INTERNATIONAL STANDARD

ISO 5620-1

First edition
1992-12-01

Shipbuilding and marine structures — Filling connection for drinking water tanks —

Part 1: General requirements

Construction navale et structures maritimes — Raccordement de remplissage des réservoirs à eau potable —

Partie 1: Exigences générales

Reference number
ISO 5620-1:1992(E)

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.

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.

International Standard ISO 5620-1 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

This first edition of ISO 5620-1 together with ISO 5620-2 cancel and replace the first edition of ISO 5620, of which they constitute a technical revision.

ISO 5620 consists of the following parts, under the general title *Shipbuilding and marine structures — Filling connection for drinking water tanks*:

— *Part 1: General requirements*

— *Part 2: Components*

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Shipbuilding and marine structures — Filling connection for drinking water tanks —

Part 1:
General requirements

1 Scope

ISO 5620 specifies the drinking water connection aboard ships for attachment of piping from another ship or from a land distribution system.

This part of ISO 5620 specifies the general requirements, the composition and the designation of the complete filling connection and gives a recommendation for the installation aboard ships.

NOTES

1 Details for the components of the filling connection are given in ISO 5620-2, both for the distribution system and for the ship.

2 The general rules for drinking water distribution systems fall within the competence of national port authorities and are outside the scope of ISO 5620.

The connection specified in ISO 5620 safeguards drinking water tanks from being filled with any other fluid. Additionally it safeguards the supply piping of the drinking water from contamination by any other liquids.

NOTES

3 ISO 5620 may be applied to inland vessels if agreed between the users.

4 Users of ISO 5620 should note that, while observing the requirements of the standard, they should at the same time ensure compliance with such statutary requirements, rules and regulations as may apply to the individual ship concerned.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 5620. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 5620 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1461:1973, *Metallic coatings — Hot dip galvanized coatings on fabricated ferrous products — Requirements.*

ISO 5620-2:1992, *Shipbuilding and marine structures — Filling connection for drinking water tanks — Part 2: Components.*

3 General requirements

3.1 Connection principle

The connection is carried out by means of special watering flanges. A flange fitted to the ship piping (flange B in figure 1) and a second one (flange A) to the piping or hose line from the drinking water supply source, at which the ship watering flange (B) has a blind flange (C).

3.2 Flange connection

3.2.1 The watering flanges A, B and C shall have a special five-point connection in accordance with the dimensions given in figure 2.

3.2.2 The nominal diameter of flange connections and piping shall be DN 65.

3.2.3 The nominal pressure of flange connections and piping shall be PN 16.

3.3 Securing of connection and main dimensions

To prevent unauthorized access to the connection on the ship, the blind flange (C) shall be secured by a corrosion-resistant padlock which is fitted to a securing bolt at the lower part of the connection, as shown in figure 3.

The stud-bolt (serial No. 5) and the securing bolt (serial No. 3) shall be spot-welded or fastened by means of suitable adhesive into the ship watering flange (serial No. 1).

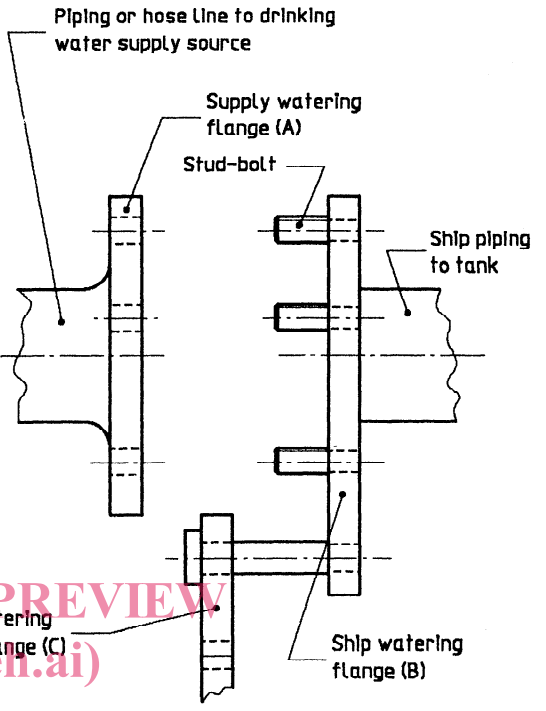


Figure 1 — Connection principle

3.4 Sealing

A gasket of suitable material for drinking water systems shall be fitted to the ship watering flange (B).

3.5 Materials and finish

3.5.1 The flange connection shall be made of weldable steel with a tensile strength of at least 360 MPa (360 N/mm^2).

3.5.2 Corrosion protection shall be obtained by hot galvanizing in accordance with ISO 1461 or by other coating which does not constitute a health hazard.

4 Composition

The composition (code letter Z) of the ship piping connection shall be as given in figure 3 consisting of components as listed in table 1.

For details of components, see ISO 5620-2.

Dimensions in millimetres

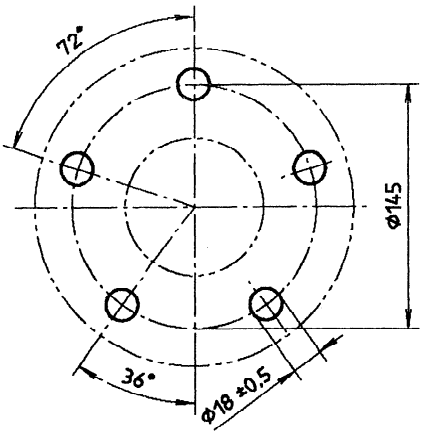
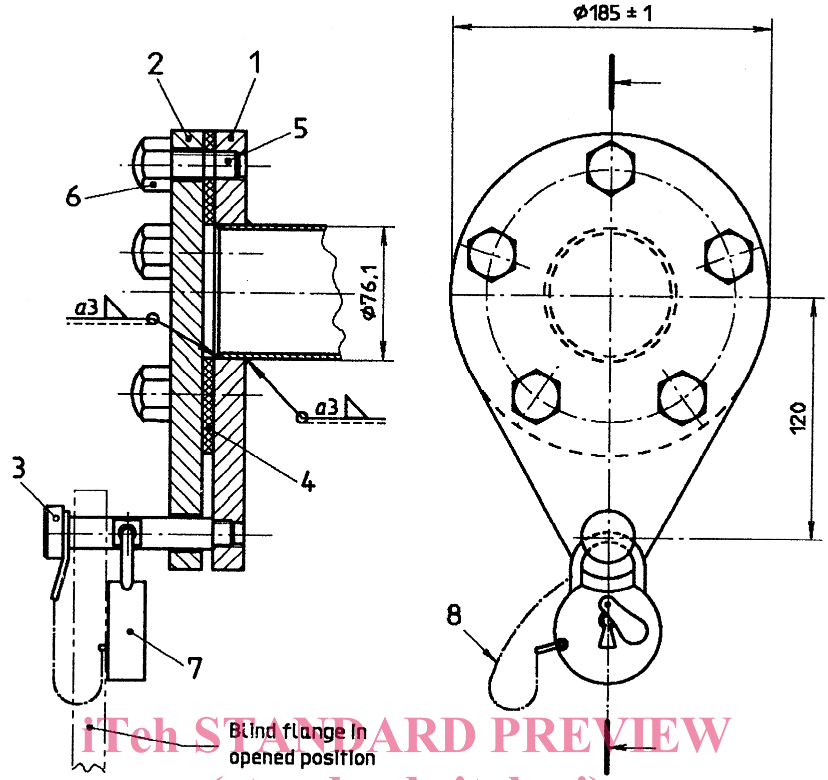


Figure 2 — Mating dimensions for watering flanges

Dimensions in millimetres



NOTE — Welds are represented in accordance with ISO 2553:1992, *Welded, brazed and soldered joints — Symbolic representation on drawings.*

Figure 3 — Composition and main dimensions of ship piping connection

Table 1 — Parts list

Serial No.	Number of components	Description	Code letter	Reference clause in ISO 5620-2:1992
1	1	Ship watering flange	B	4
2	1	Ship watering blind flange	C	5
3	1	Securing bolt	D	6
4	1	Gasket	E	7
5	5	Stud-bolt	—	8
6	5	Nut	—	9
7	1	Padlock	—	10
8	1	Securing chain	—	11

5 Designation

For reference and ordering purposes, the complete ship piping connection for drinking water tanks shall be designated, by the following elements, in the order given:

— denomination, abbreviated: Connection;

— number of this part of ISO 5620: ISO 5620-1;

— code letter for the composition: Z.

EXAMPLE

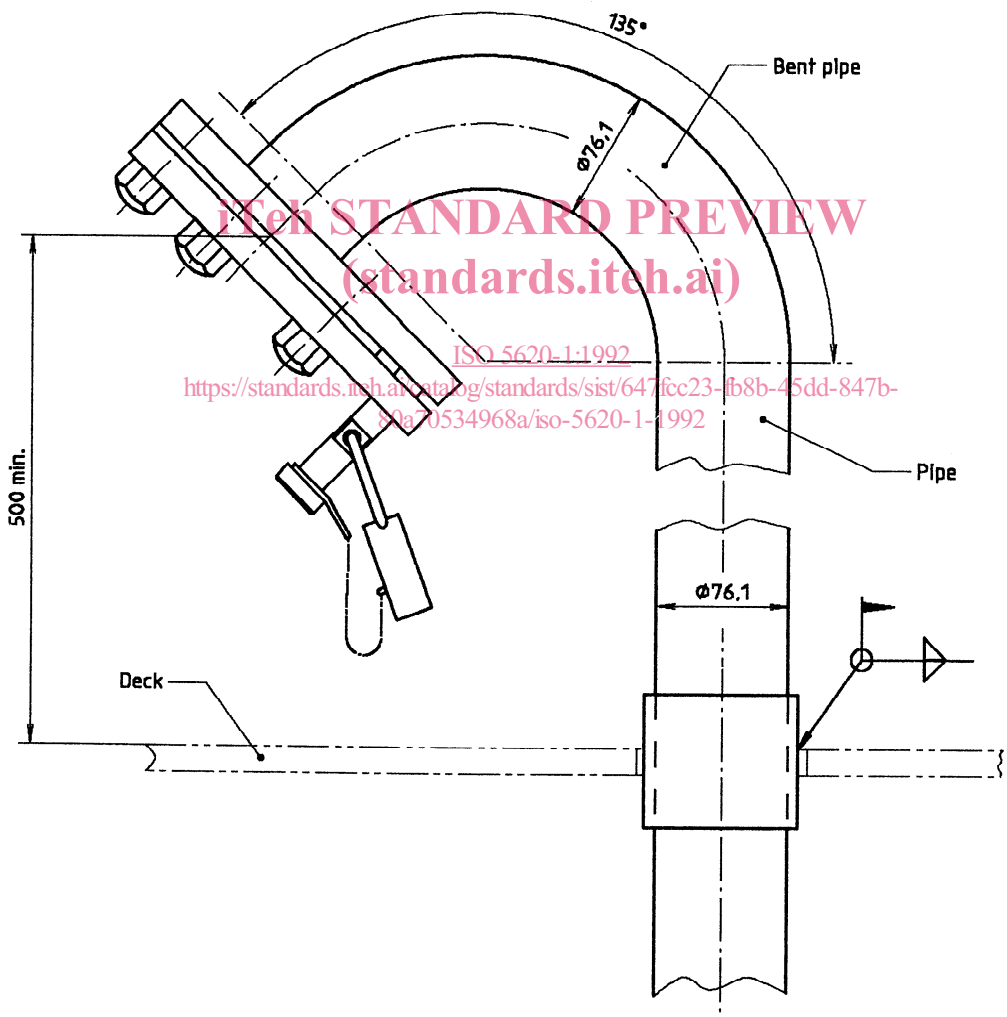
A ship piping connection for drinking water tanks according to this part of ISO 5620, composition Z is designated as follows:

Connection ISO 5620-1 - Z

6 Installation recommendation

The ship's flange connection should be installed in a suspended position as shown in figure 4. The use of a bent pipe is recommended.

Dimensions in millimetres



See note in figure 3.

Figure 4 — Installation example

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Descriptors: shipbuilding, ships, water supply, potable water, tanks (containers), piping, water pipelines, pipe joints, connecting joints, specifications, dimensions, designation, installation.

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