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Ships and marine technology — Ship recycling management systems — Guidelines for the implementation of ISO 30000

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

— an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;

— an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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.

ISO/PAS 30004 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*.

Introduction

This Publicly Available Specification has been developed in response to demand from industry for a ship recycling standard.

As concern grows for identifying essential elements required for a ship recycling facility, shipowners, ship recyclers, governments, concerned bodies and other stakeholders are increasingly looking for guidance in what is acceptable in implementing standards for ship recycling facilities.

There is recognition that the present levels of death and injury, damage to the environment, lack of sanitation and provision of basic welfare needs are unacceptable. However, there is a lack of clear guidance on what is the minimum standard required.

This Publicly Available Specification aims to identify the principle elements required for compliance with ISO 30000. It gives guidance on how to design the management system in compliance with ISO 30000 and leads the designer or auditor into what the practical consequences should be.

This Publicly Available Specification describes the principle functional requirements of a ship recycling facility and the elements of the management system and gives facilities guidance on how to establish, implement, maintain and improve a ship recycling facility management system.

Practical examples are presented throughout this Publicly Available Specification for illustrative purposes. They are not intended to present the only possibilities, nor are they necessarily suitable for every organization. In designing and implementing ISO 30000 an organization should select approaches that are appropriate to their own circumstances.

For ease of reading and understanding this Publicly Available Specification, practical help and general guidance have been separated out and are shown as boxed text.

Within some organizations, elements of the ship recycling management system could already be in place, such as the policy and risk assessment records, but others will be developed further. Some organizations will have an integrated system in place which includes elements that have requirements common to those identified in this Publicly Available Specification. Many organizations will already have systems and decide to develop an integrated system that complies with ISO 30000. Compatible standards such as ISO 9001, ISO 14001 and OHSAS 18001 are particularly relevant to this approach and ISO 30000 is designed to ease such integration.

The organization can establish, document, implement, maintain and continually improve a ship recycling management system in accordance with this guidance.

“Establish” implies a level of permanency but the system is not considered established until all of its elements have been demonstrably implemented. “Maintain” implies that, once established, the system continues to operate effectively. This requires active effort on the part of the organization. Many systems start well but deteriorate due to lack of maintenance. Many of the elements of this guidance (such as checking and performance review) are designed to ensure active maintenance of the system.

It is important that all the elements in this Publicly Available Specification be incorporated into the ship recycling management system, but the manner and extent to which individual elements are applied will depend on factors such as the size of the organization, the nature of its activities, and the hazards, the risks, the environment and the conditions in which it operates.

Key tasks for managers of ship recycling facilities who wish to establish, implement, maintain or improve a management system for their facility include

a) recognising that the environment, safety, health and welfare are among the highest organizational priorities,

b) establishing and maintaining communication and constructive relations with internal and external interested parties including stakeholders, shipowners and the general public,

c) identifying the important aspects of the facilities operations including procedures for accepting the ship and downstream waste management (i.e. activities before and after operations in the facility itself),

d) identifying the legal requirements and other requirements to which the organization subscribes, that relate to the aspects above. These include national and international law such as the International Maritime Organization (IMO) conventions, the requirements of the Basel Convention (BC), the International Labour Organization (ILO) and other competent international organizations, as well as relevant guidelines published by these or other recognised organizations,

e) ensuring the commitment of management and all persons working for or on behalf of the organization to the protection of the environment and the safety, health and welfare of all persons whom the organization can control or exert influence over, with clear assignment of accountability and responsibility,

f) encouraging planning throughout the activities of the facility and related upstream and downstream activities,

g) establishing a process for achieving necessary objectives and targets,

h) providing appropriate and sufficient resources, including training, to comply with applicable legal and other requirements to which the facility subscribes and to monitor and achieve the objectives and targets on an ongoing basis,

i) evaluating environmental, safety, health and welfare performance against the facilities' policy, objectives and targets and seeking improvement where appropriate,

j) establishing a management process to audit and review the management system and to identify opportunities for improvement of the system and resulting environmental, safety, health and welfare performance, and

k) encouraging subcontractors, suppliers, transporters, disposers, resellers and other stakeholders to establish similar systems to manage and improve environmental, safety, health and welfare performance.

Facilities may use this Publicly Available Specification, or related International Standards, in various ways, including

1) as guidance to establish, implement, maintain or improve its management system, knowing that this Publicly Available Specification is not intended for conformity assessment purposes, and

2) in support of the implementation or improvement of its ship recycling management system.

The choice will depend on factors such as

i) the facilities' goals,

ii) the maturity of the facilities' management systems,

iii) possible advantages and disadvantages, as determined by factors such as the facilities' current and desired market positions, reputation, external relations and the views of interested parties, and

iv) the size of the organization.

An effective ship recycling management system helps an organization to avoid, reduce, control or mitigate the adverse impacts of its activities and to achieve compliance with applicable legal requirements as well as other requirements to which the organization subscribes – in particular this includes national and international law, the IMO convention and the relevant guidelines issued by the IMO, the BC and the ILO.

Having a ship recycling facility management system can help the facility assure shipowners and other interested parties that

a) a management commitment exists for environmental concerns, safety, health and welfare and to meet its policy, objectives and targets,

b) legal compliance (international and national) is assured as well as compliance with the IMO, the BC and ILO guidance,

c) emphasis is based on prevention of accidents and incidents,

d) evidence of reasonable care and regulatory compliance can be provided as well as proper acknowledgement and implementation of at least the IMO, the BC, and the ILO guidance, and

e) the systems' design incorporates the process of continual improvement.

NOTE This Publicly Available Specification is based on the methodology known as Plan-Do-Check-Act (PDCA).

PDCA can be described as follows:

— Plan: establish the objectives and processes necessary to deliver results in accordance with the organization's ship recycling policy;

— Do: implement the processes;

— Check: monitor and measure processes against recycling policies, objectives, targets, legal and other requirements, and report results;

— Act: take actions to continually improve performance of the recycling management system.

Ships and marine technology — Ship recycling management systems — Guidelines for the implementation of ISO 30000

1 Scope

This Publicly Available Specification provides general advice on the application of ISO 30000 and specifications for management systems for safe and environmentally sound ship recycling facilities.

It explains the underlying principles of ISO 30000 and describes the intent, typical inputs, processes and typical outputs for each requirement of ISO 30000 to aid the understanding and implementation of ISO 30000.

This Publicly Available Specification does not create additional requirements to those specified in ISO 30000, nor does it prescribe mandatory approaches to the implementation of ISO 30000.

NOTE Occupational health and safety issues can be included when an organization seeks to implement an integrated environmental and occupational health and safety management system.

2 Normative references

The following referenced documents are indispensable for the application 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 30000, *Ships and marine technology — Ship recycling management systems — Specifications for management systems for safe and environmentally sound ship recycling facilities*

3 Terms and definitions

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

3.1
acceptable risk
risk that has been reduced to a level that can be tolerated by the organization having regard to its legal obligations and its ship recycling policy

3.2
performance indicator
EPI, SPI, MPI, WPI
⟨environmental, safety, management, welfare⟩ item that provides information or measure about the facility or an organization's performance in the stated field

3.3
correction
action taken to eliminate a detected nonconformity

3.4
hazard
source, situation or act with potential for harm in terms of human injury or ill health (both short and long term), damage to property, damage to the environment, or a combination of these

3.5
ill health
identifiable, adverse physical or mental condition arising from and/or made worse by a work activity and/or work-related situation

3.6
incident
work-related event(s) in which a negative effect on ship recycling aspects or impacts, whether related to safety, health, welfare or the environment (regardless of severity), occurred or could have occurred, whether short term or long term

NOTE 1 An accident is an incident which has given rise to actual negative effects, such as injury, ill health, fatality, permanently reduced circumstances.

NOTE 2 An incident where no negative effects occur can be referred to as a “near miss”, “near hit”, “close call” or “dangerous occurrence”.

NOTE 3 An emergency situation is a particular type of incident.

3.7
risk
combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of the incident caused

3.8
risk assessment
process of evaluating the risk(s) arising from a hazard, taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable

4 Ship recycling management system elements

4.1 General

4.1.1 The ship recycling management system model

The management system detailed in this Publicly Available Specification follows a “Plan-Do-Check-Act” (PDCA) management model. This model and the ongoing process of continual improvement are illustrated below: Practical help — Ship recycling system management model.

A ship recycling management system is best viewed as an organizing framework that should be continually monitored and periodically reviewed to provide effective direction for an organization's management in response to changing internal and external factors. All levels in the organization should accept responsibility for working to achieve improvements in the management system, as applicable.

When first establishing a management system an organization should begin where there is obvious benefit, for example by focusing on immediate safety benefits or regulatory compliance related to its most significant recycling aspects. As the management system takes shape, procedures, programmes and technologies can be put in place to further improve the facilities performance. It should be noted that relevant guidance from organizations such as the ILO and the BC give guidance in such staged improvements.

Practical help — Ship recycling system management model

PDCA is an ongoing, iterative process that enables an organization to establish, implement and maintain its ship recycling policy based on top management's leadership and commitment to the management system. After the organization has evaluated its current position in relation to its activities for safety, health, welfare and the environment, the steps of this ongoing process are as follows.

a) Plan; manage and organize tasks and operations through required procedures and practices such that the aspects and impacts are properly controlled;

   1) identify ship recycling aspects and associated ship recycling impacts (see 4.3.1),

   2) identify and monitor applicable legal requirements and other requirements to which the organization subscribes, and set internal performance criteria where appropriate (see 4.3.2),

   3) set ship recycling objectives and targets and formulate programme(s) to achieve them (see 4.3.3.1 and 4.3.3.2), and

   4) develop and use performance indicators(see 4.3.3.3).

b) Do; implement and operate the ship recycling management system (see 4.4);

   1) create management structures, assign roles and responsibilities with sufficient authority,

   2) provide adequate resources (see 4.4.1),

   3) train persons working for or on behalf of the organization and ensure their awareness and competence (see 4.4.2),

   4) establish processes for internal and external communication (see 4.4.3),

   5) establish and maintain documentation (see 4.4.4),

   6) establish and implement document control(s) (see 4.4.5),

   7) establish and maintain operational control(s) (see 4.4.6), and

   8) ensure emergency preparedness and response (see 4.4.7).

c) Check; assess ship recycling management system processes (see 4.5);

   1) conduct ongoing monitoring and measurements (see 4.5 and 4.5.1),

   2) evaluate status of compliance (see 4.5.2),

   3) identify nonconformity and take corrective and preventive actions (see 4.5.3),

   4) manage records (see 4.5.4), and

   5) conduct periodic internal audits (see 4.5.5).

d) Act; review and take action to improve the ship recycling management system (see 4.6);

   1) conduct management reviews of the ship recycling management system at appropriate intervals (see 4.6.1), and

   2) identify areas for improvement (see 4.6.2).

This ongoing process enables the organization to continually improve its ship recycling management system and its overall ship recycling performance.

4.1.2 Top management commitment and leadership

To ensure success, an early step in establishing or improving a management system involves obtaining commitment from the top management of the organization to improve the management of its activities, products, services, and suppliers. The ongoing commitment and leadership of the top management are crucial. Identifying the benefits that a ship recycling management system can bring, as well as the challenges that a management system can avoid, may help to secure top management's commitment and leadership.

4.1.3 Scope of the ship recycling management system

Top management need to define the scope of the organization's management system. ISO 30000 is designed to be all inclusive in order to allow the top management to visibly control all the processes and procedures it needs to. This is particularly the case with downstream waste management and also with the processes for accepting ships into the facility as well as the use control of contracted or subcontracted organizations throughout the processes involved. Therefore top management should clearly define these boundaries. Once the scope has been defined, all activities, products, services, subcontractors, suppliers and subsuppliers within the scope should be covered by the management system. Further, it should be noted that since the design of the facility is critical to its success, the design and infrastructure of the facility and its suppliers and subcontractors need to be within the scope.

4.1.4 Initial ship recycling status review

An organization with no existing management system, or with a management system which has not previously been assessed against ISO 30000, should assess its current position by a review. This review should cover all the safety, welfare and environmental aspects of all the facilities activities within its scope, including procedures for vessel arrivals, management of subcontractors on site, transport, disposal and other downstream waste management.

Where no formal management system exists, or if the organization is newly established, the initial status review should serve as a basis for establishing what arrangements should be made to ensure an effective management system is implemented. The initial status review should indicate where the organization currently stands in relation to managing its ship recycling aspects and associated risks.

The review should cover the following key areas:

a) identification and anticipation of safety, hazards, welfare and environmental aspects, including upstream management (import/export and acceptance of the ship), site activities and subcontractors on site, transport and downstream waste management. Each element should be examined for normal operating conditions, abnormal conditions including start up and shut down and emergency situations, pollution incidents and accidents;

b) the relevant infrastructure and facilities of the site, and all associated subcontractors, suppliers and other facilities providing vital services such as transport and disposal should be examined for adequacy, as well as the procedural and legal capability of supporting services for certification and compliance;

c) identification of applicable legal requirements, both national and international and other requirements to which the organization or its suppliers subscribes, such as guidance published by the IMO, the ILO and the BC as well as industry best practice;

d) examination of existing management practices and procedures, including those associated with procurement and contracting activities;

e) evaluation of previous emergency situations and accidents.

The review can also include additional considerations, such as

1) an evaluation of performance compared with applicable internal criteria, external standards, regulations, codes of practice, and sets of principles and guidelines,

2) opportunities for competitive advantage, including cost reduction opportunities,

3) the views of interested parties, and

4) other organizational systems that can enable or impede environmental performance.

The results of the review should be documented and can be used to assist the organization in setting the scope of its ship recycling management system, developing or enhancing its policy, setting its objectives and targets, and determining the effectiveness of its approach to maintaining compliance with applicable legal requirements and other requirements to which the organization subscribes. The results can also be used as applicable to form a baseline for continuous improvement.

Practical help — Initial review

Methods that can be used to examine existing management practices and procedures include

a) interviews with persons previously or currently working for or on behalf of the organization to determine the scope of the organization's past and current activities, products and services,

b) evaluation of internal and external communications that have taken place with the organization's interested parties, including complaints, matters related to applicable legal requirements or other requirements to which the organization subscribes, past environmental or related incidents and accidents,

c) gathering information related to current ship recycling practices such as

1) current guidance, for example as published by the IMO, the ILO and the BC as well as local information such as legislation and recent legal developments,

2) flag state and national authority advice on documents, reporting and procedures for preparing and delivering ships to be recycled, especially regarding inventories of hazardous materials (IHM) and ship recycling plans (SRP) and export/import requirements and notifications,

3) national authority requirements for ship recycling facilities,

4) owner's specific requirements for recycling of their ships,

5) best practice guidance,

6) requirements for handling hazardous materials,

7) information on ship dismantling procedures and practices,

8) methods for protecting land, sea, and air from harmful emissions due to ship recycling processes,

9) safety procedures for ship recycling, especially with regard to safe entry, hot work, working at heights, required personal protective equipment (PPE), recognising hazards, training, awareness, etc.,

10) storage, transport and disposal of hazardous materials,

11) control of subcontractors and suppliers,

12) prevention of pollution,

13) welfare practices and provisions of essential services in the facility such as messes, changing facilities, sanitation, etc.,

14) welfare provisions external to the facility such as housing, hospitals, schools, recreation, shops, financial services, emergency services, road rail and other communication, etc.,

15) emergency preparedness and response,

16) training programmes,

17) review and approval processes for operational control procedures,

18) completeness of monitoring records and/or ease of retrieving historical records, and

19) reporting procedures.

The review can be conducted using checklists, process flowcharts, interviews, direct inspection and past and current measurements, results of previous audits or other reviews. The results of the review should be documented so that it can be used to contribute to setting the scope and establishing or enhancing the organization's ship recycling management system, including its ship recycling policy.

4.2 Ship recycling policy

The ship recycling policy establishes the basic management policy of the ship recycling facility with regard to safety, health, welfare and the environment. It is expected to be complementary to any business or other policies the organization may have.

The policy sets the level of safety, health, welfare and environmental performance and responsibility required of the organization, against which all subsequent actions will be judged.

The policy should be appropriate to the impacts of the facilities operations and should guide the setting of objectives and targets. It should be reviewed periodically to ensure it remains relevant and appropriate and takes into account any changes to the organization or its operations.

A growing number of international organizations, especially UN agencies such as the IMO, the ILO and the BC, have developed guidelines. Such guidance helps organizations define the overall scope of their operations. They also help to give different organizations a common set of values. Guidance such as these can assist an organization in developing its policy, which can be as individual as the organization for which it is developed. An organization is not bound to use such guidance as provided by the three UN agencies mentioned, but it should at least show an awareness of them and their contents, and if it decides not to use them, then it should show equivalence in the documents and procedures that it does use.

The responsibility for setting policy rests with an organization's top management. The ship recycling policy can be included in or linked with other policy documents of the organization. The organization's management is responsible for implementing the policy and for providing input to the formulation and modification of the policy. The policy should be communicated to all persons working for or on behalf of the organization. In addition, the policy should be made available to the public (see 4.4.3.2 for a discussion of external communication methods).

In developing its ship recycling policy, an organization should consider

a) its mission, vision, core values and beliefs,

b) coordination with other organizational policies (e.g. quality),

c) the requirements of, and communication with, interested parties,

d) guiding principles,

e) specific local or regional conditions,

f) its commitments to safety, welfare, prevention of pollution and continual improvement, and

g) its commitment to comply with legal requirements and other requirements to which the organization subscribes.

Practical help — Ship recycling policy

The ship recycling policy should recognise that all activities, products and services within the defined scope of an organization's ship recycling management system can cause impacts on safety, welfare and the environment.

The policy should state commitments to, among other things,

a) comply with or exceed applicable legal requirements and other requirements to which the organization subscribes which relate to its ship recycling aspects,

b) provide a safe working environment for all workers and stakeholders,

c) provide adequate welfare arrangements for workers and other stakeholders as applicable,

d) provide suitable protection for the environment,

e) prevent pollution, (see Practical help — Prevention of pollution), and

f) achieve continual improvement through the development of performance evaluation procedures and associated indicators.

The policy might also include other commitments to

1) minimize any significant adverse impacts of existing infrastructure and new developments through the use of integrated management procedures and planning,

2) influence other stakeholders to improve safety, welfare and environmental performance, and

3) set an example of leadership in the field of safe and environmentally friendly ship recycling.

Practical help — Prevention of pollution, reduction and mitigation

Prevention of pollution can be incorporated into the design and development of the infrastructure and operations of the organization and also subcontractors and other key service providers such as disposal companies. Whilst prevention is most important, many operations must recognise that prevention may be impossible and thus reduction and mitigation strategies may be more practical.

Such strategies can, for example, help an organization to identify critical operations and thus target areas to reduce waste and emissions associated with processes.

In general the most critical area to identify and prevent pollution is while the ship is still afloat. Pollution at this point is hardest to contain and will spread quickest, making clean up impossible. Strategies to aid containment, or reduce the number of operations carried out afloat will have significant improvements.

Prevention, reduction and mitigation strategies must be relevant to the facilities characteristics. A floating containment boom is neither effective in a strong current, nor for potential pollutants with a density greater than the medium the ship is floating in.