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Work in progress in ISO

By

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WORK IN PROGRESS IN ISO

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1 General

Main activities of ISO in the *maritime transport area* are dealt with by ISO technical committee 8 "*Ships and marine technology*", ISO technical committee 51 "*Pallets for unit load method of material handling*", ISO technical committee 104 "*Freight containers*" and ISO technical committee 122 "*Packaging*". However, more ISO technical committees are involved, eg ISO technical committee 207 on "Environmental management", etc...

The ISO has prepared international standards aimed at improving safety of ships and of their equipment, optimizing ship transport and interoperability, facilitating operations in ports, improving security on board ships, in port and for the complete supply chain and ensuring a cleaner and sustainable environment.

This note provides updated information on ISO work related to the maritime transport area. It covers the following subjects:

- Identification of containers
- Container door end security
- Mechanical seals for containers
- Electronic seals for containers
- Supply chain application of RFIDs
- Security management for the supply chain
- Ship dismantling/recycling management
- Current list of management systems standards (MSSs)
- Societal security

2 Identification of containers

The identification of containers is currently made on the basis of the following ISO standards. The registration is made by the Bureau International des Conteneurs (BIC)

- ISO 6346:1995 "*Freight containers -- Coding identification and marking*"

Concerning the automatic identification, the ISO standard 10374: 1991 is:

- ISO 10374:1991 "*Freight containers -- RF automatic identification*"

A new standard on RF automatic identification of freight container is under preparation. At the last meeting of Sub-committee ISO/TC104/SC4 which was held in Busan (Republic of Korea) on 9 May 2007, it was felt that considerable work needs to be done to achieving a consensual ISO standard based on new technology. To exclude any misunderstanding and in order to clearly differentiate the future container tag ("license plate tag") from the existing tag specified in ISO 10374:1991, it was agreed to allot a new ISO standard number. That draft is now registered as:

- AWI 10891 "*Freight containers -- RF automatic identification*"

3 Container door end security

The technical committee ISO/TC104 "Freight containers" has examined the design of the door end of the container from the aspect of improving security and making undetected entry into the container more difficult. The current activity in this regard was focused on current industry provisions for sealing freight containers and the apparent ease in which knowledgeable individuals can defeat these provisions. The ISO/TC104 has therefore considered including sealing provisions into the standards and in particular, moving location of these provisions to a more secure location such as the locking rod cam and keeper.

The following international standard has now been issued:

- ISO 1496-1:1990/Amendment 5: 2006 *"Series 1 freight containers--Specification and testing--Part 1 General cargo containers for general purposes --Amendment 5 Door end security"*.

Moreover, some additional considerations relating to the door end security have been adopted and will be incorporated in ISO/TR 15070: 1996 on structural test criteria for freight containers. They are published as a second Amendment:

- ISO/TR 15070:1996/Amendment 2:2007 *"Series 1 freight containers --Rationale for structural test criteria -- Amendment 2 Design consideration"*

4 Mechanical seals for containers

First step of the ISO/TC104 work was completed in 2004 and PAS (Publicly Available Specification) 17712 on *"mechanical seals for freight containers"* was published. This PAS set the standard for mechanical seals, including high security seals, for use in transportation.

Further work has been undertaken to publish a second edition of this ISO/PAS and to convert it to a full ISO standard. One important addition that has been made as part of this new edition and conversion process is a new annex that details quality control procedures for seal manufacturers to ensure seals produced meet the standard and that they are properly controlled during manufacture and distribution to prevent theft, copying or other fraudulent use of the seals or seal numbers.

The second edition of ISO/PAS 17712 has been published in July 2006.

An ISO/DIS 17712 (identical to the second edition of the ISO/PAS) was submitted for ISO member body enquiry in December 2006. That last enquiry was aimed at transforming the ISO/PAS 17712 into a full ISO standard (ISO 17712). The enquiry terminated on 2007-05-03. Comments received were reviewed by ISO/TC104/WG7 before last meeting of ISO/TC104 held in Busan on 10 May 2007. It was decided to make a few technical improvements as proposed by member bodies and to re-circulate the draft for a two-month enquiry.

5 Electronic seals for containers

The following standards are now published

- ISO 18185-1:2007 *"Freight containers – Electronic seals – Part 1:Radio-frequency communication protocol"*

- ISO18185-2:2007 "*Freight containers -- Electronic seals -- Part 2: Application requirements*"
- ISO 18185-3:2006 "*Freight containers -- Electronic seals -- Part 3: Environmental characteristics*"
- ISO 18185-4:2007 "*Freight containers -- Electronic seals -- Part 4: Data protection*"
- ISO 18185-5:2007 "*Freight containers -- Electronic seals -- Part 5: Physical layer*"

One important issue that has been agreed amongst the experts and included in their work is that all electronic seals will meet the requirements laid down in PAS 17712:2006 for mechanical seals.

6 Supply chain application of Radio Frequency Identification (RFIDs)

Recognizing their overlying areas of responsibility, the technical committees ISO/TC 104 "*Freight containers*" and ISO/TC122 "*Packaging*" have established a joint working group to look specifically at the application of radio frequency identification technology (RFID) to transportation issues. The following standards are now published or will be published shortly:

- ISO7363:2007: "*Supply chain application of RFIDs - Freight containers*" (published)
- ISO/FDIS 17364 on "*Supply chain application of RFIDs - Returnable transport Items*" (to be submitted as ISO/FDIS for the ISO member body formal vote)
- ISO/FDIS 17365 on "*Supply chain application of RFIDs - Transport units*" (to be submitted as ISO/FDIS for the ISO member body formal vote)
- ISO/PRF17366 on "*Supply chain application of RFIDs - Product packaging*" (under final publication) -
- ISO/PRF17367 on "*Supply chain application of RFIDs - Product tagging*" (under final publication)

7 Security management for the supply chain

At the end of 2001, the technical committee ISO/TC8 "*Ships and marine technology*" undertook the preparation of a management system for ensuring better security in the supply chain. Several ISO/PASs were issued. At present, the following international standards are published and replacing the ISO/PASs:

- ISO 28000:2007 "*Specification for security management systems for the supply chain*"
- ISO 28001:2007 "*Security management systems for the supply chain—Best practices for implementing supply chain security—Assessments and plans*"
- ISO 28003:2007 "*Security management for the supply chain—Requirement for audit and certification of supply chain management security systems*"
- ISO 28004:2007 "*security management for the supply chain—Guidelines for the implementation of ISO/PAS 28000*"
- ISO 20858:2007 "*Ship and marine technology—Maritime port facility security assessments and security plan development*"

In addition, the following draft international standard will be submitted shortly to an ISO Member Body enquiry:

- ISO/DIS 28005 *"Ships and marine technology - Computer applications - Electronic port clearance"*

The above standardization work is dealt with in close collaboration with the International Maritime organization (IMO), the International Labour Office (ILO) and the World Customs Organization (WCO).

8 Ship dismantling/recycling management

The technical committee ISO/TC8 *"Ships and marine technology"* is undertaking work for the development of a series standards on ships recycling management systems (ISO 30000 series). This work will support and supplement the work of IMO/ILO/Basel Convention Working Group and the IMO Convention and regulations. That ISO 30000 series will apply to the recycling of all types and sizes of ships, in both international and domestic trade and will be developed with the cooperation of international organizations such as the IMO and the World Trade Organization.

The work is dealt with in a specialized Working Group ISO/TC8/WG1 *"Ship recycling"*

The following standards are under preparation:

- *Ship recycling management systems - Specifications for ship recycler management systems for safe and environmentally sound ship recycling facilities (ISO/CD PAS 30000)*
- *Ship recycling management systems - Specifications for management systems Best practices for ship recycling facilities - Assessment and plans (ISO/WI PAS 30001)*
- *Ship recycling management systems - Guidelines for selection of ship recyclers (and pro format contract) (ISO/WI 30002)*
- *Ship recycling management systems - Requirements for bodies providing audit and certification of ship recycling management (ISO/WD PAS 30003)*
- *Ship recycling management systems - Guidelines for implementing ISO 30000 (ISO/WI PAS 30004)*
- *Ship recycling management systems - Information control for hazardous materials in the manufacturing chain and ship operations (ISO/WI 30005)*

Further consideration is being made on the preparation of ISO/PAS for *"Guidelines on surveying of ships for hazardous materials to be reported"* and *"Methods to remove asbestos in ships"*

The ISO work is carried with the help of highly competent experts having got experience in in several developing countries. It is expected that first ISO Publicly available specifications (ISO/PAS) will be issued in 2008

9 Management systems standards

The list of current management systems covers the following areas:

- *Quality (ISO 9000 series) (work from ISO/TC176 "Quality management and quality assurance")*
- *Environment (ISO 14000 series) (work from ISO/TC207 "Environmental management")*

- *Information technology service* (ISO/IEC 20000) (work from ISO-IEC/JTC1 "Information technology")
- *Food safety* (ISO 22000 series) (work from ISO/TC34 "Food products")
- *Information security management* (ISO 27000 series) (work from ISO-IEC/JTC1 "Information technology")
- *Security for the supply chain* (ISO 28000 series) (work from ISO/TC8 "Ships and marine structures")

Additional Management Systems Standards are under preparation on the following subjects

- *Dismantling of ships* (ISO/WI 30000) (work from ISO/TC8/WG1 in liaison with IMO, UNEP/Basel Convention and ILO)
- *Social responsibility* (ISO/WD 26000) (Work of ISO/TMB with interested organizations)

Lastly, Management standards are envisaged for the future, eg on health and occupational safety, on road-traffic safety, etc... Other MSSs might be envisaged in certain areas.

10 Societal security

The recently established ISO technical committee 223 "*Societal security*" deals with international standardization in the area of societal security, aimed at increasing crisis management and business continuity capabilities, i.e. through improved technical, human, organizational, and functional interoperability as well as shared situational awareness, amongst all interested parties. The committee used an all-hazards approach covering all necessary activities in the key phases of crisis management and business continuity.

A first ISO Publicly Available Specification is now published:

- ISO/PAS 22399:2007 "*Societal security - Guidelines for incident preparedness and operational continuity management*".

Several other envisaged projects would concern:

- *Societal security - fundamentals and vocabulary*
- *Societal security - Essential information and data requirements for command and control, coordination and cooperation*
- *Societal security - Principles for command and control, coordination and cooperation in resolving incidents*
- *Social security - Inter/intra organizational warning procedures*
- *Social security - Guideline for incident preparedness and operational continuity management*

10 Conclusions: Trends

Attention is drawn on the ISO 28000 series of standards which is now published as full standards. ISO 28000 is already in use for its compatibility with other Governmental and International Custom Agency security initiatives, including:

- the World Customs Organization (WCO) Supply Chain Security and Facilitation of Global Trade initiative;

- the World Customs Organization (WCO) Framework of standards to Secure and Facilitate Global Trade;
- the EU Customs Security Program – Authorized Economic Operator (AEO);
- and the US Customs and Border Protection initiative – Customs Trade Partnership against Terrorism (C-TPAT).

The ISO 20000, ISO 28001, ISO 28003, ISO 28004 and ISO 20858 are now increasingly used by major companies, ports and terminals in several countries where Homeland Security Authorities are willing to strengthen the security measures.

Moreover the ISO 30000 series of standards on ship recycling are under preparation and should be published in time to be used in support of pertinent of forthcoming regulation to be adopted by IMO, ILO and the UNEP (Basel Convention) beginning of 2009

The relevant ISO technical committees will pursue their work relating to the preparation and/or revision of international standards for the design, construction, structural elements, outfitting parts, methods and technology, security plans and security management matters and marine environment matters (See note 1).

Important trends will moreover concern reducing fuel consumption, pollutant emissions for air and water as well as emissions of gases with greenhouse effect involved in global warming for the planet Earth. In that connection, it is also important to mention the current work of ISO on the preparation of an international standard ISO 26000 on "*Guidance on social responsibility*". That future major ISO contribution to social responsibility and sustainable development was highlighted by the ISO Secretary-General at the United Nations Global Compact Leaders Summit which was held in Geneva on 5 and 6 July 2007 (See note 2).

Bibliography

1) *ISO Focus on "Facilitating transport and trade" of October 2007. See all articles and more particularly "ISO standards on course to support aims of IMO" on pages 31 and 32*

2) *ISO Management Systems of September-October 2007. See article "ISO's contributions to social responsibility and sustainable development highlighted at global Compact Leaders Summit, pages 35 and 36*

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