Singapore Standards Council

SS 343 : Part 2 : 2014
(ICS 53.020.30)

SINGAPORE STANDARD

Specification for lifting gear

– Part 2 : Hooks

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This Singapore Standard was approved by the General Engineering and Safety Standards Committee on behalf of the Singapore Standards Council on 31 October 2014.

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The General Engineering and Safety Standards Committee, appointed by the Standards Council, consists of the following members:

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The Technical Committee on Safety and Health Involving the Use of Equipment, appointed by the General Engineering and Safety Standards Committee and responsible for the preparation of this standard, consists of representatives from the following organisations:

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The Working Group, appointed by the Technical Committee to assist in the preparation of this standard, comprises the following experts who contribute in their *individual capacity*:

		Name
Convenor	:	Mr Mohamad Japa Bin Rusdi
Members	:	Mr Chee Chee Chiat
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The organisations in which the experts of the Working Group are involved are:

Association of Singapore Marine Industries
Building and Construction Authority
Institution of Engineers, Singapore
Lifting Equipment Engineers Association
Ministry of Manpower
National University of Singapore
Singapore Contractors Association Limited
Singapore Institution of Safety Officers
Teho Ropes and Supplies Pte Ltd
TÜV SÜD PSB Pte Ltd
Workplace Safety and Health Council

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Contents

National Foreword

This Singapore Standard was prepared by the Working Group on Lifting Gear appointed by the Technical Committee on Safety and Health Involving the Use of Equipment under the direction of the General Engineering and Safety Standards Committee.

SS 343 consists of the following three parts, under the general title 'Specification for lifting gear':

- Part 1: Wire rope slings (Modified adoption of ISO 7531 : 1987 (2012))
- Part 2: Hooks (Modified adoption of ISO 7597 : 2013)
- Part 3: Shackles (Modified adoption of ISO 2415 : 2004)

This part of SS 343 is a modified adoption of ISO 7597 : 2013 – 'Forged steel lifting hooks with latch, grade 8', published by the International Organization for Standardization.

The modification is given as follows:

Clause	Modification
4.4	*Add* "See Annex ZA" at the end of the clause. Explanation: Annex ZA contains an inspection checklist for replacement criteria of hooks to suit local requirements and the needs of the industry.

Attention is drawn to the following:

1. Where the words 'this International Standard' appear, they shall be read as 'this part of SS 343'. The reference to 'ISO 7531' shall be replaced by 'SS 343 : Part 1'.

2. The comma has been used throughout as a decimal marker in ISO 7597, whereas in Singapore Standards it is a practice to use a full-point on the baseline as the decimal marker.

In preparing this standard, reference was made to the following publications:

1. ASME B30.10 : 2009 Hooks. Safety standard for cableways, cranes, derricks, hoists, hooks, jacks and slings

2. EN 1677-2 : 2000 Components for slings. Safety. Part 2: Forged steel lifting hooks with latch. Grade 8.

Acknowledgement is made for the use of information from the above publications.

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.*

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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 111, *Round steel link chains, chain slings, components and accessories*, Subcommittee SC 3, *Components and accessories*.

This second edition cancels and replaces the first edition (ISO 7597 : 1987), which has been technically revised.

Introduction

The hooks covered by this International Standard are normally supplied to be part of a sling, but they can also be used for other applications. In such instances, it is important that the hook design is checked to ensure its fitness for the intended use.

Specification for lifting gear – Part 2 : Hooks

1 Scope

This International Standard specifies requirements for forged steel lifting hooks with latch of grade 8 having eye or clevis and pin up to 63 t working load limit (WLL), mainly:

– for use in chain slings according to ISO 4778 and ISO 7593;

– for use in steel wire rope slings according to ISO 7531;

– for use in textile slings;

– intended for lifting objects, materials or goods.

This International Standard does not apply to hand forged hooks.

Annex A gives the bases for calculation of hook dimensions.

Annex B gives an example of a designation system for hooks of grade 8.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8539 : 2009 Forged steel lifting components for use with Grade 8 chain