INTERNATIONAL STANDARD

ISO 15371

Third edition 2015-11-15

Ships and marine technology — Fireextinguishing systems for protection of galley cooking equipment

Navires et technologie maritime — Systèmes d'extinction d'incendie des équipements de cuisine





COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, 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 Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

Contents						
Fore	word			v		
Intro	ductio	n		vi		
1	Scop	e		1		
2	-	Terms and definitions				
	Components					
3	3.1		1			
	3.2		ors			
	3.3		rge nozzles			
	3.4		ing devices			
	3.5		l actuators			
	3.6		ff devices			
	3.7	Pipe, fi	ttings, tubing and hose	6		
	3.8	Exting	uishing agent	6		
	3.9	Indicat	Tors	6		
4	Syste	em requi	rements	6		
-	4.1	-	.1			
	4.2	Use		6		
	4.3	Applica	ations	6		
	4.4	System	actuation	7		
	4.5	-	rision			
	4.6	-	ı location			
	4.7		rge nozzles			
	4.8		requirements			
	4.9		tion of common exhaust duct			
5	Test methods					
	5.1	Cookin	g appliance extinguishing tests	9		
		5.1.1	General			
		5.1.2	Deep fat fryer			
		5.1.3	Griddle			
		5.1.4	Range top			
		5.1.5	Gas radiant char-broiler			
		5.1.6 5.1.7	Electric char-broiler			
		5.1.7	Lava, pumice or synthetic rock char-broiler Natural charcoal broiler			
		5.1.9	Mesquite wood char-broiler			
		5.1.10	Upright broiler			
		5.1.11	Chain broiler			
		5.1.12	Wok			
	5.2	_	tests			
		5.2.1	Deep fat fryer extinguishing splash tests			
		5.2.2	Deep fat fryer cooking temperature splash test			
		5.2.3	Range top extinguishing splash tests	17		
		5.2.4	Range top cooking temperature splash tests			
		5.2.5	Wok extinguishing splash test	18		
		5.2.6	Wok cooking temperature splash tests			
	5.3		and duct (full scale) extinguishing test			
		5.3.1	General			
		5.3.2	Hood			
		5.3.3	Filter and frame			
	5.4	5.3.4	Duct			
	5.4	5.4.1	uishing system unit test Preparation			
		$^{2.7.1}$	r reparation			

ISO 15371:2015(E)

	5.4.2	General test procedures	22
	5.4.3	Fuel ignition and extinguishing system unit operation	23
	5.4.5	Conditions of acceptability	23
6	Installation,	operation and maintenance instruction manual	23
7	5.4.3 Fuel ignition and extinguishing system unit operation 5.4.4 Plenum testing 5.4.5 Conditions of acceptability Installation, operation and maintenance instruction manual Owner's manual Test report	25	
8	Test report		26

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. 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. 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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 8, *Ships and marine technology*, Subcommittee SC 1, *Lifesaving and fire protection*.

This third edition cancels and replaces the second edition (ISO 15371:2015). <u>Subclauses 2.25</u>, <u>2.26</u>, <u>4.4.13</u>, and <u>5.1.1.2 b</u>) have been editorially revised to clarify requirements.

Introduction

While this International Standard provides the marine industry with a means for evaluating the effectiveness of fire-extinguishing systems for a variety of grease-laden cooking appliances that may be found in a galley, it is also referenced by the International Maritime Organization (IMO) International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, and provides organizations who are party to SOLAS with a means of ensuring conformance of deep-fat cooking equipment with the fire suppression requirements prescribed in SOLAS.

Ships and marine technology — Fire-extinguishing systems for protection of galley cooking equipment

1 Scope

This International Standard applies to the design, testing, and operation of pre-engineered fire extinguishing systems to protect the galley hoods, ducts, fryers and other grease-laden appliances.

Pre-engineered fire-extinguishing system units are also required to comply with requirements for the construction and components performance as applicable to specific types, designs, sizes and arrangements. This International Standard also provides minimum requirements for the testing and evaluation of components.

A product that contains features, characteristics, components, materials or systems that are new or different from those covered by the requirements in this International Standard and that involve a risk of fire, electric shock, or injury to persons, shall be evaluated using the appropriate additional component and end product testing.

NOTE Only deep-fat cooking equipment, among the types of galley cooking equipment covered by this International Standard, are required by SOLAS chapter II-2 Regulation 10.6.4 to have fixed fire-extinguishing systems.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

auxiliary equipment

equipment used in conjunction with the extinguishing system

EXAMPLE Auxiliary equipment can be used to shut down power, fuel or ventilation to the hazard area being protected or to initiate alarm or signalling devices.

2.2

cooking appliance

cooking device that has, or is capable of having, a surface of liquid grease or one in which cooking with grease is involved

EXAMPLE Deep fat fryer, griddle, range, chain-broiler, electric char-broiler, charcoal broiler, mesquite broiler, gas radiant char broiler, wok, tilt skillet/braising pan and similar appliances.

Note 1 to entry: The protected area is limited to the cooking area of the appliance only.

2.3

cooking grease

grease

vegetable shortening incorporating an antifoaming agent

2.4

cylinder

valve assembly

container that incorporates a valve and that provides storage for the extinguishing agent and expellant gas until the valve is actuated

Note 1 to entry: For cartridge-operated units, this assembly includes the extinguishing-agent storage container and cartridge mechanism.