INTERNATIONAL STANDARD

ISO 20661

First edition
2020-01

Ships and marine technology — Cutter suction dredger supervisory and control systems

Reference number
ISO 20661:2020(E)

© ISO 2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms, definitions and abbreviated terms **1**
3.1 Terms and definitions 1
3.2 Abbreviated terms 1
4 Components and structure **2**
4.1 Components 2
4.2 Structure 2
5 General requirements **2**
5.1 Operating position and control mode 2
5.1.1 Operating position 2
5.1.2 Control modes 2
5.2 External communication 2
5.3 Diagnostic 3
5.4 Visualization of the system information 3
5.5 HMI graphics 3
5.5.1 Alarm level 3
5.5.2 Conventions on graphic colours 4
5.5.3 Brightness of the HMI 4
5.6 Alarm 4
5.7 Calibration of system 4
6 Functional requirements **5**
6.1 Preset/setup 5
6.2 Spuds and spud carrier system 5
6.3 Cutter system 5
6.4 Submersible dredge pump system 5
6.5 Inboard dredge pumps 6
6.6 Dredge valves 6
6.7 Ladder winches 6
6.8 Swing winches 6
6.9 Anchor hoisting winches and guy winches 7
6.10 Dredging profile monitor (DPM) 7
6.11 Measurement sensor and meter 7

© ISO 2020 – All rights reserved

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology.*

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

© ISO 2020 – All rights reserved

Introduction

This document describes the supervisory and control system for a number of components, functions and systems that can, but do not have to, be installed on board of a cutter dredger. It does not prescribe that all described components, functions and systems need to be installed.

© ISO 2020 – All rights reserved

Ships and marine technology — Cutter suction dredger supervisory and control systems

1 Scope

This document specifies the components and structure, general requirements, and subsystem functional requirements, of cutter suction dredger supervisory and control systems.

It is applicable only to the installed components, functions or systems. It covers the design, manufacture and modifications.

2 Normative references

The following referenced 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.

ISO 8384, *Ships and marine technology — Dredgers — Vocabulary*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purpose of this document, the terms and definitions given in ISO 8384 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1.1
cutter suction dredger supervisory and control system
CSD-SCS
system used for supervising and controlling the dredging operations performed by a cutter suction dredger

3.1.2
depth of cutter
distance from the water surface to the lower edge of the cutter head

3.2 Abbreviated terms

CCS	Cutter control system
CSD	Cutter suction dredger
CSD-SCS	Cutter suction dredger supervisory and control system

© ISO 2020 – All rights reserved