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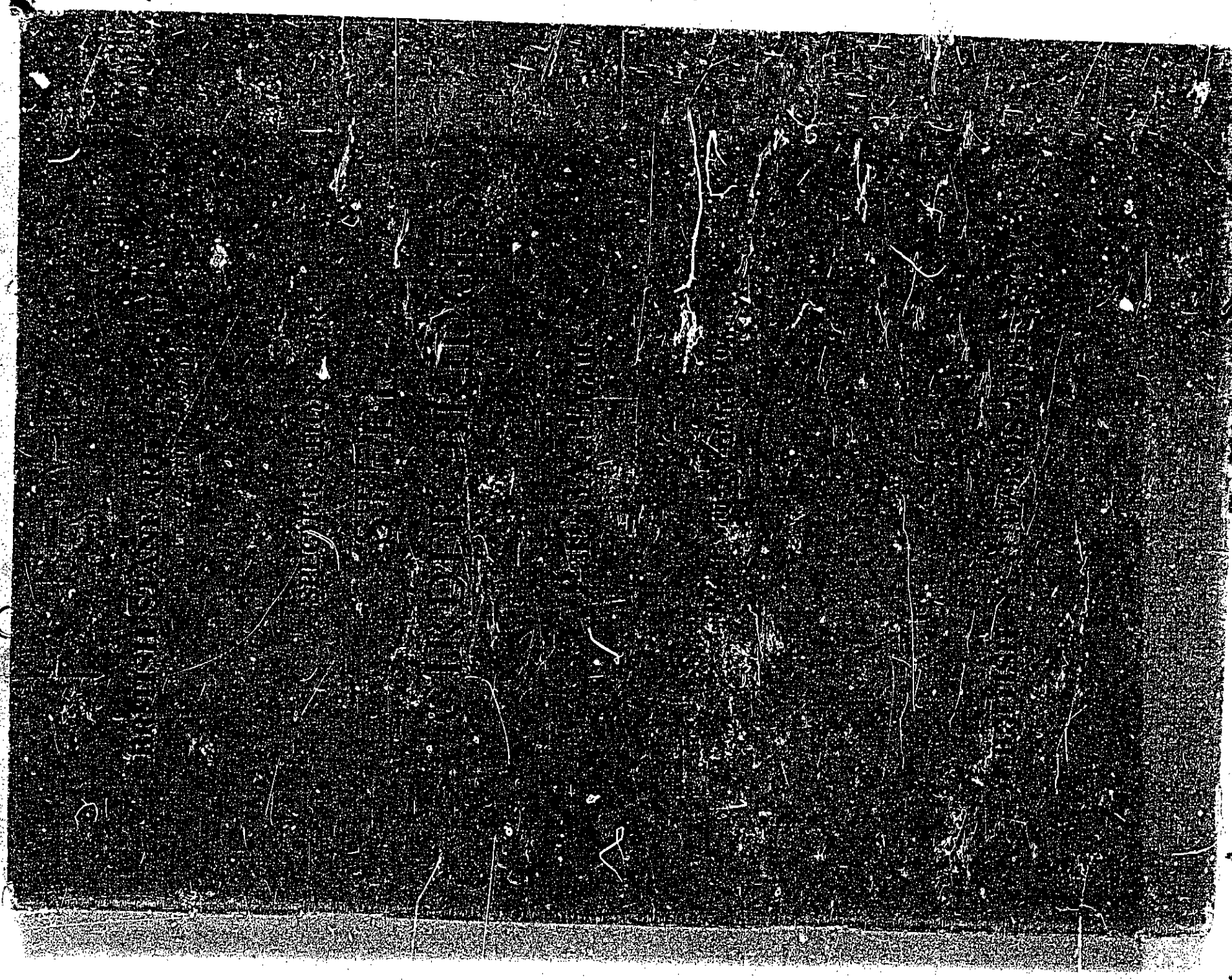

SPECIFICATION FOR

STEEL GIRDER BRIDGES

Part 3A. Loads

B.S. 153 : Part 3A : 1954

Incorporating amendments
issued January 1959 (PD 3262), March 1961 (PD 4070)
and March 1966 (PD 5748).

Price 15/- net

BRITISH STANDARDS INSTITUTION

INCORPORATED BY ROYAL CHARTER

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THIS BRITISH STANDARD, having been approved by the Iron and Steel Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council as a Britisn Standard on 31st December, 1954.

First published (Parts 3, 4 and 5), August 1923.
Appendix No. 1 to Parts 3, 4 and 5, May 1925.
First revision (Part 3), September 1937.
Second revision (Part 3A), December 1954.
Reset and reprinted, April 1966.

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

A complete list of British Standards, numbering over 4000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook, price 15s. The B.S. Yearbook may be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standard:
B.S. 648. Schedule of weights of building materials.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following B.S.I. references relate to the work in this standard:
Committee reference ISE/55. Draft for comment CO(ISE) 7622.

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RAILWAY BRIDGES

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CO-OPERATING ORGANIZATIONS

The Iron and Steel Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Alloy Steels Association
Board of Trade
British Bolt, Nut, Screw and Rivet Federation
British Cast Iron Research Association
*British Constructional Steelwork Association
British Electrical and Allied Manufacturers' Association
*British Iron and Steel Federation
British Ironfounders Association
British Mechanical Engineering Federation
*British Railways Board
British Steel Castings Research Association
Council of Ironfoundry Associations
Council of Iron Producers
*Crown Agents for Oversea Governments and Administrations
Engineering Equipment Users' Association
Federation of Civil Engineering Contractors
Institute of British Foundrymen
Institute of Iron and Steel Wire Manufacturers
Institute of Marine Engineers
*Institution of Civil Engineers
Institution of Mechanical Engineers (Automobile Division)
Institution of Production Engineers
*Institution of Structural Engineers
Iron and Steel Board
Iron and Steel Institute
Joint Iron Council
Lloyd's Register of Shipping
*Ministry of Defence, Army Department
Ministry of Defence, Navy Department
Ministry of Labour (H.M. Factory Inspectorate)
National Association of Drop Forgers and Stampers
National Physical Laboratory (Ministry of Technology)
Oil Companies Materials Association
Royal Institute of British Architects
Shipbuilding Employers' Federation
Society of British Aerospace Companies Ltd.
Society of Motor Manufacturers and Traders Ltd.

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

British Welding Research Association
Institute of Welding
Institution of Municipal Engineers
London Transport Board
Ministry of Transport
Ministry of Public Building and Works
National Association of Iron and Steel Stockholders
Republic of South Africa

BRITISH STANDARD SPECIFICATION FOR

STEEL GIRDER BRIDGES

Part 3A. Loads

FOREWORD

B.S. 153 was first published in two volumes: Parts 1 and 2 (Materials and Workmanship) in 1922 and Parts 3, 4 and 5 (Stresses, Construction and Erection) in 1923. These two volumes were then revised in 1933 and 1937 respectively.

As a result of modifications in the loading requirements for railway and highway bridges and of advances in experimental research leading to developments in design procedure, a further revision became necessary. Agreement having been reached on loading requirements, it was considered advantageous to precede the present general revision with the issue in 1954 of Part 3A, 'Loads'. This part replaced Clauses 1 to 12 of Part 3 : 1937 and Appendix No. 1 of Part 3 : 1925.

The work of revising the remaining parts of B.S. 153 has been completed; these have been re-grouped and all the Parts are now published under the authority of the Iron and Steel Industry Standards Committee in three volumes:

- Part 1. Materials and workmanship.
- Part 2. Weighing, shipping and erection.
- Part 3A. Loads.
- Part 3B. Stresses.
- Part 4. Design and construction.

The standard has been considerably enlarged in the present revision, and the design and fabrication procedure have been brought up to date with a view to ensuring consistent methods leading to maximum efficiency in the finished structure.

Except where otherwise stated, reference in this standard to bolts and nuts apply to bolts and nuts in accordance with Subclauses 2*a* and 2*b* of Part 1. The use of high strength friction grip bolts in accordance with Subclause 2*c* of Part 1 is governed by Subclause 50*b* of Part 4.

In the present reprint of Part 3A, the opportunity has been taken to incorporate the three amendments issued so far and to reset the type completely. At the same time, recent changes in B.S.I.'s typographic style have been introduced, e.g. the abbreviations for units are now in accord with B.S. 1991 and international usage, and forces are expressed in pounds-force, tons-force and kilogrammes-force in place of the customary but incorrect use of the pound, the ton and the kilogramme.