



Inland navigation — Water fire-fighting system — Couplings of fire hoses — General technical requirements

Navigation intérieure — Systèmes d'extinction d'incendie au moyen d'eau — Raccordement des tuyaux — Exigences techniques générales

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ISO/TR 5987 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

The reasons which led to the decision to publish this document in the form of a technical report type 1 are explained in the Introduction.

0 Introduction

It was initially intended to publish an International Standard on this subject: ISO/DIS 5987 was submitted for combined voting to the members of Technical Committee ISO/TC 8 and to all ISO member bodies, in December 1978. This draft did not gain the necessary support for publication as an International Standard.

Sub-committee ISO/TC 8/SC 7, *Inland navigation*, during its meeting held in Leningrad in September 1982, studied the member bodies' comments and found that it would be impossible to achieve substantial support in view of the existence of conflicting national requirements.



It was requested, however, that the document be published provisionally in the form of a technical report for the benefit of those member bodies who wish to refer to the result of the work.

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1 Scope and field of application

This Technical Report specifies the types and general technical requirements for coupling heads for hose couplings designed for fire-fighting, and used for deck washing on vessels operating in inland waterways.

2 Classification

Depending on the functions of hose couplings, the following coupling heads are used:

- female sleeve,
- male sleeve,
- hose,
- flange,
- adapter,

and corresponding end caps for coupling heads.

The nominal diameters of coupling heads shall be the following:

50, 65 and 75 (for some heads).

The nominal pressures p_v of coupling heads shall be the following:

1; 1,6 MPa.

3 Technical Requirements

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3.1 Coupling heads should be manufactured in accordance with the requirements of national standards and this Technical Report.

[ISO/TR 5987:1984](https://standards.iteh.ai/catalog/standards/sist/fa1400c2-57af-4516-b771-c36f2b332e8c/iso-tr-5987-1984)

3.2 The design of coupling heads shall ensure: <https://standards.iteh.ai/catalog/standards/sist/fa1400c2-57af-4516-b771-c36f2b332e8c/iso-tr-5987-1984>

- manual coupling of the heads without using tools, by engagement of the lug in a special groove, equal to 1,0 to 1,5 times the lug width;
- tightness of the coupling;
- stability of the coupling under pressure in the hose lines.

3.3 The choice of material for the manufacture of coupling heads should take into account the intended liquid, working pressure, temperature, and mechanical and anticorrosive properties needed, in accordance with the requirements of national standards.

3.4 External and internal surfaces of coupling heads should be smooth, without cavities, cracks, impurities and other defects which might reduce the strength or change the appearance.

Sharp edges of external surfaces should be smoothed.

3.5 The tolerances on dimensions of the machined surfaces of heads shall be in accordance with national standards.

3.6 The main dimensions and admissible variations of pipe cylindrical threads shall be in accordance with national standards.

The threads shall be of full profile, without cavities, dents, cuts or stripped threads.

No local strips, crumbling and crushing of threads of total length over 10 % of the threaded length, or those exceeding 1,5 times the turn length, are permitted.

3.7 Steel parts of coupling heads shall have a protective coating in accordance with the requirements of national standards.

3.8 Coupling heads shall have rubber sealing rings for which the choice of material shall be made in accordance with 3.3.

4 Acceptance requirements

4.1 To check the quality of coupling head manufacture and compliance with the requirements of this Technical Report and of national standards, a manufacturer shall carry out acceptance, periodic and type tests.

4.2 The acceptance test shall be carried out on at least 2 % of the daily output of coupling heads, but not less than 5 pieces of each type.

The following shall be checked:

- compliance of the heads with the requirements of 3.1 and 3.4 by external inspection;
- the strength and density of material, the leak-proof fit of the sealing ring and the tightness of coupling heads of all types.

If one of the coupling heads checked does not meet the requirements of this Technical Report and national standards, the batch of heads shall be subjected to 100 % checking.

Certificates of the 100 % checking should be presented to the user on his request.

4.3 Periodic tests shall be carried out not less than once in five years. Not less than 3 heads of each standard size from a batch shall be checked. A batch is the monthly average output of one type of head.

During periodic tests, the compliance of heads with the requirements of 3.2 shall be checked.

The records of periodic tests shall be presented to the user on his request.

4.4 When altering the design, the materials or the production technology of coupling heads, they shall again undergo type tests for compliance with the requirements of national standards.

4.5 The user shall have the option of checking the quality of coupling heads: 2 % of a batch, but not less than 5 pieces. The batch shall consist of coupling heads of one standard size.

5 Test methods

5.1 The material of coupling heads shall be tested for strength and density for 1 min by hydraulic pressure specified in drawings or in national standards.

5.2 The test for tightness shall be carried out for 1 min by hydraulic pressure specified in drawings or in national standards.

5.3 After these tests, the condition of the head joint shall be verified (see 3.2). No moisture traces on the surfaces of coupling heads or leaks through the joints of the sealing rings are permissible.

6 Marking, packing, transport and storage

6.1 Marking shall be in conspicuous places. If design considerations do not allow marking signs, they may be placed on tags.

Marking shall include:

- trade mark of the manufacturer;
- nominal diameter of the coupling;
- nominal pressure of liquid.

The marking dimensions shall be chosen depending on the area size available for marking.

The method of marking shall guarantee its legibility and durability during the entire service life of the coupling head.

6.2 Coupling heads shall be packed in accordance with national standards.

If agreed with the user, the heads may be packed into lattice boxes with two layers of bituminous paper.

The transport of the heads in containers without packing but in individual boxes is also acceptable. The coupling heads shall be so packed in the boxes as to prevent them from moving.

6.3 Each batch of heads shall be accompanied by a certificate for the heads.

6.4 Each coupling head box shall be provided with transport marking.

When transporting and storing boxes with packed coupling heads, they shall be protected against moisture and incursive damage.

7 Manufacturer's guarantees

The manufacturer shall guarantee the compliance of coupling heads with conditions of use (operation), transportation and storage laid down by this Technical Report.

The period of guarantee shall be 14 months from the moment the coupling heads are put into operation.

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