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National Standards Authority of Ireland

IRISH STANDARD

I.S. 249 : 1993

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65.040

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CATTLE SLATS

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DECLARATION

OF

SPECIFICATION

ENTITLED

CATTLE SLATS

AS

THE IRISH STANDARD SPECIFICATION FOR

CATTLE SLATS

EOLAS - The Irish Science and Technology Agency in exercise of the power conferred by section 20 (5) of the Industrial Research and Standards Act, 1961 (No. 20 of 1961) and the Science and Technology Act, 1987 (No. 30 of 1987), and with the consent of the Minister for Enterprise and Employment, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Cattle Slats) Declaration, 1993.

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

(2) The said standard specification may be cited as Irish Standard 249 : 1993 or as I.S. 249 : 1993.

3. (1) The Standard Specification (Cattle Slats) Declaration, 1982, is hereby revoked.

(2) Reference in any other standard specification to the Instrument hereby revoked and to Irish Standard 249 : 1982, thereby prescribed, shall be construed, respectively, as references to this Instrument and to Irish Standard 249 : 1993.

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Foreword

IS 249 was first published in 1982 and since then much experience has been gained in the manufacture and use of slats.

The chemical analyis of concrete in use has shown the presence of significant quantities of chloride ions. This can cause corrosion of reinforcement and spalling of the concrete cover of the slats. The chloride comes from the cattle feed/effluent. This revision has been prepared taking account of the expertise available on these matters.

In broad terms the construction of cattle slats and buildings associated with them should comply with requirements satisfying the animal husbandry and building construction needs. The criteria to be satisfied for animal husbandry relate to the surface finish on the slat, minimising of deflections and to the uniformity of level on the slats as erected, and to the absence of mortar droppings or hard particles or sharp protrusions from the slat surface, any of which if present may have undesirable effects on animal health. This specification gives no guidance directly relating to animal health, but confines itself to the verifiable requirements of building construction.

The structure upon which cattle slats are placed should be designed for the purpose of supporting the slats and containing effluent from the animals housed.

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1 Scope

This specification gives two methods for specifying the requirements for reinforced or prestressed concrete cattle slats. The methods are intended to enable a purchaser and manufacturer to agree a satisfactory specification, when guided by the specifying authority. The two methods are not directly comparable.

Cattle slats complying with this specification shall be deemed suitable for use in activities directly associated with the housing of cattle, but excludes all uses in which vehicles (self-propelled or not) may apply a loading whose effect including dynamic impact, exceeds the effect of the test or design loadings. Slatted grids with manhole openings ('Manhole slats') and slats designed for tractor loading ('Tractor slats') are not covered by this specification.

2 References

IS 1 : 1991 'Portland Cement'
IS 5 : 1990 'Aggregates for Concrete' (all parts)
IS 326 : 1988 'Structural use of concrete'
BS 5075 —— 'Concrete admixtures' (all parts)
BS 4449 : 1988 Specification for carbon steel bars for the reinforcement of concrete
BS 4482 : 1985 Specification for cold reduced steel wire for the reinforcement of concrete
BS 4486 :1980 Specification for hot rolled and hot rolled and processed high tensile alloy steel bars for the prestressing of concrete, plus AMD 5885, July
BS 5896 : 1980 Specification for high tensile steel wire strand for the prestressing of concrete

British Standards are published by the British Standards Institution, 2 Park Street, London W1A 2BS.

ISO 3893 : 1988 'Concrete - Classification by compressive strength'

ISO standards are published by the International Organization for Standardization, 1 Rue de Varembe, 1211 Geneva 20, Switzerland

3 Definitions

For the purposes of this specification the following definitions apply:

3.1 Specifying authority A purchaser or a National or Local Authority which has available authoritative guidance on the suitability of the slats considered for the application specified in clause 1 above.

3.2 Characteristic strength of concrete The value of concrete strength based on 150 mm test cubes below which not more than 5% of the population of all cube test results of the specified concrete are expected to fall.

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