

## केन्द्रीय मुहर विभाग-2

हमारा संदर्भ : सीएमडी-2/16: 10842  
2020

15 01

विषय : आई एस 10842 (भाग 1) : 2019 / आईएसओ 17642 (भाग 1) : 2004 - धातु सामग्रीमें वेल्ड पर विनाशकारी परीक्षण – वेल्डमेंट के लिए शीत क्रैकिंगपरीक्षण - आर्क वेल्डिंग प्रक्रियाएं(भाग 1) का कार्यान्वयन।

1. उपरोक्त विषय के संदर्भ में परिपत्र अवलोकन हेतु संलग्न है।

(अरुण पुच्छकायला)  
वैज्ञानिक सी (के.मु.वि.-2)

### प्रमुख (सी एम डी-2)

सभी क्षेत्रीय/शाखा/कार्यालयों/एमटीडी/एलपीपीडी को परिचालित  
आई टी एस विभाग – बीआईएस इंटरनेट पर अपलोड करने के लिए

## CENTRAL MARKS DEPARTMENT -2

**Our Ref: CMD-2/16: 10842**

**15 01 2020**

**Subject: Implementation of IS 10842 (Part 1): 2019/ISO 17642 (Part 1): 2004- Destructive Tests on Welds in Metallic Materials – Cold Cracking Tests for Weldments – Arc Welding Processes**

1. Please find enclosed circular regarding above subject for kind consideration.

(Arun Pucchakayala)  
Scientist C (CMD-2)

### Head (CMD-2)

Circulated to: All ROs/BOs/MTD/LPPD

Copy to: ITSD for hosting on BIS Intranet

## CENTRAL MARKS DEPARTMENT-2

Our Ref: CMD-2/16:10842

13 01 2020

### **Subject: Implementation of IS 10842 (Part 1): 2019/ISO 17642(Pt.1):2014 - Destructive Tests on Welds in Metallic Materials — Cold Cracking Tests for Weldments — Arc Welding Processes**

1. This has reference to the above.
2. IS 10842:1984 has been revised as IS 10842 (Part 1): 2019/ISO 17642(Pt.1):2004, IS 10842 (Part 2): 2019/ISO 17642(Pt.2):2005 and IS 10842 (Part 3): 2019/ISO 17642(Pt.3):2005. The last date of implementation of the revised standard is **10 May 2020**.
3. The standard IS 10842:1984 *prescribing Y-groove Weld Crackability Test in Structural Steel* is revised into 3 parts namely ISO 10842 Pt.1, 2 &3, with IS 10842 Pt.1 comprising general requirements, IS 10842 Pt.3 comprising externally loaded test and IS 10842 Pt.2 comprising *Y-groove Weld Crackability Test*.
4. The changes in IS 10842 Pt.2, *Self-restraint tests* comprising of Y-groove Weld Crackability Test as one of the test methods, in comparison with that of IS 10842:1984 are as mentioned below:
  - i) No restriction is imposed on thickness of structural steel that can be tested for this requirement.
  - ii) Acceptance criteria are modified with regard to thickness of steel within a cast.
  - iii) Selection and location of samples for the test.
  - iv) Method for carrying out X welds (Anchor welding).
  - v) Evaluation criteria have been extended beyond visual examination to identify presence of cracks for steel of different thicknesses in the cast. Indeed now requirement is quantitative as well as qualitative involving determination of diffusible hydrogen content, crack ratio, hardness in HAZ alongside metallographic examination.
5. Although IS 10842 is not under certification, it has been referred in IS 2062:2011 *Hot rolled medium and high tensile structural steel*.
6. In view of the above, BOs are requested to bring implementation of the revised version of IS 10842 to the knowledge of manufacturers/licensees for IS 2062:2011.

(Arun Pucchakayala)  
Scientist. C

**Head (CMD-2)**  
**DDG (Cert.)**

**Circulated to: All ROs/BOs**  
**Copy for information to: LPPD**