INTERNATIONAL STANDARD

ISO 5006-1

First edition
1991-11-01

Earth-moving machinery — Operator's field of view —

Part 1:
Test method

Engins de terrassement — Visibilité du conducteur —
Partie 1 Méthode d'essai

Reference number
ISO 5006-1 1991(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 5006-1 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Sub-Committee SC 1, *Test methods relating to machine performance*

ISO 5006 consists of the following parts, under the general title *Earth-moving machinery — Operator's field of view*

— *Part 1: Test method*

— *Part 2 Evaluation method*

— *Part 3 Criteria*

Annex A forms an integral part of this part of ISO 5006

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland
Printed in Switzerland

Introduction

The purpose of this test method is to allow the determination of the maskings that are caused by various parts of the machine on a visibility test circle around the machine from a point which simulates the eye position of the 50th percentile earth-moving machinery operator An evaluation method will be given in ISO 5006-2 and criteria for machinery in ISO 5006-3

The visibility test circle selected is one of 12 m radius on the test surface with its centre at the eye position point For the sector of vision and the visual field, an arc on the test surface with a radius of 19 m with its centre at the filament position centre is used to determine the maskings at the greater radius

The test method recognizes the effect of the operator being able to move the eye position in the head and the head position in the operator's station This results in the use of a filament spacing of up to 405 mm in the sector and field of vision and a filament spacing of 205 mm in the field of view The nominal eye spacing of 65 mm is used for the basic filament spacing

Rationale for Part 1

There is a need to quantify the ability of the earth-moving machinery operator to view the areas around the machine considering specific machine design, function and operation This part of ISO 5006 provides a test method which will allow users to quantify the visibility which is possible with current machines

A circular visibility area with a 12 m radius on the test surface was chosen because it is practical from a test facility viewpoint It represents typical road dimensions in urban areas, and it presents the ability to observe sufficient near-field visibility conditions to be useful in machinery design

The light-bulb filament locations were determined based on the eye positions of the 50th percentile earth-moving machinery operator The filament spacing was based on the typical binocular eye spacing of operators The secondary filament spacings took into account the ability of the operator to rotate the eyes within the head, the head position on the upper torso and to rotate the upper torso while using a conventional seat-belt

The area around the machine is divided into four specific areas The area to the front is the sector in which visibility is required for straight ahead travel It is the smallest sector because at higher travel speeds the viewing distance is usually great and thus the actual chord length of view is substantial

The second visibility test area is that to the front outside of the sector of vision Visibility in this area is for low-speed travel or use of the ma-