vertical loading beam width also improves the repeatability of the test between different testing laboratories.

Self-propelled machinery for forestry — Roll-over protective structures — Laboratory tests and performance requirements

1 Scope

This International Standard establishes a consistent, reproducible means of evaluating the force–deflection characteristics of roll-over protective structures (ROPS) on self-propelled forestry machines under static loading, and prescribes performance requirements for a representative specimen under such loading. It is applicable to forwarders, skidders, feller-bunchers, processors, harvesters and loaders, as defined in ISO 6814. It is not applicable to machines having a rotating platform with a cab and boom on the platform.

NOTE Research work is being done to develop a test method and criteria for machines having a rotating platform with a cab and boom on the platform. These machines are to be included in a future revision of ISO 8082.

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 148, *Steel — Charpy impact test (V-notch)*

ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs*

ISO 898-2:1992, *Mechanical properties of fasteners — Part 2: Nuts with specified proof load values — Coarse thread*

ISO 3164, *Earth-moving machinery — Laboratory evaluations of protective structures — Specifications for deflection-limiting volume*

ISO 6814, *Machinery for forestry — Mobile and self-propelled machinery — Terms, definitions and classification*

3 Terms, definitions and symbols

For the purposes of this document, the following terms, definitions and symbols (see Table 1) apply.

3.1
roll-over protective structure
ROPS
system of structural members whose primary purpose is to reduce the possibility of a seat-belted operator being crushed should the machine roll over

NOTE These structural members include any subframe, bracket, mounting, socket, bolt, pin, suspension or flexible shock absorber used to secure the system to the machine frame, but exclude mounting provisions that are integral with the machine frame.