

**ECONOMIC COMMISSION FOR EUROPE**

Informal document AC.11 No. 8 (2007)

INLAND TRANSPORT COMMITTEE

4 October 2007

Multidisciplinary Group of Experts on Inland  
Transport Security

ENGLISH ONLY

Second session

Geneva, 9-10 October 2007

Item 5 of the provisional agenda

---

**STANDARDS, INITIATIVES, GUIDELINES, BEST PRACTICES**  
**BY THE PRIVATE SECTOR**

**Submitted by the International Organization for Standardization (ISO)**

**1      Introduction**

As it concerns the security area, it is important to draw the attention on the ISO work concerning the following subjects:

- Identification of containers
- Container door end security
- Mechanical seals for containers
- Electronic seals for containers
- Supply chain application of RFID
- Security management for the supply chain
- Current list of management systems standards (MSSs)
- Societal security
- Road-traffic safety management systems

**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 need 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 tag specified in ISO 10374:1991, it was agreed to allot a new ISO standard number. That draft is now 10891 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 been issued:

- ISO 1496-1:1990/DAmd 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-months enquiry.

## **5 Electronic seals for containers**

The following standards are now published

- ISO18185-1:2007 "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: "Freight containers -- Electronic seals -- Part 4: Data protection"
- ISO 18185-5: "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 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 - Supply chain application of RFIDs - Returnable transport Items (to be submitted as ISO/FDIS for the ISO member body formal vote)
- ISO/FDIS 17365 - Supply chain application of RFIDs - Transport units (to be submitted as ISO/FDIS for the ISO member body formal vote)
- ISO17366 - Supply chain application of RFIDs - Product packaging (under final publication)
- 
- ISO17367 - 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 have now been transformed into international standards. At present the following international standards are published or being published shortly:

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

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 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 envisaged for the future, e.g. on health and occupational safety, social responsibility (ISO/WD 26000), on dismantling of ships (ISO/WI 30000), road-traffic safety, etc... Other MSSs are envisaged in certain areas.

## 9 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 public available specification is under publication process:

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

Several envisaged projects would concern:

- Social security - Essential information and data requirements for command and control, coordination and cooperation
- Social security - Inter/intra organizational warning procedures
- Social security - Essential data requirements
- Social security - Inter/intra warning

## 10 Road-traffic safety management systems

The ISO Central secretariat has taken a recent ISO initiative proposing the establishment of an ISO Project Committee to deal with the preparation of a management system standard (MSS) on the following subject:

### **Road-Traffic safety management systems - Requirements with guidance for use (possible future ISO 39001)**

A copy of the proposal sent to ISO member bodies is attached. As it can be seen, the ISO member body enquiry started on 28 September 2007 and will be closed on 28 December 2007. Any interested national delegation/delegate are invited to contact the ISO member body in their country for submitting advices/comments as well as indicating their possible interest to participate.

Addresses of ISO member bodies are available on the following website:

<http://www.iso.org/iso/home.htm>.

Interested international organizations have been made aware through the UN Road Safety Collaboration whose secretariat is held by the World Health Organisation. That Body will meet in Geneva on 16 and 17 October 2007.

## **11 Conclusions**

Members of the ECE/TRANS/AC.11 Multidisciplinary Group of Experts on Inland Transport Security are invited to take note of the above information and if so wish to use it for their pertinent task. It is moreover recommended that committee members will contact the ISO member body in their country for expressing views on drafts on interest to them

Particular attention is drawn on the ISO 28000 series of standards which is now published. 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.

-----