

केन्द्रीय मुहर विभाग -2

संदर्भ -: के.मू.वि. -2/16:4454 (Part-2)

10 04 2026

विषय: संशोधित IS 4454 (Part-2):2025 के अनुपालन हेतु दिशा निर्देश ।

यह उपरोक्त विषय के संदर्भ में है।

सक्षम अधिकारी द्वारा अनुमोदित दिशानिर्देश अनुपालन हेतु संलग्न है।

सभी क्षेत्रीय/शाखा कार्यालयों से अनुरोध है की दिशानिर्देशों का तत्काल प्रभाव से अनुपालन सुनिश्चित करें।

**रंजीत कुमार
वैज्ञानिक 'ई'**

प्रमुख (के.मू.वि. - 2)

सभी क्षेत्रीय/शाखा कार्यालय/प्रयोगशालाएँ/MTD/LRMD

CENTRAL MARKS DEPARTMENT-2

Our Ref: CMD-2/16:4454 (Part-2)

10 04 2026

Subject: Guidelines for implementation of Revised IS 4454 (Part-2):2025.

This has reference to the subject mentioned above.

The Competent Authority has approved the enclosed Guidelines for implementation.

All ROs/BOs are requested to ensure the implementation of the above Guidelines with immediate effect.

**(Ranjit Kumar)
Scientist 'E'**

Head (CMD-2)

All ROs/BOs/Labs/MTD/LRMD

CENTRAL MARKS DEPARTMENT-2

Our Ref:CMD-2/16:4454 (Part-2)

Date: 10 04 2026

Subject: Guidelines for implementation of Revised IS 4454 (Part-2):2025 (Steel Wire for Mechanical Springs — Specification Part 2 Oil Hardened and Tempered Steel Wire).

1. IS 4454 (Part-2):2001 has been revised and published as IS 4454 (Part-2):2025. The last date for implementation of the revised Standard is 10th June 2026 after which the old Standard shall stand withdrawn.
2. All BOs shall inform the Applicants and Licensees under their jurisdiction about implementation of the revised Standard within a week of issuance of these guidelines.
3. The significant changes in the revised Standard as listed in the Table below are given for the purpose of general guidance. BOs shall ensure that the product conforms to all the requirements, as applicable, as per the revised Standard.

Clause	Change
1 Scope	Clause 1 has been modified to expand the scope of the standard by including shaped wire , in addition to the existing round steel wires.
3 Terminology	The terminology for Shape Factor (Cl 3.7), Shaped Wire (Cl 3.8), & Static Duty (Cl 3.9) have been added
5 Grades Table 1	Three new grades FDSiCrV, TDSiCrV and VDSiCrV corresponding to very high tensile strength have been added. Accordingly, the requirement of chemical compositions of these grades have been added in respective Table 2. Further, upon inclusion of these new grades in the standard, new tables namely Table 6(B) and Table 7(B) specifying Mechanical Properties of these grades have also been added.
6 Manufacture	A new clause 6.2 has been added specifying that For VD Grades, the steel shall be continuously cast iron blooms and rolled into billets. In addition, the requirement of surface quality has also been specified.
9 Dimensions and Tolerances	Clause 9.4 has been modified to specify that tolerances for sizes other than those given in Table 4 may be mutually agreed upon between the purchaser and the manufacturer, in place of the earlier provision stating that sizes and tolerances other than those specified in Table 4 may be mutually agreed between them. Upon inclusion of shaped wire in the scope of the standard, a new clause 9.3 has been added specifying the requirement of size and tolerances on characteristic dimensions of the shaped wires shall be in accordance with Table 5. Accordingly, a new Table 5 has also been added.

10.6 Deep Etch Test	Upon inclusion of shaped wire in the scope of the standard, a new clause 10.6.2 has been added specifying the requirement of Deep Etch Test and result for shaped wires.
10.1 Tensile Test	Upon inclusion of shaped wire in the scope of the standard, the requirement of Tensile Test has been modified specifying the method for calculating the tensile properties for shaped wire as well.
10.2 Wrapping Test	Clause 10.2 (Wrapping Test) has been modified to state that this test is not applicable to shaped wire.
10.3 Torsion Test	Upon inclusion of shaped wire in the scope of the standard, the requirement of Torsion Test (Cl 10.3.1) has been modified to incorporate torsion test requirements for shaped wires as well (as per the agreement between the purchaser and the supplier). Cl 10.3.2 has also been modified to incorporate a provision whereby the minimum number of torsions required for Grade FD may be mutually agreed upon between the purchaser and the supplier at the time of placing the order.
10.4 Bend Test	Upon inclusion of shaped wire in the scope of the standard, the requirements of Bend Test for 'shaped wire' have been added.
10.6 & Fig 1	The requirement of Cast of the Wire has been deleted .

4. Since the revision of Indian Standard introduces a new variety, namely 'shaped wire' along with three new grades and the relevant test requirements, the existing licensee is not required to submit evidence of conformity for the existing variety/grades of wire. However, for inclusion of 'shaped wire' and newly introduced grades in the scope of the existing licence, the case shall be processed in accordance with the CSOL guidelines.

5. Consequent upon the issuance of aforementioned amendment, the existing product manual of IS 4454 (Part 2) has been revised which is being circulated separately.

6. BOs are requested to circulate these guidelines to licensees and applicants under their jurisdiction immediately after issuance of this circular.

7. The above guidelines shall come into force with immediate effect.

Ranjit Kumar
Scientist-E

Head (CMD-2)

DDG (Certification)

ROs/BOs