

# API Ballot ID# 6443

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<b>Work Item Number</b>	1078
<b>Title of Work Item</b>	Charpy V-Notch Tolerance Conflict
<b>Ballot Revision Level</b>	0
<b>Type of Ballot</b> (Initial, Comment, Comment resolution (reference API ballot#), 1 <sup>st</sup> Re-ballot, 2 <sup>nd</sup> Re-ballot, etc.)	Initial
<b>Submitter Name(s)</b>	Joe Majkrzak
<b>API Document Modified</b>	API 5CT 11 <sup>th</sup> Edition
<b>Impacted Documents</b>	None
<b>Revision Key</b>	Current API text = black Deletions = <del>red strikethrough</del> Additions = <u>underlined red</u>

**Work Item Charge:** Review Charpy impact testing requirements when both ASTM A370 and ASTM E23 are required (API 5CT, 5DP, 7-1) and there is a conflict between the two standards. Recommend resolution of the conflicts and make changes to the specifications to resolve the conflicts.

**Ballot Rationale:** The current wording in API 5CT for Charpy impact testing require conducting testing in accordance with ASTM A370 and ASTM E23. ASTM E23 had a revision where the ligament length measurement was required for specimens and conflicts with ASTM A370 that requires measurement of the notch depth. This conflict presents an issue where conforming to ASTM E23 can create a nonconformance with ASTM A370 and vice-versa.

**Ballot Text:** See below.

## 2 Normative References

ASTM E23-24, Standard Test Methods for Notched Bar Impact Testing of Metallic Materials

ASTM A370-24<sup>2</sup>, Standard Test Methods and Definitions for Mechanical Testing of Steel Products

### 6.3.3 Shear area

For Grade C110, either:

a) the minimum shear area shall be 75 %, in accordance with ASTM E23-24; or

### 9.4.7 Test Method

Tensile properties shall be determined by tests on longitudinal specimens conforming to the requirements of 9.4.5, ISO 6892-1 or ASTM A370-24, and 9.4.6 for Grades C110 and Q125 products covered therein. Tensile

tests shall be made with the specimens at room temperature. The strain rate during tensile testing shall be in accordance with the requirements of ISO 6892-1 or ASTM A370-24.

### 9.7.1 Specimen Size and Orientation

Impact test specimen dimensions shall be according to ASTM E23-24.

#### 9.7.11 Test Method

CVN impact specimens tests shall be ~~conducted~~ tested as specified in ASTM A370-24 and ASTM E23-24.

**A.16 SR 44—Charpy V-notch Test Properties—Grades N80, L80 Type 1, L80 3Cr,**

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**C90, R95, T95, P110, and Q125**

Either:

a) the minimum shear area shall be 75 %, in accordance with ASTM E23-~~24~~; or

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