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# International Standard



# 2734

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

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## **Vitreous and porcelain enamels — Apparatus for testing with alkaline liquids**

*Émaux vitrifiés — Appareils pour essai avec des liquides alcalins*

**Second edition — 1983-08-15**

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**Descriptors** : non-metallic coatings, vitreous enamels, tests, chemical tests, chemical resistance, alkalis, sodium hydroxides, test equipment.

Price based on 4 pages

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (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 authorized 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 2734 was developed by Technical Committee ISO/TC 107, *Metallic and other non-organic coatings*.

This second edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 2734-1973), which had been approved by the member bodies of the following countries:

Australia	Italy	Sweden
Egypt, Arab Rep. of	Japan	Switzerland
France	Netherlands	Thailand
Germany, F.R.	New Zealand	Turkey
Hungary	Poland	United Kingdom
India	Portugal	USSR
Ireland	Romania	
Israel	South Africa, Rep. of	

No member body had expressed disapproval of the document.

# Vitreous and porcelain enamels — Apparatus for testing with alkaline liquids

## 1 Scope and field of application

This International Standard specifies the apparatus to be used for testing the resistance of flat surfaces of vitreous and porcelain enamels to attack by solutions such as hot sodium hydroxide and other alkaline agents.

## 2 References

ISO 48, *Vulcanized rubbers — Determination of hardness (Hardness between 30 and 85 IRHD)*.

ISO 2745, *Vitreous and porcelain enamels — Determination of resistance to hot sodium hydroxide*.

## 3 Apparatus

The testing apparatus (see figure 1) consists of a cylinder (3.1) with a welded-on filling piece. The cylinder (3.1) is sealed off on both sides by the two specimens, which are enclosed in protective envelopes (3.2). The cylinder with the specimens is held between two square frame plates (3.3) which are clamped at the edges by means of four screw bolts (3.4) and four wing-nuts (3.5). The filling piece is closed with a stopper (3.6).

When the test solution is hot, the apparatus is used in conjunction with a thermostatically controlled liquid bath which is in accordance with the International Standard for the test method.

NOTE — For the test method for the determination of resistance to hot sodium hydroxide, see ISO 2745.

**3.1 Cylinder**, with a welded-on filling piece shown in figure 2, consisting of stainless steel (for example chromium-nickel steel).

**3.2 Two protective envelopes** shown in figure 3, consisting of rubber with hardness 70 IRHD according to ISO 48, resistant to alkaline solution at 100 °C.

**3.3 Two frame plates** shown in figure 4, consisting of stainless steel or steel with a corrosion-resistant coating, or of non-ferrous metal.

**3.4 Four screw bolts** shown in figure 5, consisting of corrosion-resistant material, welded into the holes in one of the frame plates.

**3.5 Four wing-nuts** of corrosion-resistant material and with threads fitting the screw bolts.

**3.6 Stopper** shown in figure 6, consisting of rubber with hardness 70 IRHD according to ISO 48, resistant to alkaline solutions at 100 °C.

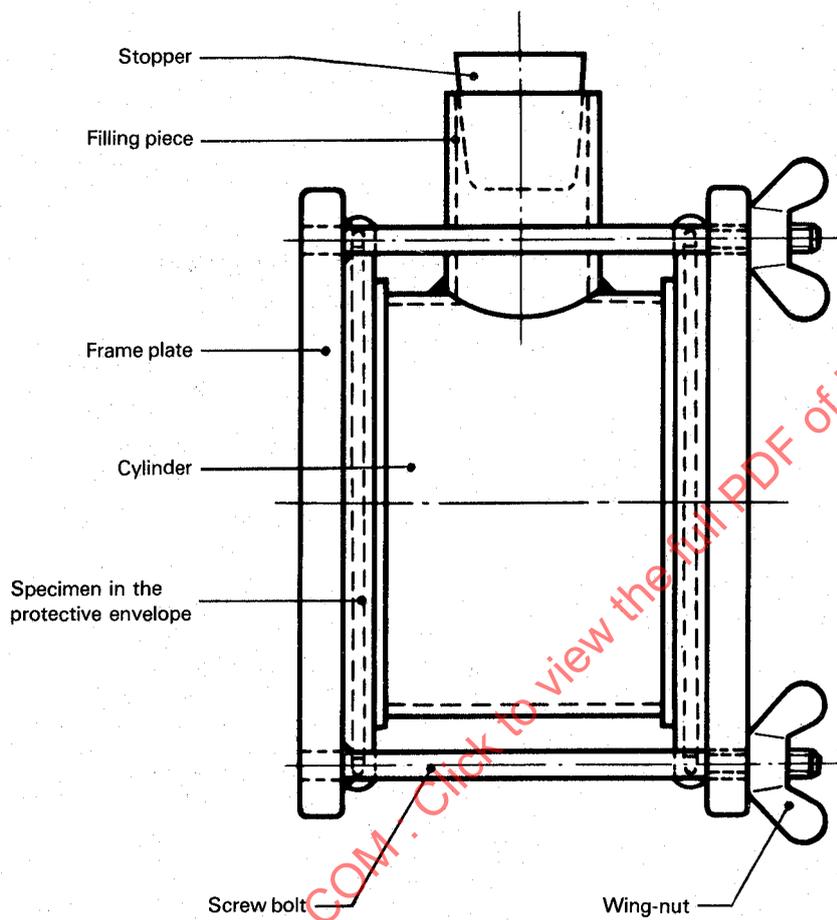


Figure 1 — Testing apparatus

Dimensions in millimetres

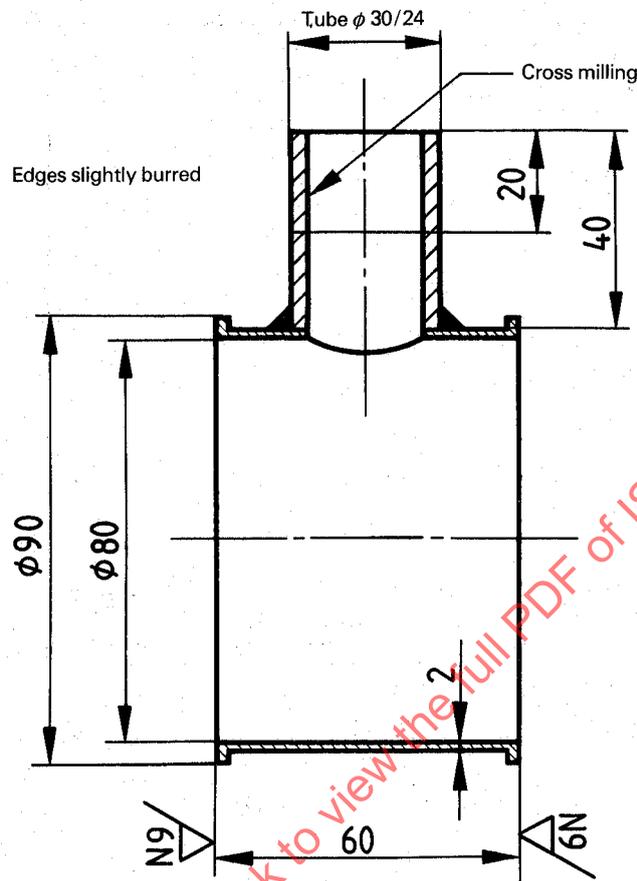


Figure 2 — Cylinder

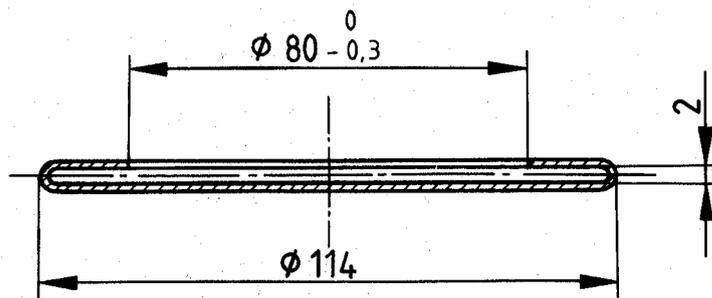


Figure 3 — Protective envelope

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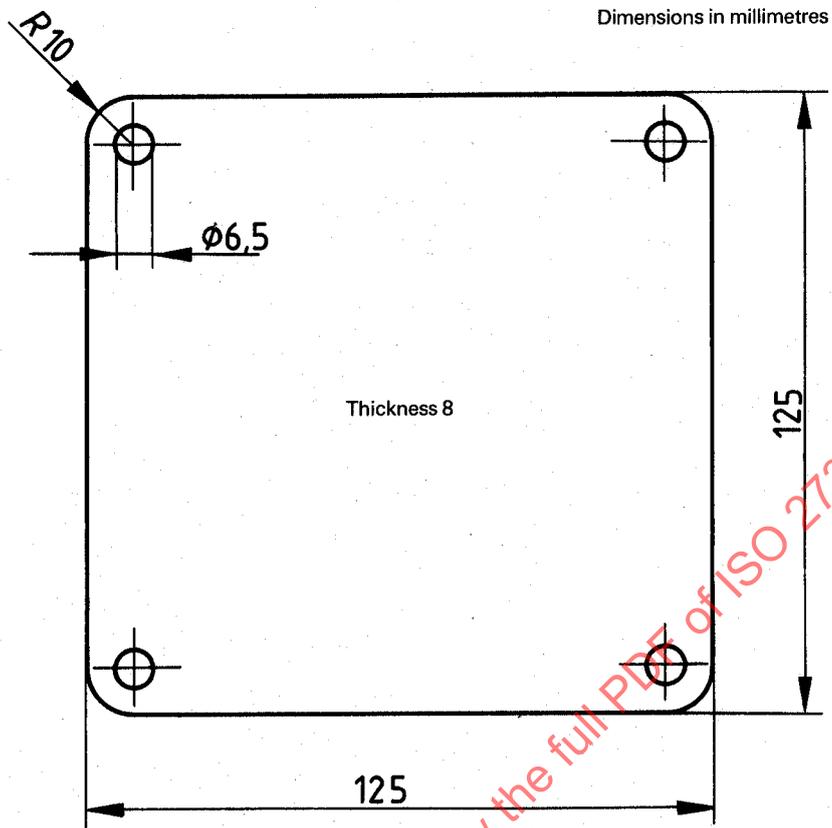


Figure 4 – Frame plate

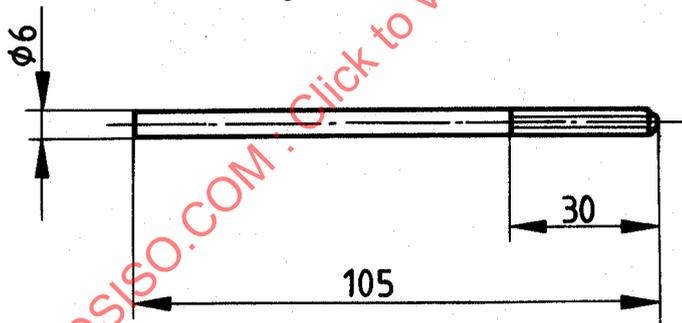


Figure 5 – Screwed bolt

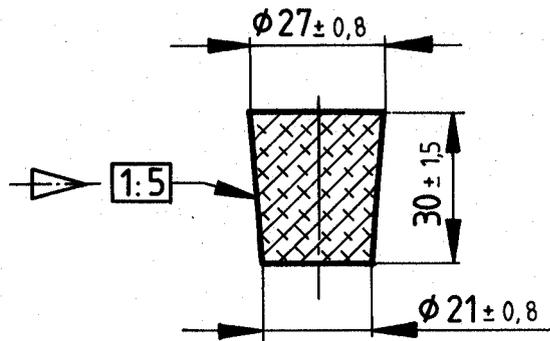


Figure 6 – Stopper