INTERNATIONAL STANDARD 3674

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION · МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ · ORGANISATION INTERNATIONALE DE NORMALISATION

Shipbuilding — Inland vessels — Deck rail

Construction navale — Bateaux de navigation intérieure — Garde-corps

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FOREWORD

ISO (the International Organization for Standardization) is a worlwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3674 was drawn up by Technical Committee ISO/TC 8, *Shipbuilding,* and circulated to the Member Bodies in February 1975.

It has been approved by the Member Bodies of the following countries :

Austria	Israel	Romania
Belgium	Italy	Spain
Brazil	Japan	Turkey
Bulgaria	Mexico	United Kingdom
Czechoslovakia	Netherlands	
France	Poland	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Germany
Ireland

Printed in Switzerland

Shipbuilding — Inland vessels — Deck rail

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the types, designs and basic dimensions of ship deck handrail (hereinafter called deck rail).

2 FIELD OF APPLICATION

2.1 The deck rails specified are intended for use on vessels of all types for inland waterways.

2.2 The International Standard does not apply to special deck rails designed for particular purposes, for example for fastening of wood loaded on the deck of a ship, solid deck rail formed by overlapping plating, etc.

3 CLASSIFICATION

Deck rails are classified in conformity with table 1.

4 GENERAL CHARACTERISTICS

4.1 As a rule, solid deck rail is fitted to the deck or the plating of a ship by welding.

4.2 Detachable deck rail is fitted to the deck by means of clamps or receptacles so that it may be easily dismantled.

4.3 Tiltable deck rail should be easy to release and tilt on the deck.

4.4 In passageways, detachable sections shall be fitted with devices which secure against spontaneous release. Chains may also be used instead of detachable sections.

4.5 Weldable steel with a minimum tensile strength of 350 N/mm² shall be used for all steel sections of deck rail.

TABLE 1

Tube	solid
	detachable
Network	solid
	detachable
Chain	detachable
	tiltable
Rope	detachable
	tiltable

5 TUBE DECK RAIL

5.1 Deck rail of this type shall be made according to figure 1.

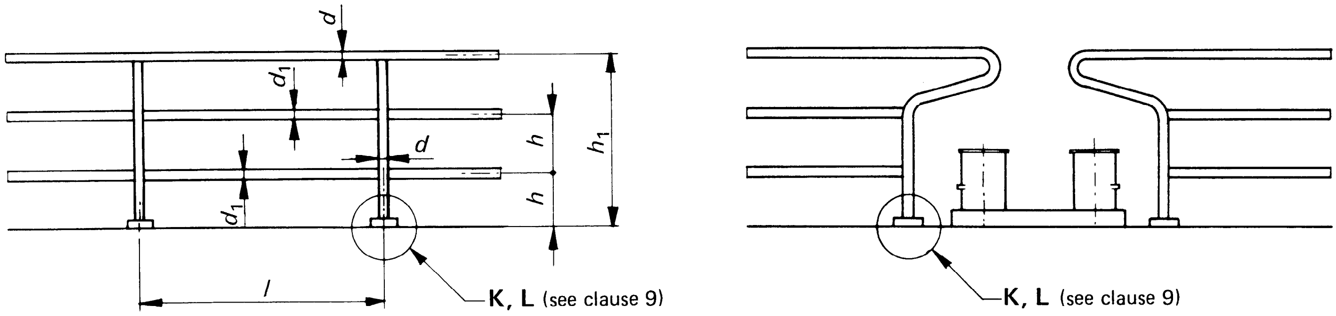


FIGURE 1 — **Diagram of tube deck rail**

NOTE — For solid deck rail, the method of fitting stanchions according to detail K shall be chosen.
For detachable deck rail, the method of fitting stanchions according to detail L shall be chosen.

5.2 Dimensions of the elements of tube deck rail shall correspond to those indicated in table 2.

TABLE 2

Dimensions in millimetres

Steel tube		h	h_1	l
d	d_1			
33,7 (1")	21,3 (1/2")	333 300	1 000 900	1 000 to 1 800

6 NETWORK DECK RAIL

6.1 Structurally, network deck rail may be made in two versions according to figure 2.

Dimensions in millimetres

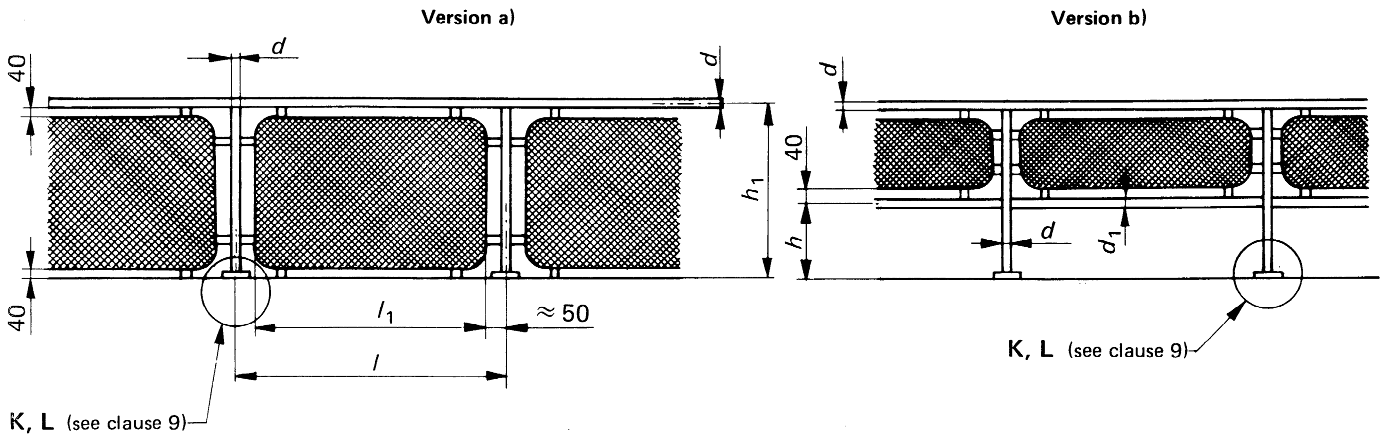


FIGURE 2 — **Diagram of network deck rail**

NOTE — For solid deck rail, the method of fitting stanchions according to detail K shall be chosen.
For detachable deck rail, the method of fitting stanchions according to detail L shall be chosen.

6.2 Dimensions of the elements of network deck rail shall correspond to those indicated in table 3.

TABLE 3

Dimensions in millimetres

Steel tube		h	h_1	l	l_1
d	d_1				
33,7 (1″)	21,3 (1/2″)	550	1 100	1 100 to 1 400	1 000 to 1 300
		450	900		

7 CHAIN DECK RAIL

7.1 The chain shall withstand an ultimate load of 9 kN minimum. The chain shall end at each stanchion and be suspended by means of spring hooks or plain hooks. The maximum sag of the chain shall not be more than 50 mm. The stanchions shall be capped.

7.2 Deck rail of this type shall be made according to figure 3.

Dimensions in millimetres

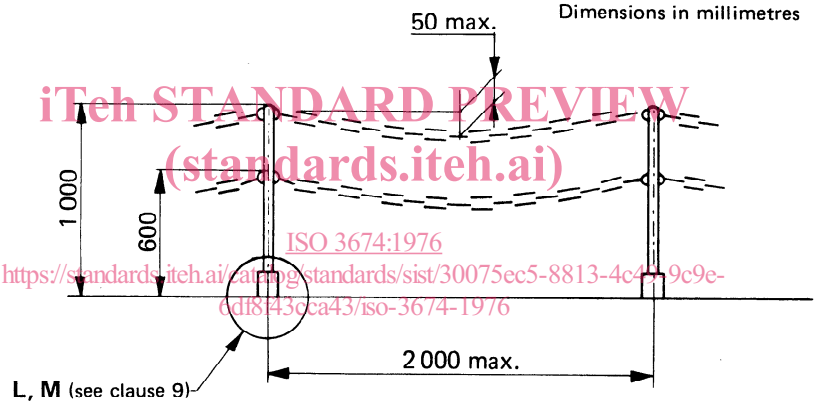


FIGURE 3 — **Diagram of chain deck rail**

NOTE — For detachable deck rail, the method of fitting stanchions according to detail L shall be chosen.

For tiltable deck rail, the method of fitting stanchions according to detail M shall be chosen.

7.3 The fixing of chains on stanchions and handrail shall be carried out according to figure 4.

Dimensions in millimetres

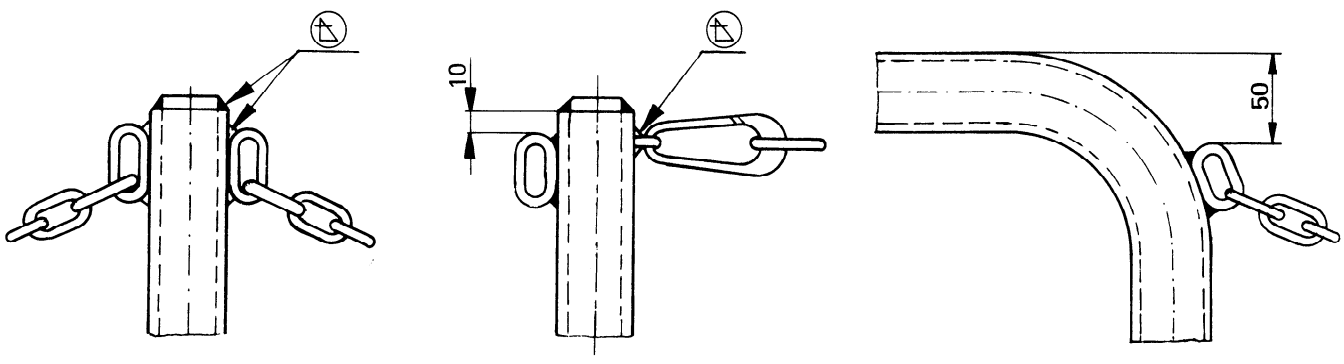


FIGURE 4 — **Methods of fixing the chains on stanchions and handrail**

8 ROPE DECK RAIL

8.1 The minimum diameter of the steel rope shall be 6 mm.

The rope is tensioned by means of tighteners and is usually anchored to the deck, superstructure walls, etc.

8.2 Deck rail of this type shall be made according to figure 5.

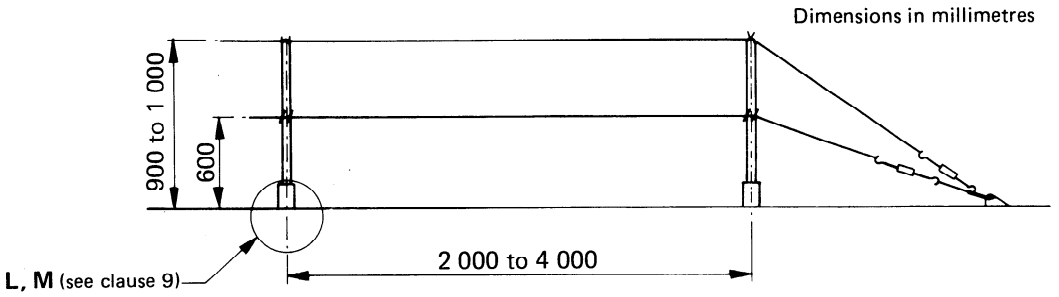


FIGURE 5 — **Diagram of rope deck rail**

NOTE — For detachable deck rail, the method of fitting stanchions according to detail L shall be chosen.

For tiltable deck rail, the method of fitting stanchions according to detail M shall be chosen.

With rope deck rail 900 mm high, it is possible to use the version with an upper rope only.

8.3 Installation of eyes for rope guiding shall be made according to figure 6.

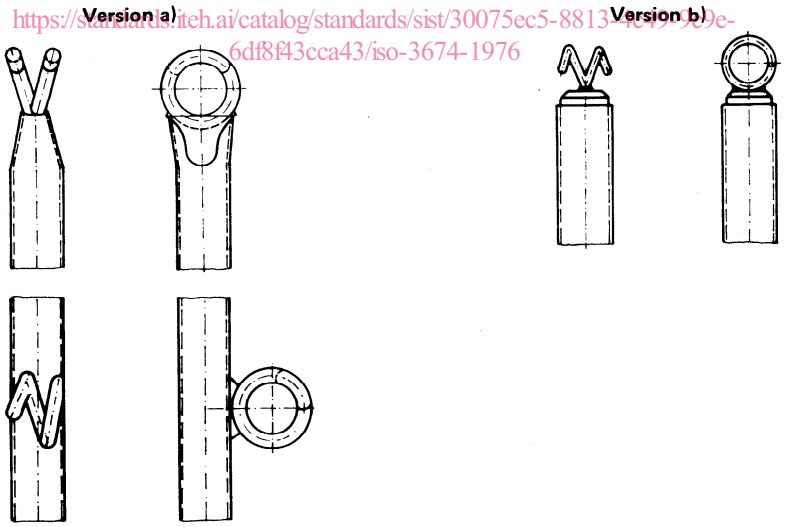
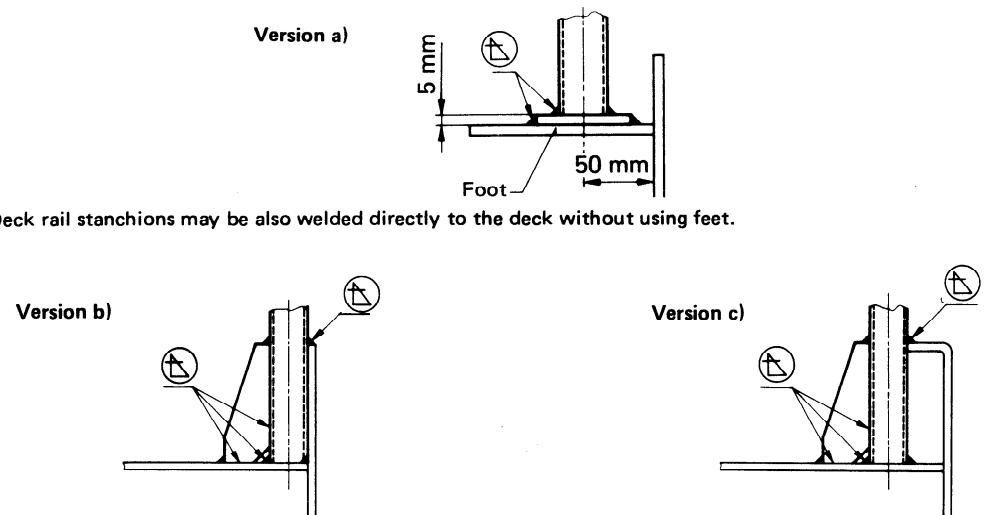


FIGURE 6 — **Installation of eyes for rope guiding**

9 STANCHION FIXING DETAILS

9.1 Detail K, for solid fixing of stanchions, can be executed in the three versions indicated in figure 7.



NOTE — Deck rail stanchions may be also welded directly to the deck without using feet.

FIGURE 7 — **Installation of solid deck rail stanchions**

9.2 Detail L, for fitting detachable deck rails, can be executed in the two versions indicated in figure 8.

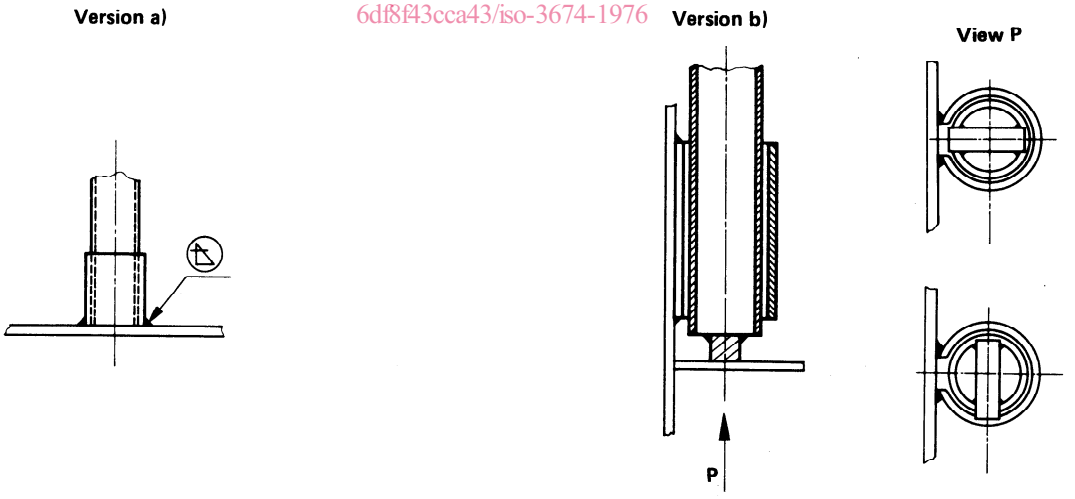


FIGURE 8 — **Installation of detachable deck rail stanchions**

9.3 Detail M for fitting of tiltable deck rail stanchions, can be executed in the two versions indicated in figure 9.

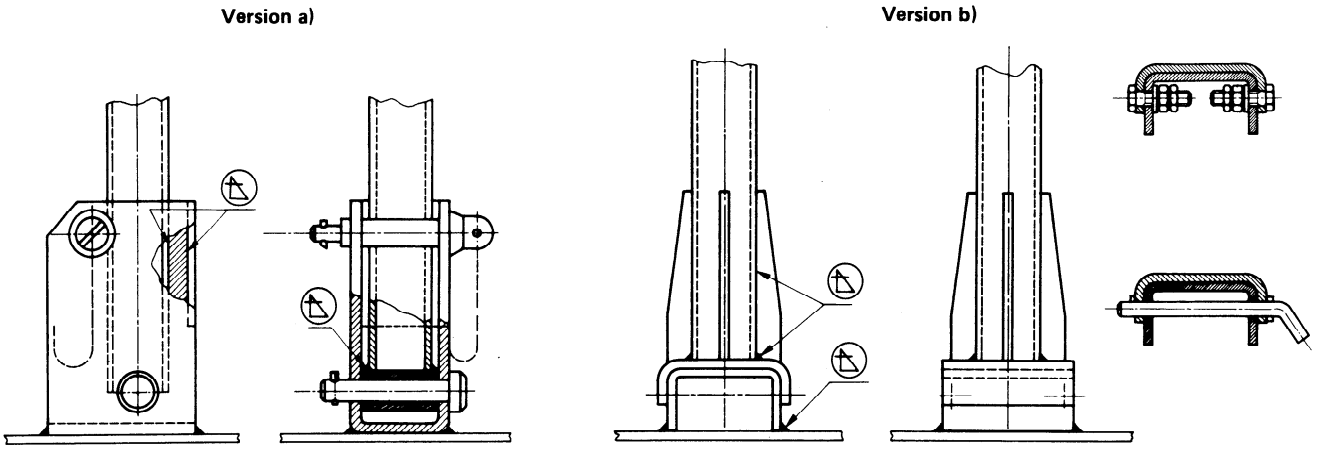


FIGURE 9 – **Installation of tiltable deck rail stanchions**

9.4 The method of fixing detachable deck rail stanchions in receptacles shall be chosen in accordance with figure 10.

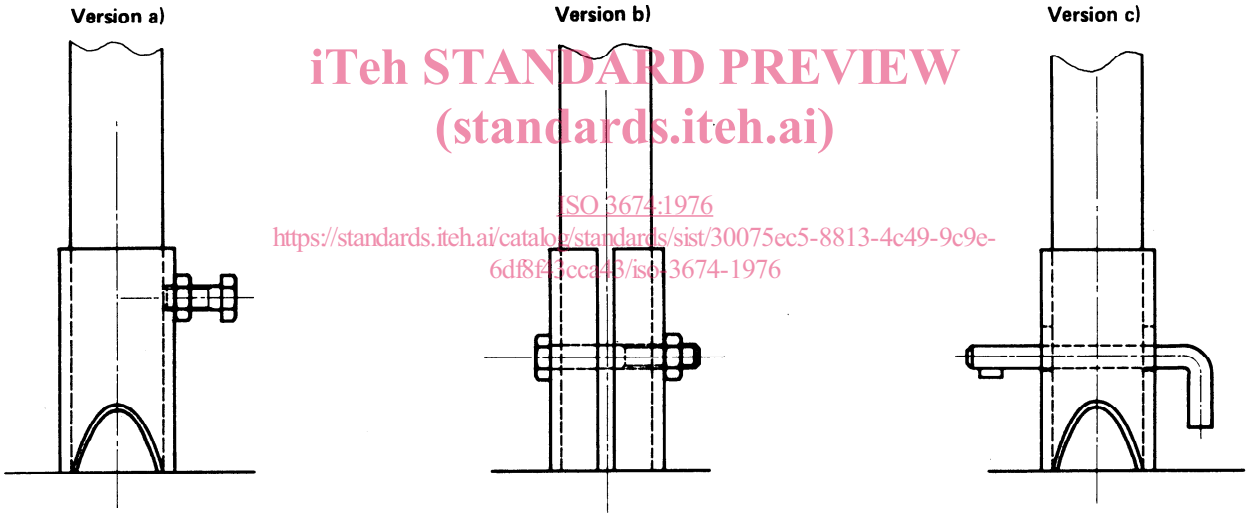


FIGURE 10 – **Methods of fixing detachable stanchions in receptacles**

Receptacles for stanchions of 33,7 mm (1″) tubes shall be made of steel tubes of 42,4 mm (1 1/2″) diameter.