ISO 7195

“Packagings for the transport of uranium hexafluoride (UF₆)”

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What is ISO?

- Non-governmental organization
- Established in 1947
- World-wide federation of 163 national standards bodies (one per country)
- Central Secretariat in Geneva (Switzerland)
- ISO in figures for the year 2015
  - 21133 International Standards and standards-type documents published to date
  - 1505 deliverables in 2015
What is an international standard?

A standard is a documented agreement containing technical specification which - when implemented - ensures that materials and services fit for their purpose.

An international standard is achieved through consensus agreement between:
- all stakeholders in each country: suppliers, users, regulators, consumers...
- national delegations
Who develops the ISO standards?

- **Political level**
  - TC 85 = “Nuclear energy, nuclear technologies, and radiological protection”
  - SC 5 = “Nuclear installations, processes and technologies”
  - WG 4 = “Transport of radioactive material”

- **Programming level**

- **Development of standards**

- **163 members**
  - General Assembly (AG)
  - Board
  - Technical Management Board (TMB)
  - TC
    - SC
      - WG
    - SC
      - WG
    - SC
      - WG
    - SC
      - WG
  - TC
    - SC
      - WG
    - SC
      - WG
    - SC
      - WG
  - TC
    - SC
      - WG
    - SC
      - WG
Who participates to SC5 activities?

- 21 Participating Countries (P-Members)
- 8 Observing Countries (O-Members)
- Liaisons with International Organizations (including the IAEA)
What is ISO 7195?

“Packaging of uranium hexafluoride (UF₆) for transport” (ISO 7195)

- was last revised in 2005,
- has to be complied with as a requirement of IAEA “Regulations for the Safe Transport of Radioactive Material” and all the modal regulations based on,
- has been developed from and is based on ANSI N14.1.

ANSI N14.1 has been used internationally as an accepted procedure for packaging UF₆. The standard cylinders included in ANSI N14.1 has been used widely as accepted designs for international transport of UF₆.

ANSI N14.1-2012 has been approved on 3 December 2012 with new title “Uranium Hexafluoride – Packagings for Transport”.

Why is ISO 7195 being revised?

ISO 7195 is being revised in the framework of the periodic review / revision of ISO Standards

- ISO 7195:2005 “Packaging of uranium hexafluoride (UF₆) for transport”
- ISO 7195:201X “Packagings for the transport of uranium hexafluoride (UF₆)”

Revised scope of the standard includes

- To provide for compatibility of packagings for the transport of uranium hexafluoride (UF₆) among different users within the nuclear industry
- To describe their design basis
- To provide the requirements for the procurement and fabrication of new packaging
- To define the requirements for inspections, cleanliness, and maintenance of packagings in service
ISO 7195 – What is new?

- New title means to focus on the packagings
  - Requirements regarding operations are out of the scope of the standard
- Alignment with ANSI N14.1 is improved (while maintaining and enhancing the international aspect of the Standard)
- Overlaps with the Regulations and the Advisory Material are removed
  - The table with the accelerations to be considered for tie-down is removed
  - Duties which are allocated to the Competent Authority are removed
- Roles and qualifications of inspectors are clarified
  - Authorized Inspector vs. Competent Inspector
- Option for substituting the periodic hydrotest by doing alternative inspections during manufacturing and during the 5-year inspection is now available
  - Existing provisions for 30C cylinders are now an option for 30B and 48Y cylinders
ISO 7195 – Where are we?

► DIS 7195 was approved

  ▪ DIS ballot took place from 22 October 2015 to 22 January 2016
    • P-Members voting: 13 in favour out of 14 = 93 % (requirement >= 66.66%)
    • Member bodies voting: 1 negative vote out of 14 = 7 % (requirement <= 25%)
      (Negative vote with the following comment: “Acceptance of specified technical modifications will change our vote to approval”)
  ▪ Many editorial and technical comments were received (no comment of such a nature that they could jeopardize the future of the process)
    • Almost 300 comments from 7 countries (the draft was deeply scrutinized!)

► Paris meeting from 29 to 31 March 2016

  ▪ 16 participants from 6 countries and 1 organization (liaison)
  ▪ All the comments were resolved to the satisfaction of the participants
ISO 7195 – What is next?

► **New draft has to be finalized**
  
  - Revision of the draft to include the resolution of all the comments as agreed during the meeting
  - Final review by the members of the Working Group 4

► **FDIS ballot to take place during 8 weeks in the first half of 2017**
  
  - FDIS ballot is almost a “Yes or No” vote (only editorial comments will be taken into account if there is a “Yes” consensus)

► **Publication after the FDIS ballot** (and the editorial changes by ISO Secretariat following the FDIS ballot)
ISO 12807 “Safe transport of radioactive material - Leakage testing on packages”

- ISO 12807 was published in 1996.
- ISO 12807 describes a method for relating permissible activity release rates of the radioactive contents carried within a containment system to equivalent gas leakage rates under specified test conditions. It pertains specifically to Type B packages for which the regulatory containment requirements are specified explicitly.

- ISO 12807 is being revised
  - DIS ballot from 15 November 2016 (?) to 6 February 2017
ISO 10276 “Trunnions for packages used to transport radioactive material”

- ISO 10276 was published in 2010
- ISO 10276 is being revised
  - Collecting the comments with the topics to be included in the revision