

IRISH STANDARD SPECIFICATION

CATTLE GRIDS

I.S. 185:1972

Price 50p

INSTITUTE FOR INDUSTRIAL RESEARCH AND STANDARDS

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DECLARATION

OF

SPECIFICATION

ENTITLED

CATTLE GRIDS

AS

**THE IRISH STANDARD SPECIFICATION FOR
CATTLE GRIDS**

The Institute for Industrial Research and Standards in exercise of the power conferred by section 20 of the Industrial Research and Standards Act, 1961 (No. 20 of 1961), and with the consent of the Minister for Industry and Commerce, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Cattle Grids) Declaration 1972.

2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Cattle Grids.

(2) The said standard specification may be cited as Irish Standard 185:1972 or as I.S. 185:1972.

SCHEDULE

Cattle Grids

SCOPE

1. This specification applies to the requirements for cattle grids, suitable for carrying pneumatic-tyred vehicles with axle loads not exceeding 10.2 tonnes (10 tons), on private roads. Two designs of grid are covered, a 2.75 m (9 ft.) wide grid and a wider grid (See Tables 1 and 2).

General requirements only are included in the specification. A typical grid is illustrated in Fig. 1 and general recommendations on the design of grids are given in the appendix.

DEFINITIONS

2. For the purposes of this specification the following definitions apply:

Cattle grid. A device, set in a roadway, consisting of a number of transverse bars supported over a pit (the tops of the bars being level with the surface of the road) across which wheeled traffic may pass but which forms a barrier against animals.

Side walls. The walls of the pit, running parallel to the road, on which rest the ends of the transverse bars.

End walls. The walls of the pit running at right angles to the road to retain the road structure and the soil beneath it.

Intermediate supports. The walls or beams supporting the transverse bars, parallel to and in between the side walls.

PIT

3. *a. Length.* The length of the pit, in the direction of the road, shall be not less than 2.5 m (8 ft. 3 in.).

b. Width. The width of the pit shall be 2.75 m (9 ft.) or such greater width as shall be agreed between the purchaser and the supplier.

c. Depth. The depth of the pit shall be not less than 250 mm (10 in.) below the bottoms of the transverse bars.

d. Walls. There shall be side and end walls constructed of concrete, brick or stone.

e. Floor. The floor shall be of concrete not less than 100 mm (4 in.) in thickness.

f. Drainage. Adequate means for drainage shall be provided.

TRANSVERSE BARS

4. *a. Material.* Transverse bars shall be of one of the following steel sections:

(i) Tubes complying with the quality requirements of British Standard 1775, Steel Tubes for Mechanical, Structural and General Engineering Purposes. British Standards are published by the British Standards Institution, 2, Park Street, London W1A 2BS.

(ii) Hot-rolled hollow sections complying with the quality requirements of British Standard 4, Structural Steel Sections, Part 2, Hot-rolled Hollow Sections.

(iii) Channels complying with the quality requirements of British Standard 4, Structural Steel Sections, Part 1, Hot-Rolled Sections.

Alternatively, other sections or other materials of at least equal strength may be used provided the top width of each bar does not exceed 38 mm (1½ in.).

b. Dimensions. The cross-sections of the transverse bars shall be as set out in Table 1 for 2.75 m wide grids and in Table 2 for wider grids. The length of the bars shall be at least 150 mm (6 in.) longer than the width of the pit.

c. Spacing. When tubes or circular hollow sections are used there shall be a clear space of $125 + 5$ mm ($5 + \frac{1}{4}$ in.) between bars. When flat-topped sections are used there shall be a clear space of not less than 125 mm (5 in.) and not more than 150 mm (6 in.) between bars.

d. Installation. Bars shall be securely fixed or housed where they meet the supporting walls or suspended supports and may be made removable. The tops of the transverse bars shall be level with the road surface.

SUPPORTS

5. *a.* The transverse bars shall be supported at their ends and at intermediate points. Intermediate supports shall be walls constructed of concrete, brick or stone or beams of steel or reinforced concrete supported upon the end walls.

b. The number and arrangement of the intermediate supports shall be such that their spacings shall be not greater than those specified in Table 1 or Table 2, as appropriate. Extra intermediate support shall be provided to accommodate the wheel arrangement of heavy vehicles likely to use the grid if the intermediate supports provided in accordance with Tables 1 and 2 are not located to suit such vehicles.

c. Intermediate supports shall be so constructed that there is not more than 50 mm (2 in.) of flat surface on their tops. They shall not project above the mid-height of the transverse bars. Where tubes or circular hollow sections are used for the transverse bars, their bearing on the supports shall be not less than 38 mm ($1\frac{1}{2}$ in.).

PROTECTIVE TREATMENT OF STEELWORK

6. Galvanised sections may be used. If it is specified that the whole of the steelwork and steel fittings of the grid shall receive protection the treatment shall be one of the following:

- a.* A metal coating complying with British Standard 2569:Part 1, “Sprayed Metal Coatings”.
- b.* Galvanizing after manufacture to meet the requirements of British Standard 729:Part 1, “Hot-dip galvanized coatings”.
- c.* One works coat of black paint (tar base) or of a black bitumen solution.
- d.* One works coat of red oxide primer.

Note: The protective treatments specified in subclauses 6*c* and 6*d* above are not intended to serve as finishing coats.

GUARD FENCES

7. Guard fences, of a type suitable to contain the animals against which the grid has been installed, shall be erected at each side of the grid for the whole of its length. Each fence shall be so erected that no part of the side wall below it projects beyond it on the pit side. It is recommended that reflectors be fixed on the end posts of the guard fences to alert night traffic.

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