

SINGAPORE STANDARD

Steel for the prestressing of concrete

– Part 1 : General requirements



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The Building Materials Product Standards Committee appointed by the Standards Council consists of the following members:

	Name	Organisation
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	Assoc Prof Tan Kiang Hwee	<i>National University of Singapore</i>
	Mr Tan Tian Chong	<i>Building and Construction Authority</i>
	Mr Teo Tit Ngee	<i>Singapore Contractors Association Limited</i>
Co-opted Member	: Dr Tam Chat Tim	<i>Individual Capacity</i>

The Technical Committee on Steel appointed by the Building Materials Product Standards Committee and responsible for the preparation of this standard consists of representatives from the following organisations:

	Name	Organisation
Chairman	: Assoc Prof Chiew Sing Ping	<i>Building Materials Product Standards Committee</i>
Deputy Chairman	: Mr Chan Yek Seng	<i>Jurong Town Corporation</i>
Secretary	: Ms Lee Hiok Hoong	<i>Singapore Productivity and Standards Board</i>
Members	: Assoc Prof James M W Brownjohn	<i>Nanyang Technological University</i>
	Mr Bernard K P Chung	<i>Singapore Structural Steel Society</i>
	Mr Ho Wan Boon	<i>PWD Corporation Pte Ltd</i>
	Mr Khalid Mahmood	<i>Association of Consulting Engineers, Singapore</i>
	Mr Lee Yoon Moi	<i>Singapore Contractors Association Limited</i>
	Assoc Prof Richard J Y Liew	<i>National University of Singapore</i>
	Mr Henry H T Lim	<i>Institution of Engineers Singapore</i>
	Mr Pang Piow Chi	<i>Singapore Confederation of Industries</i>
	Mr Tan Hong Tuan	<i>Housing & Development Board</i>

The Working Group appointed by the Technical Committee to assist in the preparation of this standard comprises the following members:

	Name	Organisation
Convenor	: Mr Chan Yek Seng	<i>Jurong Town Corporation</i>
Members	: Mr Louis Paul Fok Kow	<i>Land Transport Authority</i>
	Mr Lee Yoon Moi	<i>Singapore Contractors Association Limited</i>
	Mr Pang Piow Chi	<i>Singapore Confederation of Industries</i>
	Mr Tan Kheng Hwee	<i>BBR Construction Systems Pte Ltd</i>
	Mr Tan See Wan	<i>Singapore Productivity and Standards Board</i>

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National Foreword

This Singapore Standard was prepared by the Technical Committee on Steel under the direction of the Building Materials Product Standards Committee.

This standard is identical to ISO 6934-1 : 1991 which is published by the International Organisation for Standardisation. In addition to Annexes A to C in the ISO standard, the Technical Committee has included Annexes ZA and ZB which are for users' information only.

Annex ZA (Informative) 'Guidelines on modulus elasticity' has been included for the designers' easy reference whereas Annex ZB (Informative) is a specification to limit ionising radiation from steel for the reinforcement of concrete. The specification is introduced to address concerns of possible radioactive contamination during the manufacturing process and the risk to health through exposure to radioactivity from the finished steel product.

Attention is drawn to the following:

1. Where the words 'International Standard' appear, they should be read as 'Singapore Standard'.
2. The comma has been used throughout as a decimal marker, whereas in Singapore Standards, it is a practice to use a full-point on the baseline as the decimal marker.
3. This ISO standards referred to shall be replaced by Singapore Standards as follows:

International Standards	Corresponding Singapore Standards	
ISO 6892 : 1998	SS 456 : 1999	Metallic materials – Tensile testing at ambient temperature
ISO 10065 : 1990	SS 427 : 1998	Steel bars for reinforcement of concrete – Bend and rebend tests

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR.*
3. *Compliance with a SS or TR does not exempt users from any legal obligations.*

Specification for steel for the prestressing of concrete – Part 1 : General requirements

1 Scope

1.1 ISO 6934 specifies requirements for high tensile strength steel to be used in prestressed concrete. It applies only to material in the condition as supplied by the manufacturer. It does not cover requirements for materials and anchorage devices used in conjunction with the prestressing steel in structural components.

1.2 The specific properties for each type of prestressing steel are given in ISO 6934-2 to ISO 6934-5.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 6934. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 6934 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1099:1975, *Metals — Axial load fatigue testing.*

ISO 6892:1984, *Metallic materials — Tensile testing.*

ISO 7801:1984, *Metallic materials — Wire — Reverse bend test.*

ISO 10065:1990, *Steel bars for reinforcement of concrete — Bend and rebend tests.*