International Standard 7608

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

Shipbuilding — Inland navigation — Couplings for disposal of oily mixture and sewage water

Construction navale — Navigation intérieure — Raccords d'évacuation du mélange eau-hydrocarbures et des eaux usées

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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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7608 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

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0 Introduction

This International Standard has been prepared in accordance with the environmental protection aspects of the Final Act of the Conference on Security and Cooperation in Europe (Helsinki, 1975).

It is also in conformity with the *International convention for the prevention of pollution from ships, 1973 (MARPOL, 1973).*

1 Scope and field of application

1.1 This International Standard specifies types, design and basic dimensions and requirements of couplings from storage containers to the piping for the disposal of oily mixture and sewage water from storage tanks.

1.2 The type of coupling is chosen depending on the use of the vessel and on the system of polluted water transfer and treatment adopted in its operational area.

2 References

ISO 2902, *ISO metric trapezoidal screw threads — General plan.*

ISO 4200, *Plain end steel tubes, welded and seamless — General tables of dimensions and masses per unit length.*

3 Classification

3.1 Depending on the nature of the fluids, this International Standard provides for two groups of couplings:

— group A: couplings for disposal of oily mixture;

— group B: couplings for disposal of sewage water.

3.2 Depending on the design, four types of couplings are distinguished:

— type 1: flange couplings;

— type 2: quick-release couplings with a union nut;

— type 3: adapters to connect the flange of the receiving pipe (of the port or collecting vessel) to the bush of the vessel disposing of oily mixture or sewage water;

— type 4: adapters to connect the end-piece of the receiving pipe (of the port or collecting vessel) to the flange of the vessel disposing of oily mixture or sewage water.

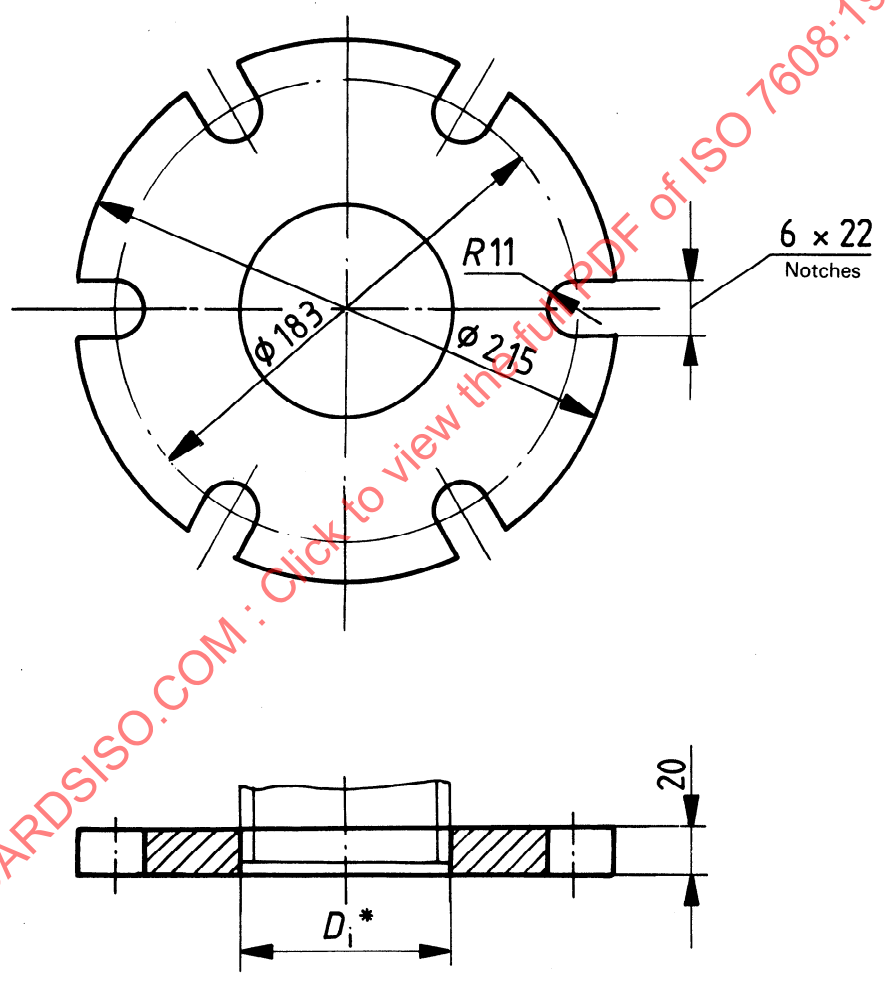
3.3 Vessels of "river/sea" type shall be equipped with a fixed flange coupling of type 1.

4 Design

4.1 Flange couplings — Type 1

4.1.1 The design and basic dimensions of a coupling flange for the disposal of oily mixture (group A) shall correspond to those indicated in figure 1. The flange is designed for tubes of internal diameter up to 125 mm.

Dimensions in millimetres



* See clause 4.1.3.

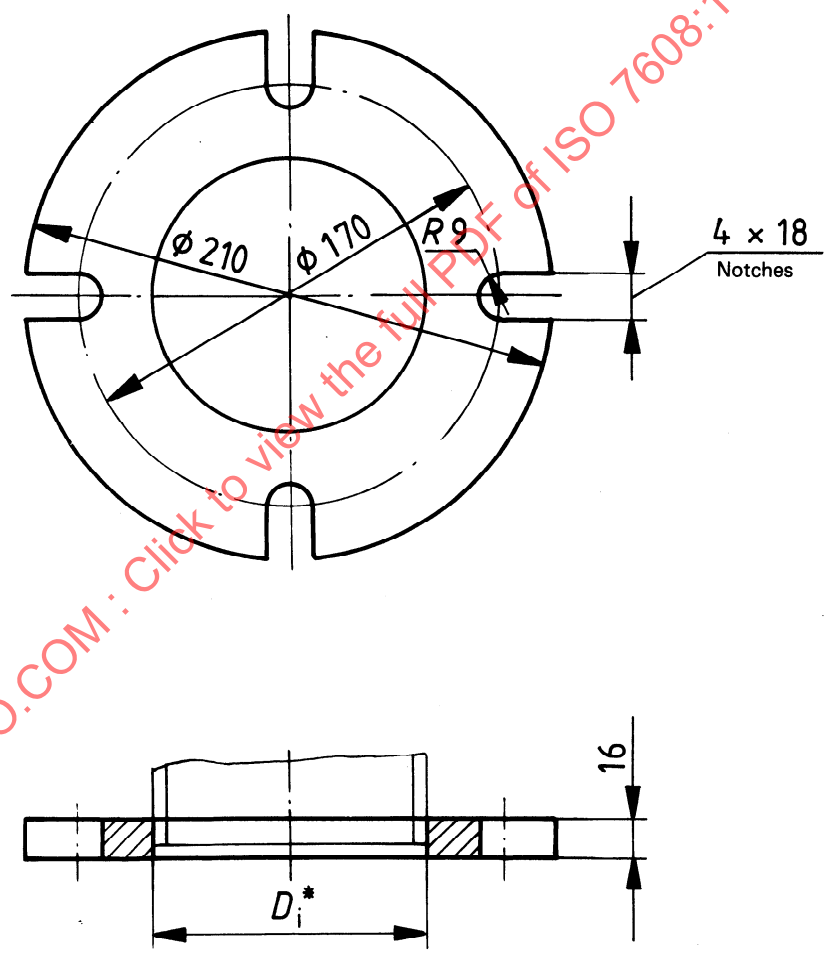
Figure 1 — Coupling flange for the disposal of oily mixture

4.1.2 The design and basic dimensions of a coupling flange for the disposal of sewage water (group B) shall correspond to those indicated in figure 2. The flange is designed for tubes of internal diameter up to 100 mm.

4.1.3 The internal diameter D_i of flanges shall be chosen according to the outside diameter of the tube.

4.1.4 The connection of flanges for the disposal of oily mixture and sewage water shall be made with bolts with diameters of 20 mm and 16 mm respectively, and of an appropriate length.

Dimensions in millimetres



* See clause 4.1.3.

Figure 2 — Coupling flange for the disposal of sewage water

4.2 Quick-release couplings — Type 2

4.2.1 Quick-release couplings consist of two parts : a bush and an end-piece (with a union nut) which is fixed on the bush by turning the handwheel.

4.2.2 The design and dimensions of a quick-release coupling for the disposal of oily mixture (group A) shall correspond to those indicated in figure 3.

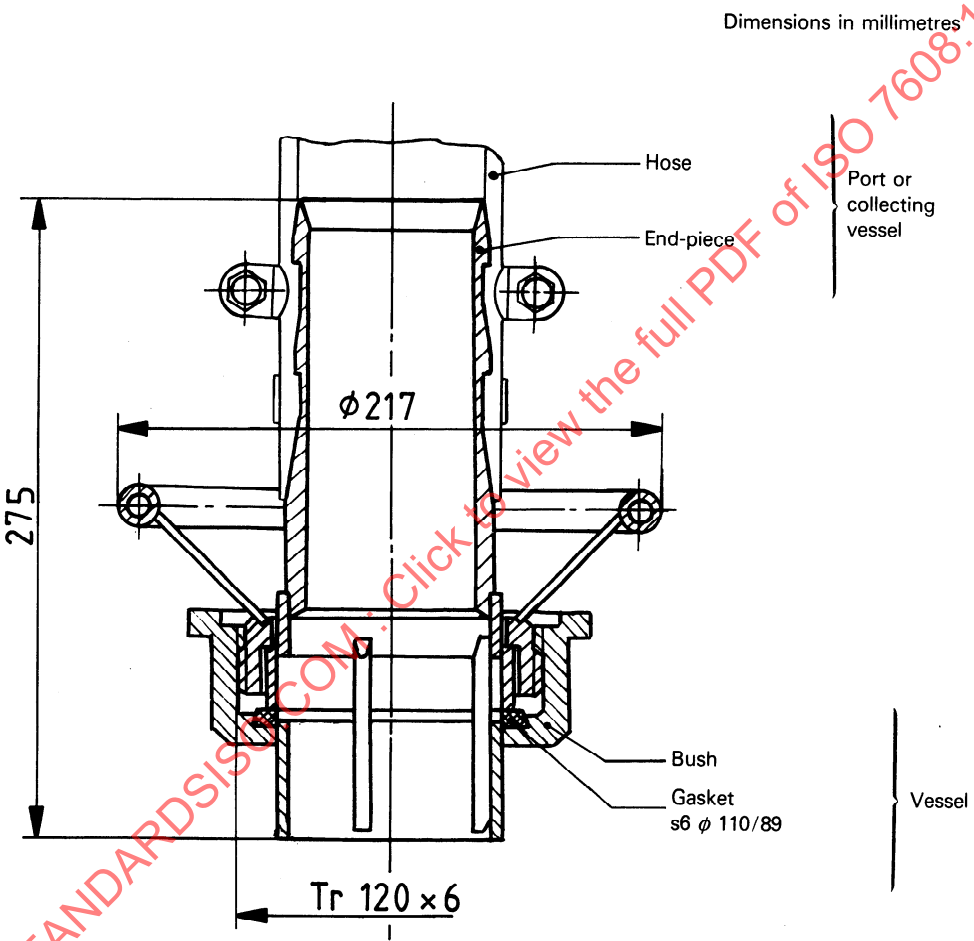


Figure 3 — Quick-release coupling DN 80 (assembled) for the disposal of oily mixture

4.2.3 The design and dimensions of the end-piece of a quick-release coupling for the disposal of oily mixture shall correspond to those indicated in figure 4.

Dimensions in millimetres

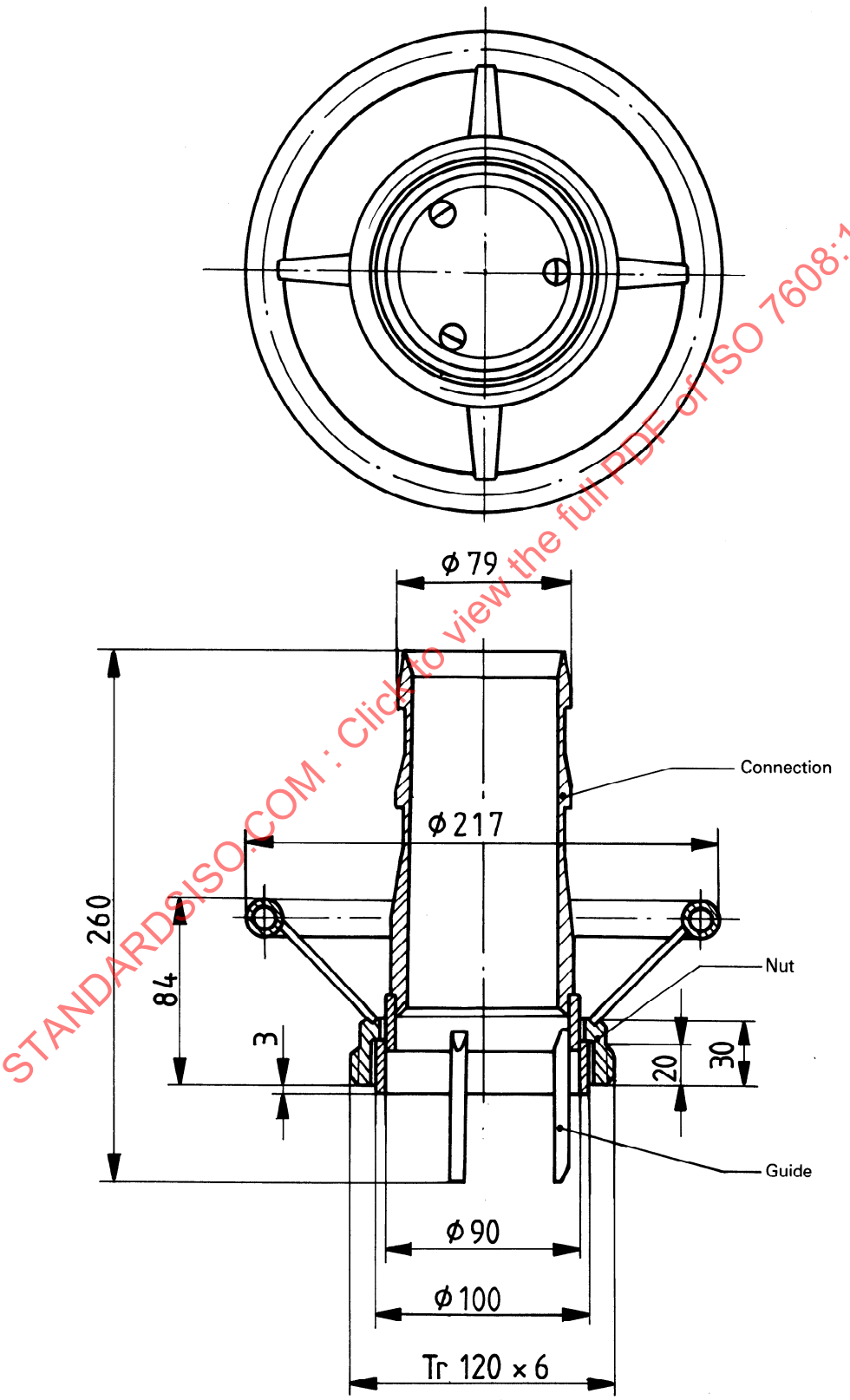


Figure 4 — End-piece DN 80 for the disposal of oily mixture

4.2.4 The design and basic dimensions of the bush of a quick-release coupling for the disposal of oily mixture shall correspond to those indicated in figure 5.

4.2.5 The gaskets s6 ϕ 110/89 and s2 ϕ 135/120 of a quick-release coupling for the disposal of oily mixture shall be made of oil- and petrol-resistant soft rubber. The basic dimensions of a gasket are indicated in figures 13 and 14.

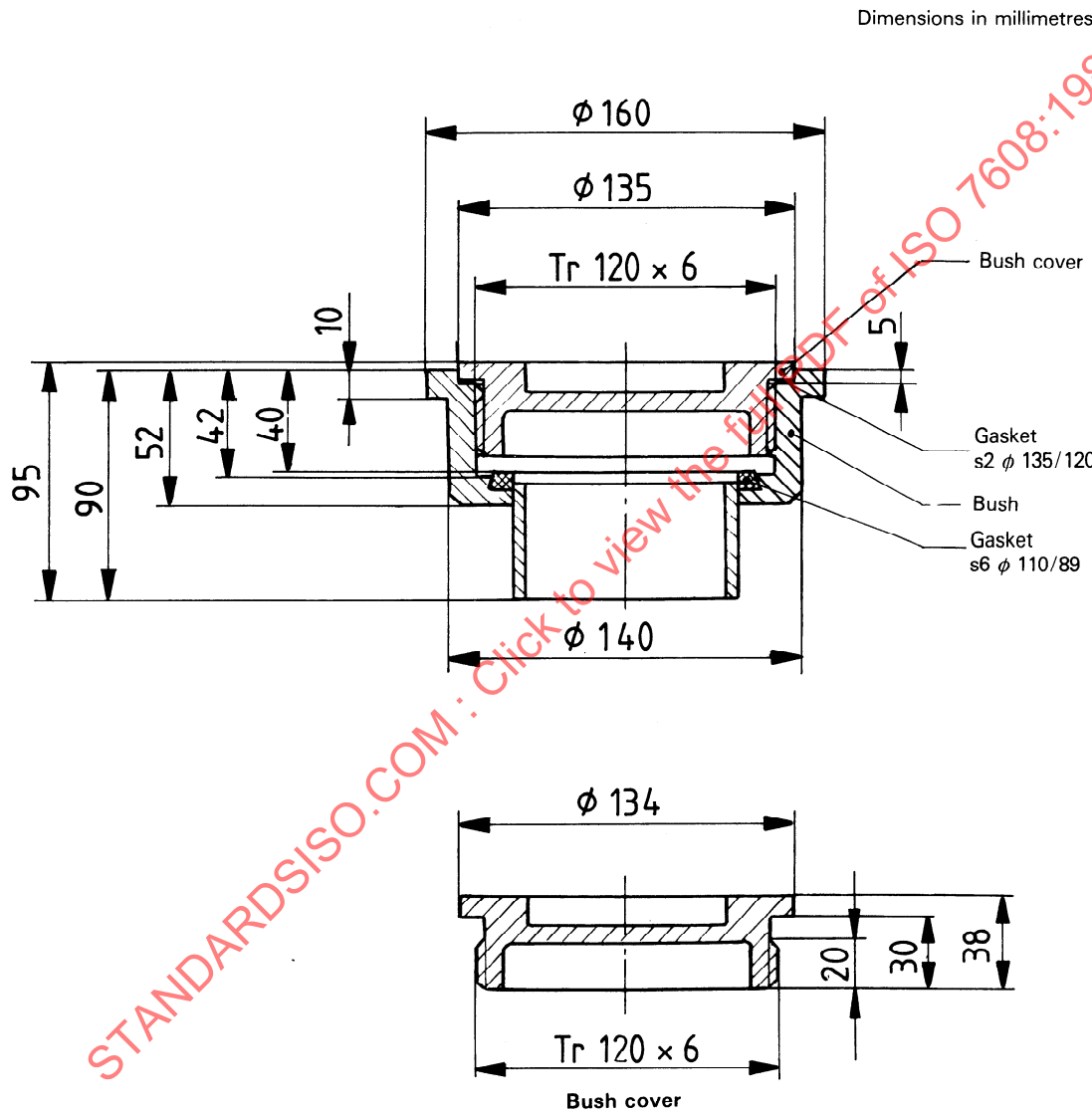


Figure 5 — Bush DN 80 for the disposal of oily mixture, assembled with the cover

4.2.6 The design and basic dimensions of a quick-release coupling for the disposal of sewage water (group B) shall correspond to those indicated in figure 6.

Dimensions in millimetres

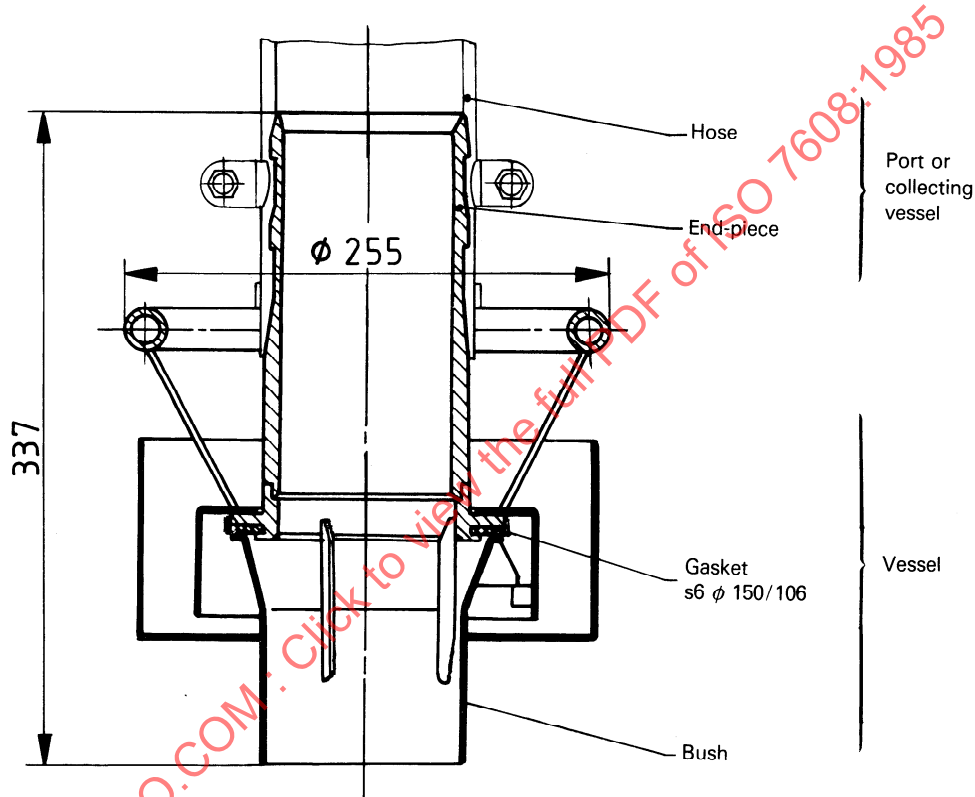


Figure 6 — Quick-release coupling DN 100 (assembled) for the disposal of sewage water

4.2.7 The design and basic dimensions of the end-piece of a quick-release coupling for the disposal of sewage water shall correspond to those indicated in figure 7.

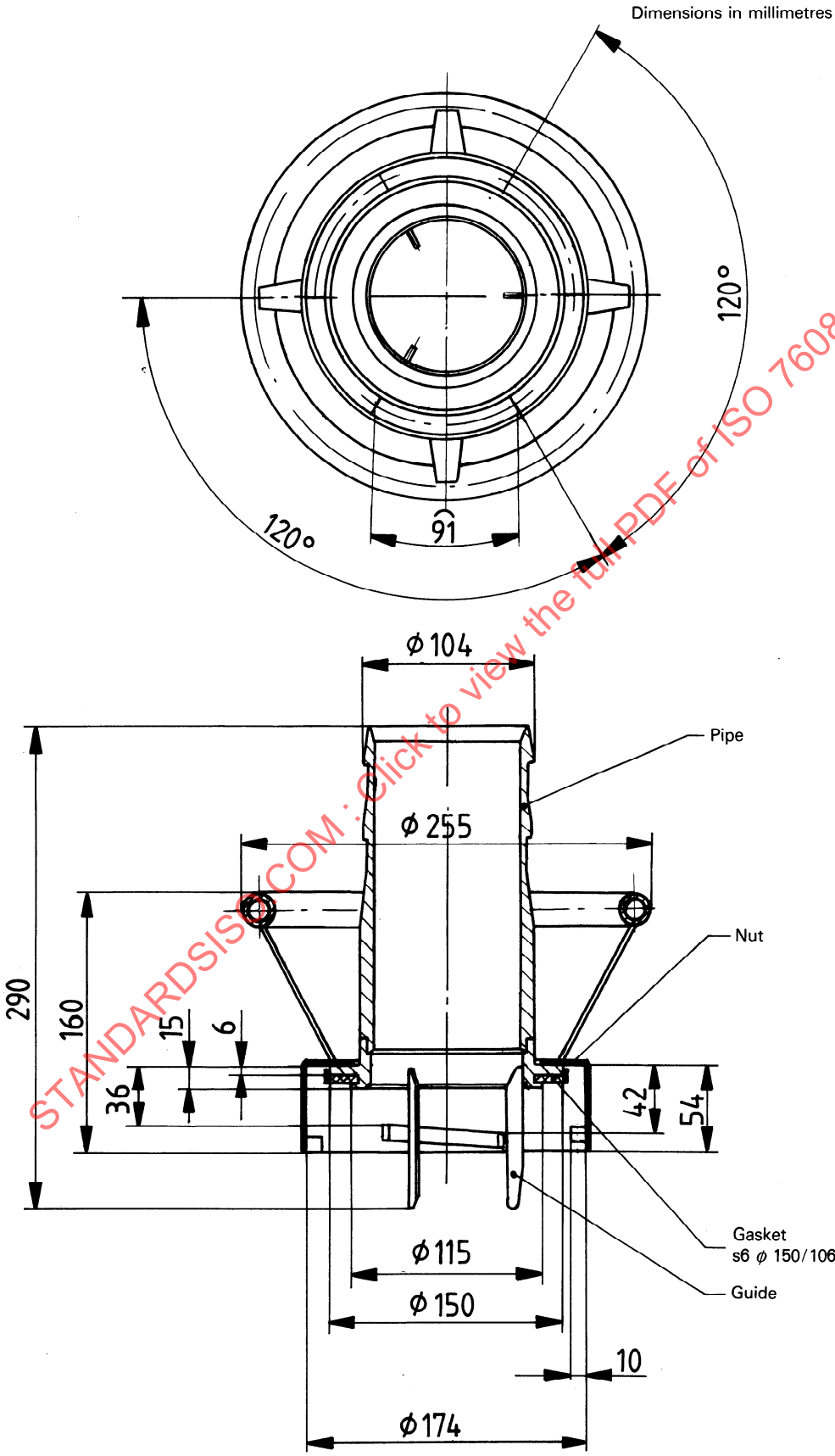


Figure 7 — End-piece DN 100 for the disposal of sewage water

4.2.8 The design and basic dimensions of the bush of a quick-release coupling for the disposal of sewage water shall correspond to those indicated in figure 8.

4.2.9 The gasket s6 ϕ 150/106 of a quick-release coupling for the disposal of sewage water shall be made of acid- and alkali-resistant soft rubber. The basic dimensions of the gasket are indicated in figure 15.

Dimensions in millimetres

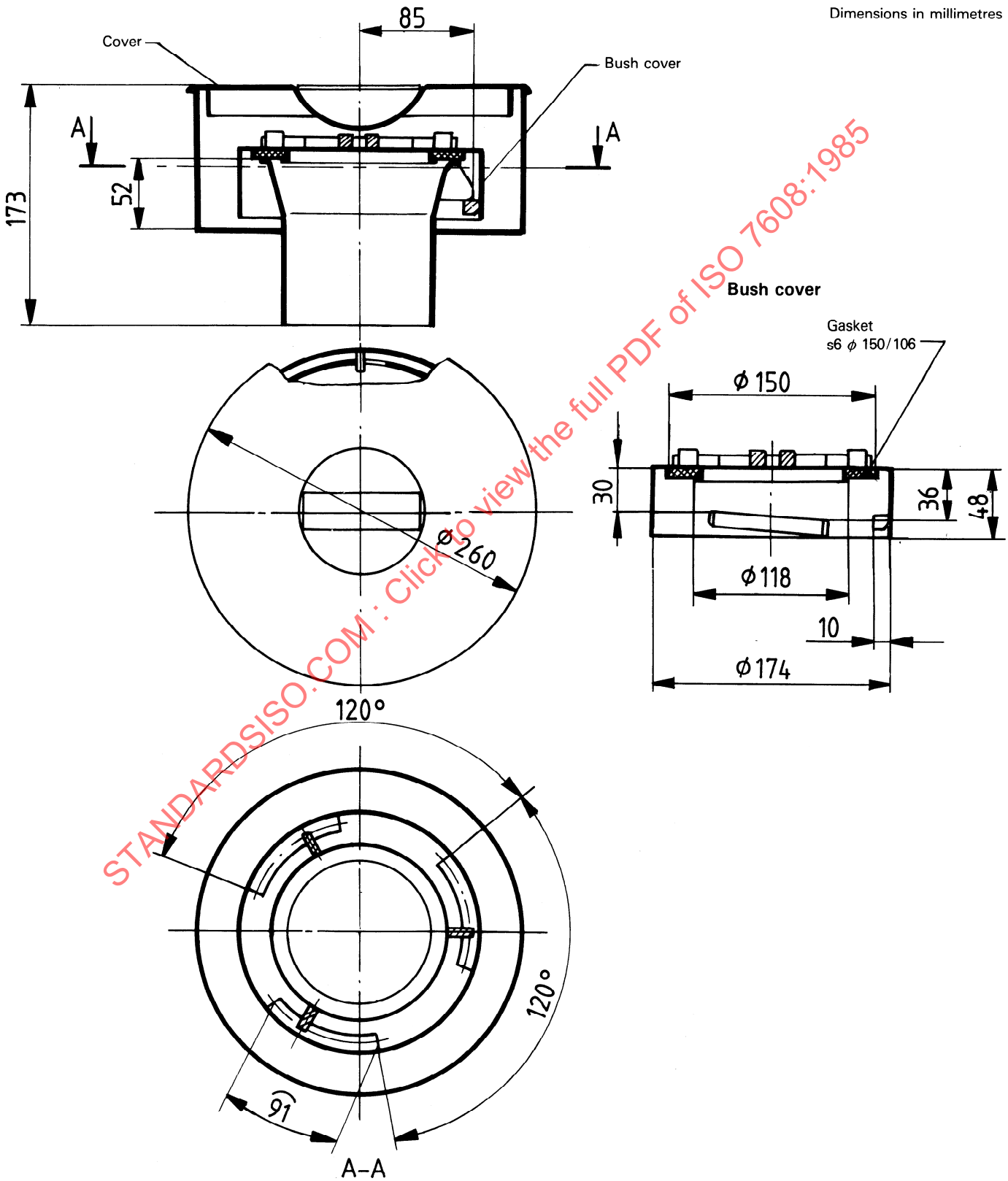


Figure 8 — Bush DN 100 for the disposal of sewage water, assembled with cover

4.3 Adapters (flange/end-piece) — Type 3

4.3.1 The design and basic dimensions of the DN 80 adapter (flange/end-piece) for the disposal of oily mixture (group A) shall correspond to those indicated in figure 9.

Dimensions in millimetres

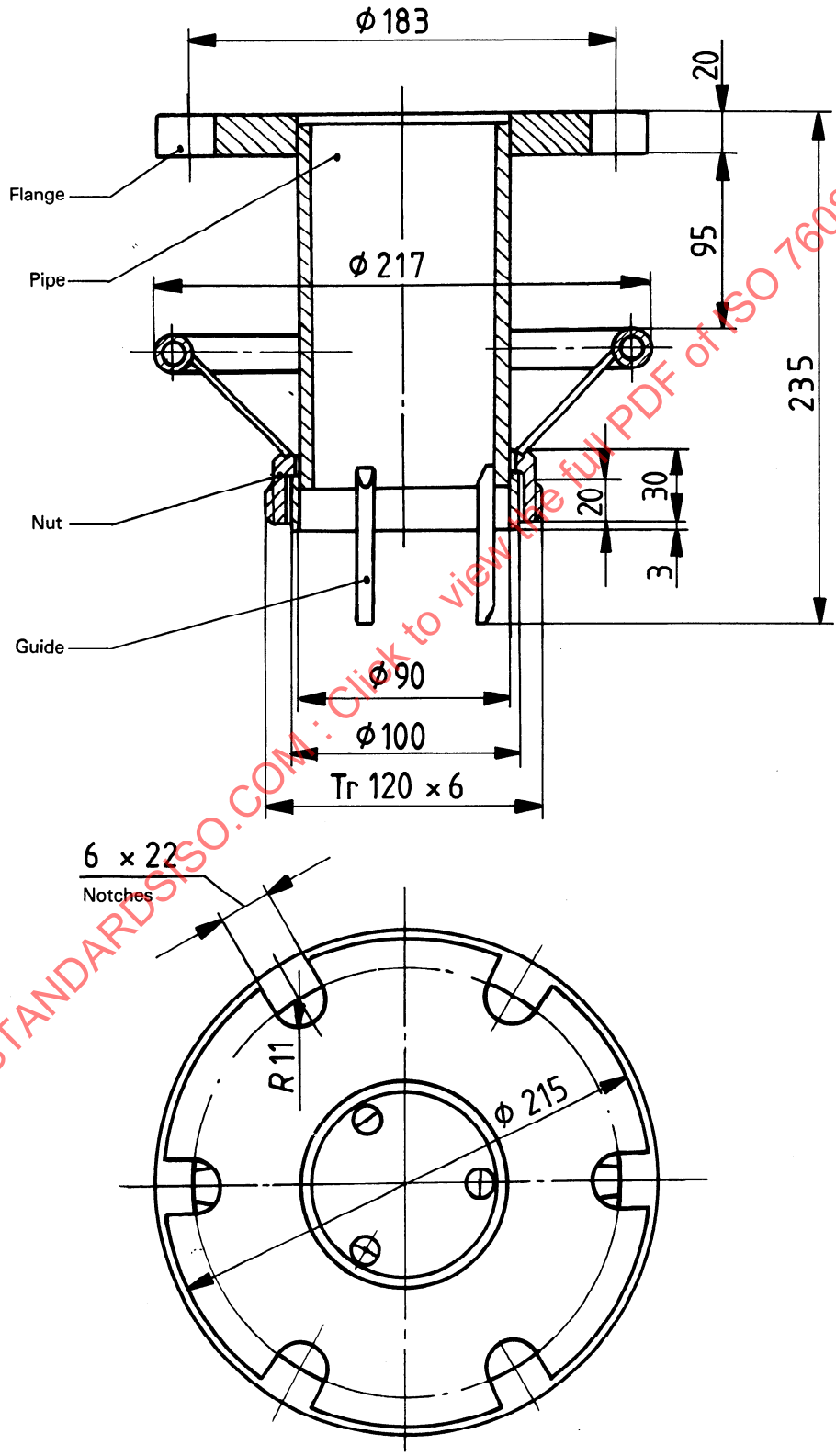


Figure 9 — DN 80 adapter of type 3 (flange/end-piece) for the disposal of oily mixture

4.3.2 The design and basic dimensions of the DN 100 adapter (flange/end-piece) for the disposal of sewage water (group B) shall correspond to those indicated in figure 10.

4.3.3 The gasket s6 ϕ 150/106 shall be made of acid- and alkali-resistant soft rubber. The basic dimensions of the gasket are indicated in figure 15.

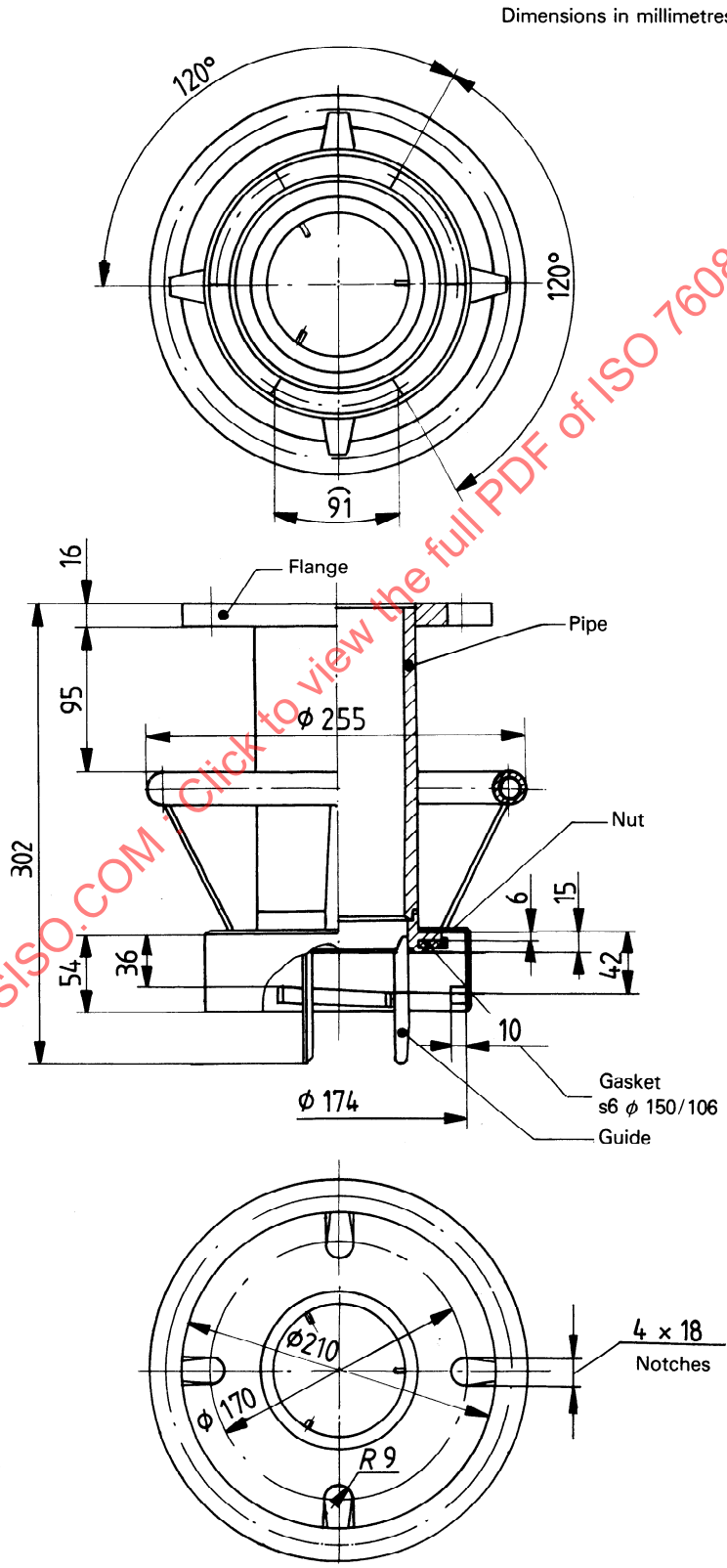


Figure 10 — DN 100 adapter of type 3 (flange/end-piece) for the disposal of sewage water

4.4 Adapters (flange/bush) — Type 4

4.4.1 The design and basic dimensions of the DN 80 adapter (flange/bush) for the disposal of oily mixture (group A) shall correspond to those indicated in figure 11.

Dimensions in millimetres

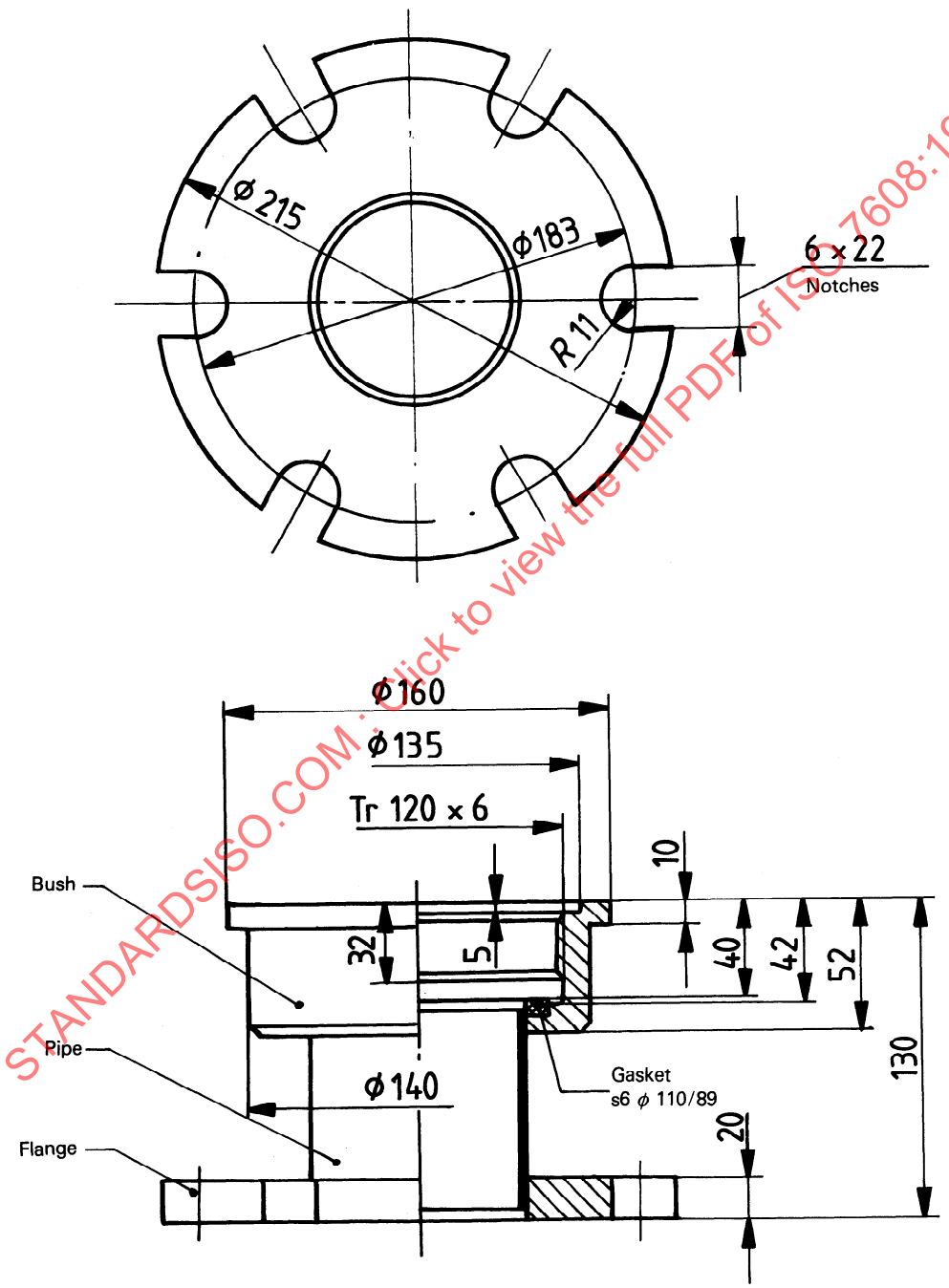


Figure 11 — DN 80 adapter of type 4 (flange/bush) for the disposal of oily mixture