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# INTERNATIONAL STANDARD



# 3604

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

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## Fitting for unplasticized polyvinyl chloride (PVC) pressure pipes with elastic sealing ring type joints – Pressure test for leakproofness under conditions of external hydraulic pressure

*Raccords à bagues d'étanchéité élastiques pour canalisations avec pression en polychlorure de vinyle (PVC) non plastifié – Essai d'étanchéité sous conditions de pression hydraulique extérieure*

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**Descriptors** : piping, pressure pipes, plastic tubes, unplasticized polyvinyl chloride, pipe fittings, sealing rings, tests, water-tightness tests, pressure tests.

## FOREWORD

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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 3604 was drawn up by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and was circulated to the Member Bodies in December 1974.

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

Austria	Israel	South Africa, Rep. of
Belgium	Italy	Spain
Canada	Mexico	Sweden
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Finland	Norway	Turkey
France	New Zealand	U.S.A.
Germany	Poland	U.S.S.R.
Ireland	Romania	Yugoslavia

The Member Body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

# Fitting for unplasticized polyvinyl chloride (PVC) pressure pipes with elastic sealing ring type joints – Pressure test for leakproofness under conditions of external hydraulic pressure

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the method for testing the leakproofness of elastic sealing ring type joints between fittings and unplasticized polyvinyl chloride (PVC) pressure pipes when the external hydraulic pressure is greater than the pressure within the pipes.

## 2 PRINCIPLE

Checking of the leakproofness of an assembled joint full of air under atmospheric pressure when submitted to external hydraulic pressure greater than the atmospheric pressure within the pipe.

## 3 SPECIFICATION

The test shall be carried out at two levels of difference between the external and internal pressure, namely 0,01 and 0,08 MPa (0,1 and 0,8 bar).

The test temperature shall be  $20 \pm 2$  °C.

The joint shall remain leakproof for at least 1 h at each test pressure, when the spigot and socket conform to the extreme limits of their respective tolerances (see clause 5).

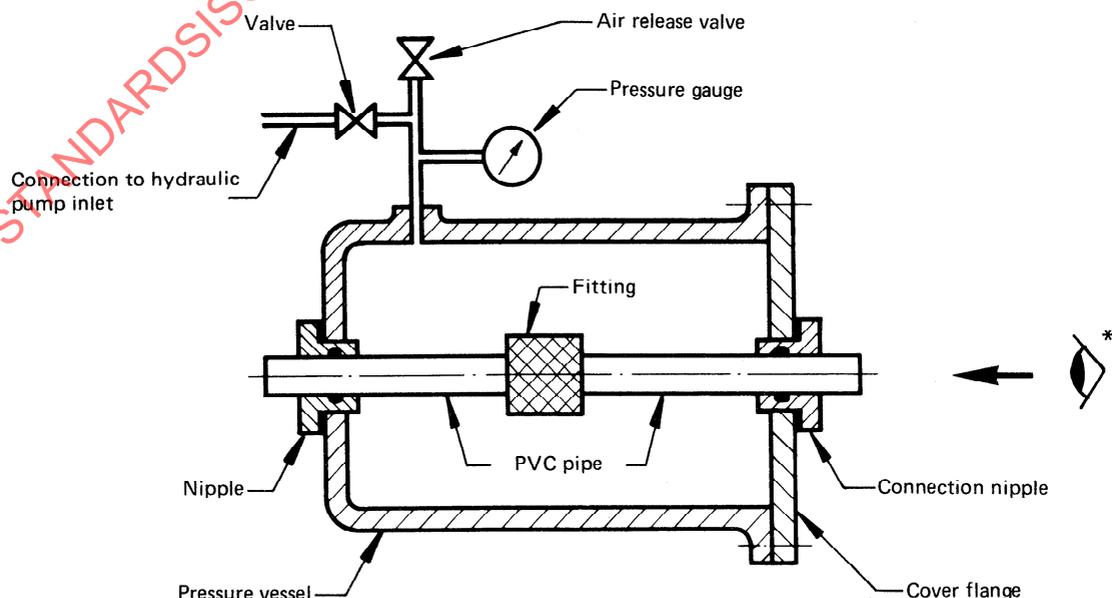
## 4 APPARATUS

**4.1 Enclosed tank, or pressure vessel**, capable of being used at the appropriate test pressures and of receiving the test specimen. The inside of the test specimen shall be open to the atmosphere through the walls of the tank or vessel. The assembly shall be arranged so as to enable any leakage to be detected within the test specimen.

**4.2 Device**, connected to the tank or vessel (4.1) and capable of raising and maintaining a water pressure of

- 1)  $0,01 + 0,005$  MPa ( $0,1 + 0,05$  bar)
- 2)  $0,08 \pm 0,005$  MPa ( $0,8 \pm 0,05$  bar)

**4.3 Pressure gauge**, fitted to the test tank or vessel to enable the test pressure to be observed.



\* The apparatus must permit a clear view through the test specimen

FIGURE 1 – Diagram of a suitable apparatus