

SINGAPORE STANDARD

**Specification for Cold-reduced steel wire
for the reinforcement of concrete and the
manufacture of welded fabric**

– Part 1 : Steel grade 500



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Contents

| | Page |
|----------------|-------------|
| Foreword _____ | 5 |

SPECIFICATION

| | | |
|----|---|----|
| 1 | Scope _____ | 6 |
| 2 | Normative references _____ | 6 |
| 3 | Definitions _____ | 6 |
| 4 | Dimensions, masses and tolerances _____ | 8 |
| 5 | Geometry of ribbed wires _____ | 9 |
| 6 | Chemical composition _____ | 10 |
| 7 | Mechanical properties _____ | 11 |
| 8 | Testing of mechanical properties _____ | 11 |
| 9 | Designation _____ | 13 |
| 10 | Marking _____ | 13 |
| 11 | Certification and inspection _____ | 13 |
| 12 | Test report _____ | 16 |

ANNEXES

| | | |
|---|--|----|
| A | Determination of the deviation from nominal mass (normative) _____ | 17 |
| B | Measurement of rib geometry (normative) _____ | 18 |
| C | Description for ordering purposes (informative) _____ | 20 |
| D | Specification to limit ionising radiation (informative) _____ | 21 |

TABLES

| | | |
|---|--|----|
| 1 | Dimensions, masses and tolerances _____ | 9 |
| 2 | Minimum projected ribbed area, f_r _____ | 10 |
| 3 | Chemical composition – Maximum values in percentage by mass _____ | 10 |
| 4 | Characteristic values for proof stress at 0.2% non-proportional elongation, tensile strength, ratio of tensile strength to proof stress and percentage elongation after fracture on a gauge length of 5 times the nominal diameter _____ | 11 |
| 5 | Mandrel diameter to be used for the bend test _____ | 12 |
| 6 | Mandrel diameter to be used for the rebend test _____ | 12 |
| 7 | $R_{p0.2}$ and R_m - Coefficient k as a function of a number (n) of the test results (for a reliable failure rate of 5% ($p = 0.95$) at a probability of 90% ($1 - \alpha = 0.90$)) _____ | 15 |

| | | |
|-----|--|----|
| 8 | $R_m/R_{p0.2}$ and $A_{5.65}$ - Coefficient k as a function of a number (n) of the test results (for a reliable failure rate of 10% ($p = 0.90$) at a probability of 90% ($1 - \alpha = 0.90$)) _____ | 15 |
| D.1 | Radioactivity - Maximum activity concentration _____ | 21 |

FIGURES

| | | |
|---|---|----|
| 1 | Example of ribbed wire with three rows _____ | 9 |
| 2 | Determining the area of the longitudinal section, F_R _____ | 19 |

Foreword

This Singapore Standard was prepared by the Technical Committee on Review of SS 18 : 1970 under the direction of the Building Materials Product Standards Committee.

It is a revised edition of SS 18 : Part 2 : 1970 (formerly known as SS 18 : 1970).

It is related to ISO 10544 : 1992 'Cold-reduced steel wire for the reinforcement of concrete and the manufacture of welded fabric' but is not equivalent in technical content. Modifications to certain areas of the ISO Standard were made to suit local practice and to be consistent with the other Singapore Standards on 'Steel for the Reinforcement of Concrete', namely SS 2 : Parts 1 and 2 : 1999 and SS 32 : Part 1 : 1999. These areas include $R_m/R_{p0.2}$, $A_{5.65}$ and the mandrel diameters for bend test.

This standard is released to allow time for the designers in the industry to introduce any necessary changes. The continued relevance of SS 18 : Part 2 : 1970 will be reviewed when CP 65 – 'Code of practice for structural use of concrete' is next reviewed.

Annexes C and D of this Singapore Standard are for information only. Included in Annex D (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.

Acknowledgement is made for the use of information from ISO.

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.
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Specification for cold-reduced steel wire for the reinforcement of concrete and the manufacture of welded fabric – Part 1 : Steel grade 500

1 Scope

This Singapore Standard specifies technical requirements for plain or ribbed steel wire for the reinforcement of concrete or for use in the manufacture of welded fabric in accordance with SS 32 : Part 1.

One steel grade, 500 N/mm², is defined.

Wires that may be used for the prestressing of concrete, tying, lifting and other general engineering or industrial purposes are not included in this standard. Wires used in severe cyclic conditions are also excluded.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Singapore Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Singapore Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

| | |
|------------------|---|
| ISO 404 : 1992 | Steel and steel products - General technical delivery requirements. |
| ISO 10144 : 1991 | Certification scheme for steel bars and wires for the reinforcement of concrete structures. |
| SS 2 : - | Specification for steel for the reinforcement of concrete. Part 2 : 1999 Ribbed bars. |
| SS 32 : - | Specification for welded steel fabric for the reinforcement of concrete. Part 1 : 1999 Steel grades 300 and 500. |
| SS 427 : 1998 | Steel bars for reinforcement of concrete - Bend and rebend tests. |
| SS 456 : 1999 | Metallic materials - Tensile testing at ambient temperature. |