BSI Standards Publication

Service personnel for the maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear

Part 1: General requirements for training providers

Documents
Document Sharing Hub

Full document details: PD ISO/PAS 23678-1:2020

National foreword

This Published Document is the UK implementation of ISO/PAS 23678-1:2020.

The UK participation in its preparation was entrusted to Technical Committee SME/32, Ships and marine technology - Steering committee.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 02728 0

ICS 47.020.01; 03.100.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 March 2020.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: PD ISO/PAS 23678-1:2020

PUBLICLY AVAILABLE SPECIFICATION

ISO/PAS 23678-1

First edition
2020-03

Service personnel for the maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear —

Part 1: General requirements for training providers

Reference number
ISO/PAS 23678-1:2020(E)

Documents
Document Sharing Hub
© ISO 2020

Full document details: PD ISO/PAS 23678-1:2020

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

© ISO 2020 – All rights reserved

Documents
Document Sharing Hub

Full document details: PD ISO/PAS 23678-1:2020

Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions, and abbreviated terms ... **1**

4 Service technician competence progression ... **4**
- 4.1 General ... 4
- 4.2 Initial training — Introductory education and training ... 4
- 4.3 Initial refresher training ... 5
- 4.4 Level 1 Stage 1 technician-controlled environment education and training ... 5
- 4.5 Level 1 Stage 2 Technician controlled environment experience and assessment: ... 6
- 4.6 Level 2 Infield supervised workplace experience and competence assessment requirements ... 6
  - 4.6.1 General ... 6
  - 4.6.2 Initial Level 2 Infield supervised workplace experience and competence assessment process ... 6
- 4.7 Level 2 competence re-assessment requirements ... 7

5 Resources for service technician training ... **7**
- 5.1 General ... 7
- 5.2 Staff resources ... 8
  - 5.2.1 General ... 8
  - 5.2.2 Requirements for trainers and assessors ... 8
  - 5.2.3 Assessors and internal verifiers ... 8
  - 5.2.4 Trainer/assessor candidate ratio ... 8
- 5.3 Physical resources ... 8
  - 5.3.1 General ... 8
  - 5.3.2 Resources for training and assessment ... 8
  - 5.3.3 Facilities ... 9
- 5.4 Equipment ... 9
  - 5.4.1 General ... 9
  - 5.4.2 Equipment required for initial training ... 10
  - 5.4.3 Equipment required for Level 1 Service Technical training ... 10

6 Administration and certification ... **11**
- 6.1 Course administration ... 11
- 6.2 Certification ... 11
  - 6.2.1 General ... 11
  - 6.2.2 Initial certificate ... 12
  - 6.2.3 Level 1 certificate ... 12
  - 6.2.4 Level 2 certificate ... 12
  - 6.2.5 Criteria for changing the scope of the certificate ... 12
  - 6.2.6 Criteria for suspending the certificate ... 12

7 Code of conduct ... **13**

Annex A (informative) **Service technician competence progression** ... **14**

Annex B (informative) **Equipment covered by the training** ... **18**

Annex C (informative) **Level 1 technician Stage 2 controlled environment experience and assessment exercise criteria** ... **19**

Annex D (informative) **Examples of certificates** ... **20**

Bibliography ... **27**

Documents
Document Sharing Hub

© ISO 2020 – All rights reserved

Full document details: PD ISO/PAS 23678-1:2020

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*, Subcommittee SC 1, *Maritime safety.*

A list of all parts in the ISO/PAS 23678 series can be found on the ISO website.

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
Documents
Document Sharing Hub
Full document details: PD ISO/PAS 23678-1:2020

Introduction

The industry recognises that a major objective is to prevent accidents and incidents from occurring. A global network of competent personnel employed by authorized service providers is vital for lifesaving appliances to remain fit for purpose, sustaining crew confidence and contributing to the prevention of incidents and accidents.

It has been recognized from the new requirements in IMO Resolution MSC.402 (96) for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances, and release gear (henceforth referred to as the "IMO Requirements") adopted 19th May 2016 and entering into force 1st January 2020, that it is necessary to develop an International Standard. This necessity is based on the IMO Requirements, paragraph 7.1.1:

"*Employment and documentation of personnel certified in accordance with a recognized national, international or industry standards as applicable, or a manufacturer's established certification programme. In either case, the certification programme shall comply with section 8 for each make and type of equipment for which service is to be provided;*"

This document and the associated ISO/PAS 23678-2, ISO/PAS 23678-3 and ISO/PAS 23678-4 have been developed to achieve three key objectives.

1. The first objective was to develop training documents that would support the IMO Requirements, section 7, paragraph 7.1.1.

2. The second objective was to develop training documents that would provide a consistent, reliable, and standardised approach to training and provide a clear auditable trail for interested parties to grant authorisation supporting the IMO Requirements, section 3, to approved service providers.

3. The third objective was to develop training documents that would enable personnel certified by authorized service providers to develop and maintain competencies identified by industry experts to a level that enables them to competently work unsupervised on equipment covered by this document.

This document has been developed by identifying common design features in relation to survival craft, davits, winches and release gear makes and types for which service is to be provided. This has been achieved by conducting professional discussions with disciplined experts to obtain the appropriate information to develop a training programme that is fit for purpose. Successfully completing the service technician training in ISO/PAS 23678-2, ISO/PAS 23678-3 and ISO/PAS 23678-4 enables personnel certified by an authorized service provider to meet the IMO Requirements, section 7, paragraph 7.1.1., and section 8.

The ISO/PAS 23678-series on service technician training consist of:

— Part 1: Guidance to training providers; describes the competence route of the candidate and the resources that the training provider needs to deliver the training.

— Part 2: Initial training; describes the training programme for initial familiarisation and induction training, which is classroom education. The training programme focuses on introducing individuals to the complex terminology, rules and regulations, organisations, health, and safety that a service technician needs to understand in order to carry out their role.

— Part 3: Level 1 training; describes the controlled environment education and training delivered at a training school. The training programme focuses on the technical training for type specific lifesaving appliances.

— Part 4: Level 2 in-field competence; describes the requirements for initial infield and ongoing competence assessments.

© ISO 2020 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/PAS 23678-1:2020

NOTE ISO/PAS 23678-1, ISO/PAS 23678-2 and ISO/PAS 23678-3 are referencing typical in-house/training school training programmes. ISO/PAS 23678-4 is typical in-field performance of the personnel trained and recording of their competence.

© ISO 2020 – All rights reserved
Documents
Document Sharing Hub
Full document details: PD ISO/PAS 23678-1:2020

Service personnel for the maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear —

Part 1:
General requirements for training providers

1 Scope

This document establishes a uniform, safe and consistent approach to training personnel to enable them to establish and maintain the required competencies in relation to maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear.

It also provides the necessary information for interested parties to grant authorization and effectively evaluate and audit training, supporting the IMO Requirements, Section 3.

It describes the competence route, resources, facilities and certification requirements for personnel trained by a manufacturer or by an authorized service provider to carry out maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear. This document also sets out the competence route of the candidate, and the resources that the training provider needs to deliver the training.

This document is intended to be used in conjunction with ISO/PAS 23678-2, ISO/PAS 23678-3 and ISO/PAS 23678-4.

2 Normative references

There are no normative references in this document.

3 Terms and definitions, and abbreviated terms

For the purposes of this document, the following terms and definitions 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
authorised service provider
entity authorized by the administration, meeting the *IMO Requirements* (3.14), section 3 and section 7

© ISO 2020 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/PAS 23678-1:2020

3.2
company
owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship and who on assuming such responsibility has agreed to take over all the duties and responsibilities imposed by the International Safety Management Code

[SOURCE: SOLAS Regulation IX:2010, 1.2]

3.3
competent person
person having such knowledge and experience of as is necessary for that person to carry out maintenance, thorough examination, operational testing, *overhaul* (3.13) and *repair* (3.14) of a *complete system* (3.4), assess the condition of a complete system and make a judgement as to whether it can remain in service

3.4
complete system
survival craft (3.17) and associated *equipment* (3.6), release gear and *launching appliance* (3.9)

3.5
disciplined expert
expert that has proven competence in design, manufacturing, inspection, maintenance, training and certification of personnel for LSA *equipment* (3.6)

3.6
equipment
equipment to which the *IMO Requirements* (3.14) apply

3.7
intervention
activity that includes maintenance, thorough examination, operational testing, *overhaul* (3.13) and *repair* (3.14) of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), *launching appliances* (3.9) and release gear

3.8
interested party
entity with the ability to grant authorisation, meeting the *IMO Requirements* (3.14)

3.9
launching appliance
means of transferring a *survival craft* (3.17) from its stowed position safely to the water

3.10
manufacturer
original *equipment* (3.6) manufacturer or any entity which has taken legal and legitimate responsibilities for equipment when the original equipment manufacturer no longer exists or supports the equipment

3.11
offload release mechanism
release mechanism that releases the *survival craft* (3.17)/rescue boat/fast rescue boat when it is waterborne or when there is no load on the hooks

3.12
on-load release mechanism
on-load release gear
release mechanism that releases the *survival craft* (3.17)/rescue boat/fast rescue boat with load on the hooks

© ISO 2020 – All rights reserved
Documents
Document Sharing Hub
Full document details: PD ISO/PAS 23678-1:2020

3.13
overhaul
periodical activity defined by the *manufacturer* (3.10) that proves continued fitness for purpose for a defined period subject to correct maintenance

3.14
IMO Requirements
requirements related to Regulation III/20 of the International Convention of Safety of Life At Sea, 1974, given in the IMO Resolution MSC.402(96) for maintenance, thorough examination, operational testing, *overhaul* (3.13) and *repair* (3.14) of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), *launching appliances* (3.9) and release gear

3.15
repair
activity requiring disassembly of *equipment* (3.6), or any other activity outside the scope of the instructions for on-board maintenance and for emergency *repair* (3.14) of lifesaving appliances meeting the requirements of SOLAS Regulations III/36.2 and III/35.3.18, respectively

3.16
service technician
person that is trained and certified by a *manufacturer* (3.10) or an *authorised service provider* (3.1) to carry out maintenance, thorough examination, operational testing, *overhaul* (3.13) and *repair* (3.14) of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), *launching appliances* (3.9) and release gear

3.17
survival craft
craft capable of sustaining the lives of persons in distress from the time of abandoning the ship

[SOURCE: SOLAS Regulation III/23:2003]

3.18
type
category of LSA *equipment* (3.6) having common characteristics, including lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear

Abbreviated terms

ALARP	As low as reasonably practicable
ASP	Authorised service provider
COSHH	Control of substances hazardous to health
FRB	Fast rescue boat
MAH	Major accident hazard
MSC	Maritime safety committee
MODU	Mobile offshore drilling unit
MSDS	Material safety data sheets
LSA	Lifesaving appliances
PPE	Personal protective equipment
RA	Risk assessment

© ISO 2020 – All rights reserved

Documents
Document Sharing Hub
Full document details: PD ISO/PAS 23678-1:2020