STANDARD **11662-1**

First edition
1995-06-01

Mobile cranes — Experimental determination of crane performance —

Part 1:
Tipping loads and radii

Grues mobiles — Détermination expérimentale des performances des grues —

Partie 1: Charges de basculement et portées

Reference number
ISO 11662-1:1995(E)

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.

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.

International Standard ISO 11662-1 was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 6, *Mobile cranes*.

ISO 11662 consists of the following parts, under the general title *Mobile cranes — Experimental determination of crane performance* :

— *Part 1: Tipping loads and radii*

— *Part 2: Structural characteristics*

— *Part 3: Dynamic characteristics*

Annex A of this part of ISO 11662 is for information only.

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Printed in Switzerland

Introduction

ISO 11662 specifies test methods to be used to verify the design of a crane relative to its load rating chart. These tests will normally be one-time tests carried out on the prototype of a new model. Based on the test results, the load chart of the crane shall be modified where necessary to comply with the requirements of the International Standard.

Mobile cranes — Experimental determination of crane performance —

Part 1:
Tipping loads and radii

1 Scope

This part of ISO 11662 specifies a test method to determine the maximum capacity of a mobile crane to counterbalance loads applied on its hook block.

The test is applicable for cranes whose capacity to support loads is based on its static resistance to overturning. The test shall not be used on cranes whose capacity is based on structural strength or on limitations due to available load hoist, jib hoist or jib telescope capability.

This part of ISO 11662 applies to all mobile cranes as defined in ISO 4306-2.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 11662. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11662 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4306-2:1994, *Lifting appliances — Vocabulary — Part 2: Mobile cranes.*

3 Definitions

For the purpose of this part of ISO 11662, the following definitions apply.

3.1 balance condition: Condition of crane loading in which the load moment acting to overturn the crane is equal to the maximum moment of the crane available to resist overturning.

3.2 axis of rotation: Vertical line through the axis around which the crane superstructure rotates before load is applied to the crane hook.

3.3 load: Force acting to unbalance a crane, resulting from the gravitational force created by the hook block itself and the charges suspended from it.

3.4 radius of load: Horizontal distance between the point from which the radius is measured projected onto the supporting surface before loading, and the centre of the vertical hoist line or tackle after loading.

4 Principle

The load is applied by freely suspending from the crane hook block a weight of predetermined magnitude and either lengthening the radius until crane stability is overcome, or adding incremental weights using a fixed radius until crane stability is overcome.

The tester should ensure that tests are made in the least stable direction for each rating under test.

5 Apparatus

5.1 Supporting surface, of concrete or other firm material, sufficiently large to provide for unobstructed testing.