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E-BUSINESS POSSIBILITIES FOR THE FACILITATION OF MARITIME TRAFFIC

Report of the Correspondence Group on electronic access to, or electronic versions of, certificates and documents required to be carried on ships

Submitted by the United States

SUMMARY

Executive summary: This document describes the work of the Correspondence Group on electronic access, or electronic versions of certificates and documents required to be carried on ships, to identify the features of electronic access and electronic versions of certificates and documents that would make them acceptable in lieu of paper originals

Strategic direction: 8

High-level action: 8.0.3

Planned output: 8.0.3.1, 8.0.3.2

Action to be taken: Paragraph 11

Related document: FAL 37/17

Background

1 FAL 37 established the Correspondence Group on Electronic access to certificates and documents under the direction of Mr. Roger K. Butturini (United States) in September 2011. The following countries and organizations participated in the work of the Correspondence Group:

BELGIUM
BRAZIL
BULGARIA
CYPRUS
DENMARK
DOMINICA
FRANCE
GERMANY
ISRAEL
ITALY

LIBERIA
MARSHALL ISLANDS
NETHERLANDS
POLAND
REPUBLIC OF KOREA
SAINT KITTS AND NEVIS
SWEDEN
TURKEY
UNITED STATES

EUROPEAN COMMISSION (EC)
INTERNATIONAL CHAMBER OF SHIPPING (ICS)

2 The work of the Correspondence Group was guided by the terms of reference established in FAL 37/17, paragraph 7.22:

- .1 prepare objective(s) and define the scope and vision of a system for electronic access or electronic versions of certificates and documents;
- .2 identify the potential users and their needs, as well as the strengths, weaknesses, opportunities, threats and benefits of making electronic access or electronic versions of certificates and documents available to supplement or replace original paper certificates or documents, including validation of certificates and documents;
- .3 define the minimum features that could be recommended to make electronic access or electronic versions of certificates and documents equivalent to paper documents;
- .4 define the recommended features to make electronic access to ship certificates and documents reliable and appropriately secure;
- .5 annotate the list of certificates and documents required to be on board ships with the source of the requirement (e.g. Convention) and the IMO Committee responsible for the certificate or document; and
- .6 report to FAL 38 on the results of the Correspondence Group's work.

Definitions used by the Correspondence Group

3 For the purposes of the Correspondence Group's work and in the context of FAL.2/Circ.123-MEPC.1/Circ.769-MS.1/Circ.1409, the Correspondence Group used the following definitions:

Certificate means the form specified in an IMO requirement and issued by an Administration, or the Administration's representative, as proof of compliance with the requirement.

Document means books, manuals, plans, instructions, and similar media that are not certificates and are used to convey a ship's information.

Electronic access means transmitting or viewing a certificate from a source, including online, other than the ship.

Electronic version means a certificate that is printed or viewed independent of electronic access, such as a paper copy of the certificate or a certificate viewed from a disk or ship's computer.

Work done by the Correspondence Group

4 This document describes the work of the Correspondence Group on electronic access, or electronic versions of certificates and documents required to be carried on ships. Annex 1 shows the list of potential users and their needs, and the strengths, weaknesses, opportunities and threats of making electronic access or electronic versions of certificates and documents available to supplement or replace original paper certificates or documents,

including validation of certificates and documents. Annex 2 shows the list of documents required to be carried on board ships annotated with the source, any requirements for originals, and colour-coded to identify certificates considered eligible to be in electronic format.

The members of the Correspondence Group completed the following tasks:

- .1 The Correspondence Group established a work schedule to advise all participants of the tasks and deadlines needed to ensure meeting the terms of reference by the due date for submitting the Report of the Correspondence Group.
- .2 The Correspondence Group established objectives and derived the scope and vision to meet those objectives (TOR.1).
- .3 The Correspondence Group identified the potential users of electronic access or electronic versions of certificates and documents, their needs, and the advantages and disadvantages of electronic access or electronic versions of certificates and documents. The results are presented in annex 1 (TOR.2).
- .4 The Correspondence Group used the results of the work for TOR.2 to define the minimum features necessary to make electronic access or electronic versions of certificates and documents equivalent to paper documents, meet user needs, and mitigate the threats (TOR.3). In completing this work, the Correspondence Group was guided by the example of Liberia's approach to using electronic access and electronic versions of certificates and documents.
- .5 The Correspondence Group also used the results of the work for TOR.2 to define the recommended features to make electronic access to ship certificates and documents reliable and appropriately secure (TOR.4). In completing this part of our work, the Correspondence Group identified several existing international standards that are relevant to establishing and using websites for access to electronic certificates or documents. Liberia's existing website provided a valuable example of a successful approach.
- .6 The Correspondence Group reviewed the list of documents required to be carried on board ships found in IMO FAL.2/Circ.123-MEPC.1/Circ.769-MS.C.1/Circ.1409. We researched the source of all certificates and documents within our agreed scope. We annotated the list to show the responsible IMO Committee or Sub-Committee and whether the source language requires an original, signed paper copy to be carried on board. Furthermore, the list is colour-coded to indicate certificates the Correspondence Group considers are eligible for electronic access or electronic versions. The results are presented in annex 2 (TOR.5).

Findings of the Correspondence Group

5 In general, the members of the Correspondence Group agreed on the following principles for electronic access or electronic versions of certificates and documents (referred to simply as "electronic certificates"):

- .1 The Correspondence Group members agreed the objective of the work was to determine reliable, secure, and employable criteria for acceptance of

electronic-based alternatives as equivalent to original paper copies of certificates and documents.

- .2 The Correspondence Group members agreed that the scope of the work was limited to certificates and documents required to be carried aboard ships as described in FAL.2/Circ.123-MEPC.1/Circ.769-MS.C.1/Circ.1409. In this context, the terms "certificates" and "documents" do not include ships' records such as the official log book, oil record book, or other means of logging vessel continuous operations, even if these types of documents are listed in FAL.2/Circ.123-MEPC.1/Circ.769-MS.C.1/Circ.1409. Furthermore, the Correspondence Group agreed that the scope of our work was focused on certificates as a primary element of port State control activities, and thus having a more pressing need for the envisioned benefits of electronic access or electronic versions.
- .3 The Correspondence Group members agreed that the vision of our work was to eliminate the burden on Administrations, Port State Control Officials, ships' crews, and other stakeholders caused by both reliance on paper certificates and incidences of ships being delayed, detained, or denied movement due to the absence of original copies of IMO certificates physically on board the ship.
- .4 The potential users of a system of electronic access or electronic versions of certificates include, but are not limited to:
 - Port State Control Officials
 - Recognized Organizations
 - Classification Societies
 - Ship Vetting Companies
 - Administration Authorities
 - Master and Crew
 - Vessel owner, operator, and charterer
 - Vessel agent
 - Repair facilities
 - Port facilities
- .5 The advantages of electronic access or electronic versions of certificates and documents span the list of potential users and include the ease of creating, maintaining, transmitting, and validating certificates and documents. Both Administration officials and industry representatives express a compelling need for a system that is quicker, more responsive, and facilitates ship arrival, stay, and departure. The advantages of using electronic access or electronic versions of certificates include:

- Distribution – Electronic media could be used instead of mail for faster access to original, replacement, and updated versions;
 - Durability – Electronic media is more durable than paper;
 - Maintenance – Electronic media is easier and less costly to maintain than paper and is consistent with "paperless" initiatives;
 - Traceability – Electronic media is amendable to many security, tracking, and validation methods; and
 - Security – Electronic media, and its inherent redundancy, offers greater opportunity for validation than paper.
- .6 The disadvantages of electronic access or electronic versions of certificates include:
- Infrastructure – Electronic equipment used to access or distribute certificates might be initially more costly and require more personnel training than paper, is subject to outages, and might depend on the local internet infrastructure;
 - Security – Electronic media, including online access, requires more security precautions and access control than paper;
 - Validation – The perception that an original signature is the best proof of validity remains common among Administrations and creates a challenge for proving the equivalency of electronic media; and
 - Accountability – Reliance on electronic access to certificates might make accountability unclear during port State control activities when, for example, a shipmaster cannot access certificates online because the local internet is inoperative or some other occurrence outside the master's control makes certificates inaccessible.
- .7 The features of an electronic version of a certificate that would make it equivalent to the paper original are:
- contains all of the information and features described in the IMO source requirement, including, but not limited to, issue date, expiry date, signature (including electronic signature), and seal of the Administration;
 - visible in colour both front and back;
 - includes a unique traceable number or other security feature to identify it from other certificates;
 - includes an imbedded watermark to identify it as an electronic version; and
 - includes validation instructions.

- .8 The features to make electronic access to certificates reliable and appropriately secure are:
- Available on a continuous basis to authorized users (Note, this would not preclude public access, as in the Liberia model, if adequate security features are employed);
 - Response time does not unreasonably delay the user;
 - Certificate information is current and error-free;
 - Communicates default alternate access instructions if the system becomes inoperative; and,
 - Access authorizations and system operation, maintenance, and security comply with the applicable ISO 27000 series of standards (see paragraph 9).

6 MSC 81 (MSC 81/25, paragraph 24.6) noted the view that an electronic access to certificates would not be considered as an alternative to the physical inspection of the certificates and could, possibly, serve in the context of the prioritization of PSC inspections.

7 In many of the responses to the 2011 survey (FAL 37/5/3), Administrations suggested that the requirements for original certificates and documents came from national laws and policies. IMO requirements for original versions of certificates and documents are infrequent. A significant exception is the STCW Convention requirement that original seafarers' certificates and endorsements must be kept on board the vessel. Notably, the STCW Convention also requires that information on the status of seafarers' certificates and endorsements is available for validation electronically by 1 January 2017.

8 Many successful examples exist in the maritime field of electronic access or electronic versions of certificates and documents, including:

- .1 In 2009, through Circular letter No.2593, the Government of Liberia notified IMO of its intent to issue paperless, electronic versions of certain IMO certificates. In the Liberia model, a publically available website allows Port State Control Officials to verify the electronic certificate by using the unique tracking number and ship IMO number.
- .2 The STCW Convention requires Parties to maintain registers of certificates and endorsements for masters and officers, to make information available on the status of such certificates and endorsements to other Parties and companies that request verification, and to make this information available electronically by 2017. Thirty-six nations have already developed online authentication and validation sites. (Note – some of these sites display only the certificate data and not a picture of the certificate as a means of reducing electronic storage requirements and to prevent printing fraudulent copy of the certificate.)
- .3 Since May 2011, Denmark has issued national trading permits electronically. The feedback received from the shipowners is very positive. They find the system very easy to handle and update. The system makes it possible to register and document modifications. The greatest advantage is that the certificate is never late.

- .4 On 3 December 2012, the Panama Canal Authority announced (Advisory to Shipping No. A-29-2012) that, beginning 1 January 2013, Notice of Acknowledgement (NOA) certificates for vessels complying with Panama Canal Shipboard Oil Pollution Emergency Plan (PCSOPEP) requirements will only be issued electronically.

9 The ISO/IEC 27000-series (also known as the "ISMS Family of Standards") comprises information security standards published jointly by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). The series provides best practice recommendations on information security management, risks and controls within the context of an overall information security management system (ISMS), similar in design to management systems for quality assurance (the ISO 9000 series) and environmental protection (the ISO 14000 series). These standards are in common use already among maritime Administrations and would likely form the foundation of a reliable and secure system for electronic access or electronic versions of certificates. In addition to the published standards shown below, many other standards in this series are under development:

- .1 ISO/IEC 27000 – Information security management systems – Overview and vocabulary
- .2 ISO/IEC 27001 – Information security management systems – Requirements
- .3 ISO/IEC 27002 – Code of practice for information security management
- .4 ISO/IEC 27003 – Information security management system implementation guidance
- .5 ISO/IEC 27004 – Information security management – Measurement
- .6 ISO/IEC 27005 – Information security risk management
- .7 ISO/IEC 27006 – Requirements for bodies providing audit and certification of information security management systems
- .8 ISO/IEC 27010 – Information technology – Security techniques – Information security management for inter-sector and inter-organizational communications
- .9 ISO/IEC 27011 – Information security management guidelines for telecommunications organizations based on ISO/IEC 27002
- .10 ISO/IEC 27031 – Guidelines for information and communications technology readiness for business continuity
- .11 ISO/IEC 27033-1 – Network security overview and concepts
- .12 ISO/IEC 27035 – Security incident management

Conclusions of the Correspondence Group

- 10 The Correspondence Group agreed on the following conclusions during its work:
- .1 An electronic version of a certificate must include the features noted in paragraph 5.7 above and must be verifiable, when necessary, from a separate source to be considered equivalent to an original paper certificate;
 - .2 An Administration that chooses to use electronic access to certificates to distribute or validate electronic versions of certificates should control access, modification, and printing authorizations to prevent creation of fraudulent certificates;
 - .3 Creation, distribution, and maintenance of certificates using electronic means are processes that an Administration could delegate to a Recognized Organization or a similar trusted third party that meets established guidelines for reliability and security;
 - .4 Given the success of, 1) other systems used to create, distribute, and maintain certificates electronically; 2) the willingness of Administrations to use and accept electronic versions of certificates; 3) the absence of written prohibitions at IMO against the use of electronic versions of certificates, and, 4) the expected benefits of using electronic versions of certificates, there seems no reason to delay development of guidelines for using electronic versions of certificates in lieu of original paper copies;
 - .5 The reliability and security of electronic access to certificates can be assured through the implementation of the industry standards for information technology that are already in common use throughout many industries across the globe;
 - .6 Acceptance of electronic access to certificates on either a centralized or distributed database should continue to be a focus of the Committee as experience is gained with use and acceptance of electronic versions of certificates because development of digital certificates in compact files might lead to further facilitation benefits and refined port State control activities.

Action requested of the Committee

- 11 The Committee is invited to:
- .1 take note of the work of the Correspondence Group above;
 - .2 review the list of potential users and their needs, and the strengths, weaknesses, opportunities, and threats of acceptance of electronic access and electronic versions of certificates and documents;
 - .3 review the annotated list of certificates and documents required to be carried on board ships shown in annex 2;
 - .4 review the findings and conclusions of the Correspondence Group; and
 - .5 decide on further work on this agenda item.

Annex 1 – Table of Potential Users, Needs, Strengths, Weaknesses, Opportunities, and Threats

Stakeholders	Needs	Strengths	Threats	Opportunities	Benefits	Other
Port State Control Officials	<ul style="list-style-type: none"> - Reliable validation of certificates and documents. - Traceability. - Easier access. - Current, reliable information. - Record intermediate surveys, tests, inspections. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. - Earlier decision-making information. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. - Potential problems recording periodic examinations. -Costs of implementing IT solutions. - Unreliable online access in some areas. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Faster pre-arrival processing. - Accurate targeting. - Trend analysis. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. 	<ul style="list-style-type: none"> - MSC and MEPC have not supported electronic access as an alternative for physical examination of certificates. (MSC 81/25)
Recognized Organizations	<ul style="list-style-type: none"> - Greater redundancy. - Easier revision. - Easier transmission. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. - Potential problems recording periodic examinations. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Trend analysis. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. 	
Classification Societies	<ul style="list-style-type: none"> - Easier access. - Current, reliable information. - Record 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. 	

Stakeholders	Needs	Strengths	Threats	Opportunities	Benefits	Other
	intermediate surveys, tests, inspections.	<ul style="list-style-type: none"> - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Fraudulent revision of electronic documents. - Potential problems recording periodic examinations. 	<ul style="list-style-type: none"> stored files. - Trend analysis. 	<ul style="list-style-type: none"> - Clearer record keeping. 	
Ship Vetting Companies	<ul style="list-style-type: none"> - Reliable validation of certificates and documents. - Traceability. - Easier access. - Current, reliable data. - Record intermediate surveys, tests, inspections. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Trend analysis. 	<ul style="list-style-type: none"> - Clearer record keeping 	
Administration Authorities	<ul style="list-style-type: none"> - Reliable validation of certificates and documents. - Traceability. - Easier access. - Current, reliable information. - Record intermediate surveys, tests, inspections. - Reduced burden. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. - Potential problems recording periodic examinations. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Trend analysis. - Pursue e-government initiatives. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. - Simplify the work of Consulates. - Reduced burden 	<ul style="list-style-type: none"> - Europe Directive 2010/65 becomes effective 1 June 2015 and requires electronic submission of FAL forms.

Stakeholders	Needs	Strengths	Threats	Opportunities	Benefits	Other
Master and Crew	<ul style="list-style-type: none"> - Easier access. - Current, reliable information. - Record intermediate surveys, tests, inspections. - Reduced administrative burdens. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Faster pre-arrival processing. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. - Reduced burden. 	
Vessel owner, operator, and charterer	<ul style="list-style-type: none"> - Traceability. - Easier access. - Current, reliable information. - Record intermediate surveys, tests, inspections. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Faster pre-arrival processing. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. 	
Vessel agent	<ul style="list-style-type: none"> - Traceability. - Easier access. - Current, reliable information. - Record intermediate surveys, tests, inspections. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Faster pre-arrival processing. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. 	

Stakeholders	Needs	Strengths	Threats	Opportunities	Benefits	Other
Repair facilities	<ul style="list-style-type: none"> - Easier access. - Current, reliable information. - Record intermediate surveys, tests, inspections. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Faster pre-arrival processing. 	<ul style="list-style-type: none"> - Certificate information more reliable. 	
Port facilities	<ul style="list-style-type: none"> - Reliable validation of certificates and documents. - Traceability. - Easier access. - Current, reliable information. 	<ul style="list-style-type: none"> - Electronic media more durable than paper. - Electronic media can leave a "paper" trail. - Electronic media is more easily stored and distributed. - Electronic media is more easily revised. - Electronic media can be used for data. 	<ul style="list-style-type: none"> - Unsecure online access. - Password/user name protection. - Fraudulent revision of electronic documents. - Potential problems recording periodic examinations. 	<ul style="list-style-type: none"> - Further evolution of electronic versions could lead to small, easily stored files. - Faster pre-arrival processing. 	<ul style="list-style-type: none"> - Fewer detentions for paperwork issues. - Clearer record keeping. - More reliable scheduling. 	

Annex 2 – Annotated List of Certificates Required to be Carried Aboard Ships
(FAL .2/Circ.123-MEPC.1/Circ.769-MS.C.1/Circ.1409)

- Certificate considered eligible for electronic access or an electronic version.

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
1	All ships			
	International Tonnage Certificate (1969)	Tonnage Convention, article 7	No specific requirement for original.	SLF
	International Load Line Certificate	LL Convention, article 16; 1988 LL Protocol, article 16	No specific requirement for original.	SLF
	International Load Line Exemption Certificate	LL Convention, article 16; 1988 LL Protocol, article 16	No specific requirement for original.	SLF
	Coating Technical File	SOLAS 1974, regulation II-1/3-2; Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers (resolution MSC.215(82))	Some copies allowed/not specific about other records.	DE
	Construction drawings	SOLAS 1974, regulation 3-7; MSC/Circ.1135 on As-built construction drawings to be maintained on board the ship and ashore	No specific requirement for originals.	DE
	Ship Construction File	SOLAS 1974, regulation 3-10; MSC.1/Circ.1343 on Guidelines for the information to be included in a Ship Construction File	SCF should remain with the ship and be continuously updated.	DE
	Intact stability booklet	SOLAS 1974, regulations II-1/5 and II-1/5-122 and II-1/25-8; LL Convention; 1988 LL Protocol, regulation 10, 2008 IS Code, MSC/Circ.456	No specific requirements for original documents.	SLF

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Damage control plans and booklets	SOLAS 1974, regulations II-1/19; MSC.1/Circ.1245	No specific requirement for original.	DE
	Minimum safe Manning document	SOLAS 1974 (2000 amendments), regulation V/14.2	No specific requirement for original.	STW
	Fire safety training manual	SOLAS 1974 (2000 amendments), regulation II-2/15.2.3	No specific requirement for original.	FP
	Fire Control plan/booklet	SOLAS 1974 (2000 amendments), regulations II-2/15.2.4 and II-2/15.3.2 (p 177)	No specific requirement for original.	FP
	Onboard training and drills record	SOLAS 1974 (2000 amendments), regulation II-2/15.2.2.5	Logbook; not eligible for electronic copy.	FP
	Fire safety operational booklet	SOLAS 1974 (2000 amendments), regulation II-2/16.2	Onboard manual; no original required.	FP
	Maintenance Plans	SOLAS 1974 regulations II-2/14.3.3 and II-2/14.4	No specific requirement for original.	FP
	Training manual	SOLAS 1974 regulation III/35	No specific requirement for original.	DE
	Nautical charts and nautical publications	SOLAS 1974 regulations V/19 and V/27	ECDIS back-up system.	NAV

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	International Code of Signals and a copy of Volume III of IAMSAR Manual	SOLAS 1974 regulation V/21	Onboard manual; no original required.	COMSAR
	Records of navigational activities	SOLAS 1974 regulations V/26 and V/28	No specific requirement for original.	NAV
	Manoeuvring booklet	SOLAS 1974 regulation II-1/28	No specific requirement for original.	NAV
	Certificates for masters, officers or ratings.	STCW 1978, article VI, regulation I/2; STCW Code, section A-I/2	Certificates must be kept available in their original form on board the ships on which the holder is serving.	STW
	Records of hours of rest	STCW Code, section A-VIII/11; Seafarers' Hours of Work and the Manning of Ships Convention, 1996 (No.180); IMO/ILO Guidelines for the Development of Tables of Seafarers' Hours of Work or Hours of Rest	Competent authority shall determine the procedures for keeping such records on board.	STW
	International Oil Pollution Prevention Certificate	MARPOL Annex I, regulation 7	No specific requirement for original.	MEPC
	Oil Record Book	MARPOL Annex I, regulations 17 and 36	The Oil Record Book Part I shall be kept in such a place as to be readily available for inspection at all reasonable times and, except in case of unmanned ships under tow, shall be kept on board the ship. Preserved for 3 years.	MEPC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Shipboard Oil Pollution Emergency Plan	MARPOL Annex I, regulation 37; resolution MEPC.54(32) as amended by resolution <i>MEPC.86(44)</i>	No specific requirement for original.	MEPC
	International Sewage Pollution Prevention Certificate	MARPOL Annex IV, regulation 5; MEPC/Circ.408	No specific requirement for original.	MEPC
	Garbage Management Plan	MARPOL Annex V, regulation 9	No specific requirement for original.	MEPC
	Garbage Record Book	MARPOL Annex V, regulation 9	Kept on board the ship in such a place to be available for inspection in a reasonable time. Preserved for 2 years.	MEPC
	Voyage data recorder system-certificate of compliance	SOLAS 1974, regulation V/18.8	No specific requirement for original.	NAV
	Cargo Securing Manual	SOLAS 1974 regulations VI/5.6 and VII/5; MSC.1/Circ.1353	No specific requirement for original.	DSC
	Document of Compliance	SOLAS 1974, regulation IX/4; ISM Code, paragraph 13	13.6 The copy of the Document of Compliance is not required to be authenticated or certified.	MSC
	Safety Management Certificate	SOLAS 1974, regulation IX/4; ISM Code, paragraph 13	No specific requirement for original.	FSI

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	International Ship Security Certificate (ISSC) or Interim International Ship Security Certificate	SOLAS 1974 (2002 amendments), regulation XI-2/9.1.1; <i>ISPS Code part A, section 19 and appendices.</i>	No specific requirement for original.	MSC
	Ship Security Plan and associated records	SOLAS 1974 (2002 amendments), regulation XI-2/9; ISPS Code part A, sections 9 and 10	9.6 The plan may be kept in an electronic format. In such a case, it shall be protected by procedures aimed at preventing its unauthorised deletion, destruction or amendment.	MSC
	Continuous Synopsis Record (CSR)	SOLAS 1974 regulation XI-1/5	No specific requirement for original.	MSC
	International Anti-fouling System Certificate	AFS Convention regulation 2(1) of annex 4	No specific requirement for original.	MEPC
	Declaration on Anti-fouling System Ships	AFS Convention regulation 5(1) of annex 4	No specific requirement for original.	MEPC
	International Air Pollution Prevention Certificate	MARPOL Annex VI, regulation 6	No specific requirement for original.	BLG
	Ozone Depleting Substances Record Book	MARPOL Annex VI, regulation 12.6	No specific requirement for original.	MEPC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Fuel Oil Changeover Procedure and Log-Book (record of fuel changeover)	MARPOL Annex VI, regulation 14.6	No specific requirement for original.	MEPC
	Manufacturer's Operating Manual for Incinerators	MARPOL Annex VI, regulation 16.7	No specific requirement for original.	MEPC
	Bunker Delivery Note and Representative Sample	MARPOL Annex VI, regulation 18.6 and 18.8.1	No specific requirement for original.	MEPC
	Technical File	NO _x Technical Code, paragraph 2.3.4	No specific requirement for original.	MEPC
	Record Book of Engine Parameters	NO _x Technical Code, paragraph 2.3.7	No specific requirement for original.	MEPC
	Exemption Certificate	SOLAS 1974, regulation I/12; 1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	MSC
	LRIT conformance test report	SOLAS 1974, regulation V/19-1; MSC.1/Circ.1307	No specific requirement for original.	MSC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
2	In addition to the certificates listed in section 1 above, passenger ships shall carry:			
	Passenger Ship Safety Certificate	SOLAS 1974, regulation I/12, 1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	DE
	Exemption Certificate	SOLAS 1974, regulation I/12; 1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	DE
	Special Trade Passenger Ship Safety Certificate, Special Trade Passenger Ship Space Certificate	STP 71, rule 5 SSTP 73, rule 5	No specific requirement for original.	DE
	Search and rescue co-operation plan	SOLAS 1974 regulation V/7.3	No specific requirement for original.	COMSAR
	List of operational limitations	SOLAS 1974 regulation V/30	No specific requirement for original.	DE
	Decision support system for masters	SOLAS 1974, regulation III/29	No specific requirement for original.	DE

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
3	In addition to the certificates listed in section 1 above, cargo ships shall carry:			
	Cargo Ship Safety Construction Certificate	SOLAS 1974, regulation I/12, 1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	DE
	Cargo Ship Safety Equipment Certificate	SOLAS 1974, regulation I/12, 1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	DE
	Cargo Ship Safety Radio Certificate	SOLAS 1974, regulation I/12, as amended by the GMDSS amendments; 1988 SOLAS Protocol, regulation I/12 (2000 amendments), appendix	No specific requirement for original.	COMSAR
	Cargo Ship Safety Certificate	1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	DE
	Document of authorization for the carriage of grain	SOLAS 1974, regulation VI/9; International Code for the Safe Carriage of Grain in Bulk, section 3	No specific requirement for original.	SLF
	Certificate of insurance or other financial security in respect of civil liability for oil pollution damage	CLC 1969, article VII	No specific requirement for original.	MEPC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Certificate of insurance or other financial security in respect of civil liability for bunker oil pollution damage	Bunker Convention 2001, Article 7	Article 7.5 states "The certificate shall be carried on board the ship and a copy shall be deposited with the authorities who keep the record of the ship's registry or, if the ship is not registered in a State Party, with the authorities issuing or certifying the certificate.	MEPC
	Certificate of insurance or other financial security in respect of civil liability for oil pollution damage	CLC 1992, article VII	No specific requirement for original.	MEPC
	Enhanced survey report file	SOLAS 1974, regulation XI-1/2; resolution A.744(18)	No specific requirement for original.	MEPC
	Record of oil discharge monitoring and control system for the last ballast voyage	MARPOL Annex I, regulation 31	Logbook.	MEPC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Oil Discharge Monitoring and Control (ODMC) Operational Manual	MARPOL Annex I, regulation; resolution A.496(XII); resolution A.586(14); resolution MEPC.108(49)	No specific requirement for original	MEPC
	Cargo Information	SOLAS 1974, regulations VI/2 and XII/10; MSC/Circ.663	No specific requirement for original.	DSC
	Ship Structure Access Manual	SOLAS 1974 regulation II-1/3-6	No specific requirement for original.	DE
	Bulk Carrier Booklet	SOLAS 1974, regulations VI/7 and; XII/8; Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code)	No specific requirement for original.	DE
	Crude Oil Washing Operation and Equipment Manual (COW Manual)	MARPOL Annex I, regulation 35; resolution MEPC.81(43)	No specific requirement for original.	MEPC
	Condition Assessment Scheme (CAS) Statement of Compliance, CAS Final Report and Review Record	MARPOL Annex I regulations 20 and 21; resolution MEPC.94(46); resolution MEPC.99(48); resolution MEPC.112(50); resolution MEPC.131(53); resolution MEPC.155(55)	No specific requirement for original.	MEPC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Subdivision and stability information	MARPOL 73/78, Annex I, regulation 28	No specific requirement for original.	MEPC
	VOC Management Plan	MARPOL Annex VI, regulation 15.6	No specific requirement for original	MEPC
4	In addition to the certificates listed in sections 1 and 3 above, where appropriate, any ship carrying noxious liquid chemical substances in bulk shall carry:			
	International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (NLS Certificate)	MARPOL, Annex II, regulations 8	A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration. Otherwise, nothing specific about carrying original on board.	MEPC
	Cargo record book	MARPOL Annex II, regulation 15.2	No specific requirement for original.	MEPC
	Procedures and Arrangements Manual (P & A Manual)	MARPOL Annex II, regulation 14; resolution MEPC.18(22)	No specific requirement for original.	MEPC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Shipboard Marine Pollution Emergency Plan for Noxious Liquid Substances	MARPOL Annex II, regulation 17	No specific requirement for original.	MEPC
5	In addition to the certificates listed in sections 1 and 3 above, where applicable, any chemical tanker shall carry:			
	Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk	BCH Code, section 1.6; BCH Code as modified by resolution MSC.18(58), section 1.6	No specific requirement for original.	BLG
	International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk	IBC Code, section 1.5; IBC Code as modified by resolutions MSC.16(58) and MEPC.40(29), section 1.5	No specific requirement for original.	BLG
6	In addition to the certificates listed in sections 1 and 3 above, where applicable, any gas carrier shall carry:			
	Certificate of Fitness for the Carriage of Liquefied Gases in Bulk	IGC Code, section 1.6	No specific requirement for original.	BLG

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk	IGC Code, section 1.5; IGC Code as modified by resolution MSC.17(58), section 1.5	No specific requirement for original.	BLG
7	In addition to the certificates listed in sections 1, and 2 or 3 above, where applicable, any high-speed craft shall carry:			
	High-Speed Craft Safety Certificate	SOLAS 1974, regulation X/3; 1994 HSC Code, section 1.8; 2000 HSC Code, section 1.8	No specific requirement for original.	DE
	Permit to Operate High-Speed Craft	1994 HSC Code, section 1.9; 2000 HSC Code, section 1.9	No specific requirement for original.	DE
8	In addition to the certificates listed in sections 1, and 2 or 3 above, where applicable, any ship carrying dangerous goods shall carry:			
	Document of compliance with the special requirements for ships carrying dangerous goods	SOLAS 1974, regulation II-2/19.4	No specific requirement for original.	DSC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
9	In addition to the certificates listed in sections 1, and 2 or 3 above, where applicable, any ship carrying dangerous goods in packaged form shall carry:			
	Dangerous goods manifest or stowage plan	SOLAS 1974, regulations VII/4.5 and VII/7-2; MARPOL Annex III, regulation 4	No specific requirement for original.	DSC
10	In addition to the certificates listed in sections 1, and 2 or 3 above, where applicable, any ship carrying INF cargo shall carry:			
	International Certificate of Fitness for the Carriage of INF Cargo	SOLAS 1974, regulation VII/16; INF Code (resolution MSC.88(71)), paragraph 1.3	No specific requirement for original.	MSC
11	In addition to the certificates listed in sections 1, and 2 or 3 above, where applicable, any Nuclear Ship shall carry:			
	A Nuclear Cargo Ship Safety Certificate or Nuclear Passenger Ship Safety Certificate, in place of the Cargo Ship Safety Certificate or Passenger Ship Safety Certificate, as appropriate.	SOLAS 1974, regulation VIII/10	No specific requirement for original.	MSC

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Other certificates and documents which are not mandatory			
	Special purpose ships			
	Special Purpose Ship Safety Certificate	Resolution A.534(13) as amended by MSC/Circ.739; 2008 SPS Code (resolution MSC.266(84)), SOLAS 1974, regulation I/12; 1988 SOLAS Protocol, regulation I/12	No specific requirement for original.	DE
	Offshore support vessels			
	Offshore Supply Vessel Document of Compliance	Resolution MSC.235(82)	No specific requirement for original.	MSC
	Certificate of Fitness for Offshore Support Vessels	Resolution A.673(16); MARPOL 73/78, Annex II, regulation 13(4)	No specific requirement for original.	MEPC
	Diving systems			
	Diving System Safety Certificate	Resolution A.536(13), section 1.6	No specific requirement for original.	DE

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
Dynamically supported craft				
	Dynamically Supported Craft Construction and Equipment Certificate	Resolution A.373(X), section 1.6	No specific requirement for original.	DE
Mobile offshore drilling units				
	Mobile Offshore Drilling Unit Safety Certificate	Resolution A.414(XI), section 1.6; resolution A.649(16) section 1.6; resolution A.649(16) as modified by resolution MSC.38(63), section 1.6, 2009 MODU Code (resolution A.1023(26))	No specific requirement for original.	DE
Wing-In-Ground (WIG) Craft				
	Wing-in-ground Craft Safety Certificate	MSC/Circ.1054, section 9	No specific requirement for original.	DE
	Permit to Operate WIG Craft	MSC/Circ.1054, section 10	No specific requirement for original.	DE

Category	Certificate or Document	Reference	Does the source document require original Certificates and Documents?	Committee/ Sub-Committee
	Noise levels			
	Noise Survey Report	Resolution A.468(XII), section 4.3	No specific requirement for original.	DE