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Ships and marine technology — Navigation and ship operations — Electronic inclinometers

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National foreword

This British Standard is the UK implementation of ISO 19697:2016. It supersedes PD ISO/PAS 19697:2014 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/80, Maritime navigation and radiocommunication equipment and systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Contents

Page

Foreword ... **v**
Introduction ... **vi**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **2**
4 Requirements ... **3**
4.1 General ... 3
4.2 Functionality ... 3
4.3 Information ... 3
4.3.1 Actual heel angle and roll amplitude ... 3
4.3.2 Roll period ... 3
4.3.3 Roll peak hold value ... 3
4.4 Display ... 4
4.5 Alerts ... 4
4.5.1 Operational alerts ... 5
4.5.2 Functional alerts ... 5
4.6 Interface ... 6
4.7 Power supply ... 6
5 Accuracy ... **6**
5.1 Actual heel angle, roll amplitude and roll period ... 6
5.2 Acceleration condition ... 6
6 Test methods and required results ... **6**
6.1 General ... 6
6.2 Static actual heel angle test ... 7
6.2.1 Method of testing and required results ... 7
6.3 Dynamic actual heel angle test ... 7
6.3.1 Method of testing and required results ... 7
6.4 Long-term actual heel angle test ... 7
6.4.1 Method of testing and required results ... 7
6.5 Roll period test ... 8
6.5.1 Method of testing and required results ... 8
6.6 Connections to other equipment test ... 8
6.6.1 Method of testing and required results ... 8
6.7 Display test ... 8
6.7.1 Method of testing and required results ... 8
6.8 Operational alert test ... 10
6.8.1 Method of testing and required results ... 10
6.9 Functional alert test ... 11
6.9.1 Method of testing and required results ... 11
6.10 Roll peak hold value test ... 11
6.10.1 Method of testing and required results ... 11
6.11 Reset function of roll peak hold value test ... 11
6.11.1 Method of testing and required results ... 12
6.12 Power supply test ... 12
7 Installation position ... **12**
8 Information ... **12**
Annex A (informative) **Relationship between transverse metacentric stability and measured natural roll period of ships in waves** ... **13**
Annex B (informative) **Test facility type test methodology** ... **16**
Annex C (informative) **IEC 61162-1 interface for VDR and other systems** ... **17**

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AVA Documents
Document Sharing Hub
Full document details: BS ISO 19697:2016

Bibliography **19**

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Document Sharing Hub
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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 8, *Ships and marine technology*, Subcommittee SC 6, *Navigation and ship operations*.

This first edition cancels and replaces ISO/PAS 19697:2014.

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Introduction

An electronic inclinometer is an electronic device that provides information about roll period, roll amplitude and the heel angle of the ship. *Electronic inclinometers are intended to support the decision-making process on board in order to avoid dangerous situations, as well as assist in and facilitate maritime casualty investigation*. The requirements in this document take into account human factors, ergonomic principles and advances in technology.

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INTERNATIONAL STANDARD ISO 19697:2016(E)

Ships and marine technology — Navigation and ship operations — Electronic inclinometers

1 Scope

This document specifies the performance requirements, methods of testing and test results of electronic inclinometers required by the performance standard, IMO resolution MSC.363 (92), in addition to the general requirements contained in resolution A.694 (17) and is associated with IEC 60945.

The electronic inclinometers provide information about actual heel angle, roll amplitude, roll period to support decision-making process on board in order to avoid dangerous situations, in stability (see Annex A for information), as well as to assist in maritime casualty investigation. The electronic inclinometers are mainly composed of a set of sensors, a signal processor, a display, an input device and an interface to other systems.

It does not apply to the electronic inclinometers installed for purposes which are outside the scope of this document, e.g. monitoring of cargo status.

Where a requirement in this document is different from IEC 60945, the requirement in this document takes precedence.

NOTE All requirements that are extracted from the recommendations of IMO Resolution MSC.363 (92), performance standards for electronic inclinometers, are printed in italics and the resolution and paragraph numbers are indicated in brackets.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60945, *Maritime navigation and radiocommunication equipment and systems — General requirements — Methods of testing and required test results*

IEC 61162-1, *Maritime navigation and radiocommunication equipment and systems — Digital interfaces — Part 1: Single talker and multiple listeners*

IEC 61162-2, *Maritime navigation and radiocommunication equipment and systems — Digital interfaces — Part 2: Single talker and multiple listeners, high-speed transmission*

IEC 61924-2, *Maritime navigation and radiocommunication equipment and systems — Integrated navigation systems — Part 2: Modular structure for INS — Operational and performance requirements, methods of testing and required test results*

IEC 62288, *Maritime navigation and radiocommunication equipment and systems — Presentation of navigation-related information on shipborne navigational displays — General requirements, methods of testing and required test results*

IMO resolution MSC.191 (79), *Performance standard for the presentation of navigation-related information on shipborne navigational displays*

IMO resolution MSC.252 (83), Performance standards for Integrated Navigation Systems (INS)

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