

API Ballot 7124

TG OCTG
Page 1 of 3

Work Item Number	2480
Title of Work Item	5CT Oblique Notch Angle Tolerance
Ballot Revision Level	0
Type of Ballot (Initial, Comment, Comment resolution (reference API ballot#), 1 st Re-ballot, 2 nd Re-ballot, etc.)	Initial Work Item Ballot
Submitter Name(s)	Martha SOLANO (Tenaris)
API Document Modified	API 5CT 11ed Addendum 1
Impacted Documents	API 5CT
Revision Key	Current API document in black, Additions in red with gray highlight

Work Item Charge: Review and refresh to include oblique notch angle tolerance requirement(s) for reference standards; review and refresh demonstrated capability and records requirements related to notch angle tolerance.

Ballot Rationale: API 5CT includes cases for detection of oblique defects but does not include reference standard notch angle tolerance requirement. Amplitude of NDE unit signal can change depending on the notch angle and tolerance. Some NDE systems can sweep multiple angles during inspection and some NDE systems have fixed oblique angles. The NDE demonstrated capability and Nondestructive Examination System Capability Records requirements does not address reference standard notch angle tolerance.

Ballot Text: See bellow

9.15.3 Reference Standards

(Add the following text at the end of the section)

The tolerance for the oblique notch angle from the intended orientation shall be determined through a demonstrated and documented capability assessment but shall not exceed ± 5 degrees (see 9.15.4).

The verification of the oblique notch angle from the intended orientation may be performed direct or indirect.

Examples of angle verification methods include the use of mechanical devices (e.g., a protractor), optical methods, ultrasonic or radiographic techniques, notch machining device setups, a representative notch produced using the same machining tooling and setup (e.g., an OD notch on the same reference standard or a notch on a separate plate), or any other documented method defined by the manufacturer. See Figure D.29.

9.15.4 Nondestructive Examination System Capability Records

The verification shall cover, as a minimum, the following criteria:

(Add the following text at the end of the list)

- g) Angle verification methodology and procedure for oblique artificial reference indicators in reference standards.

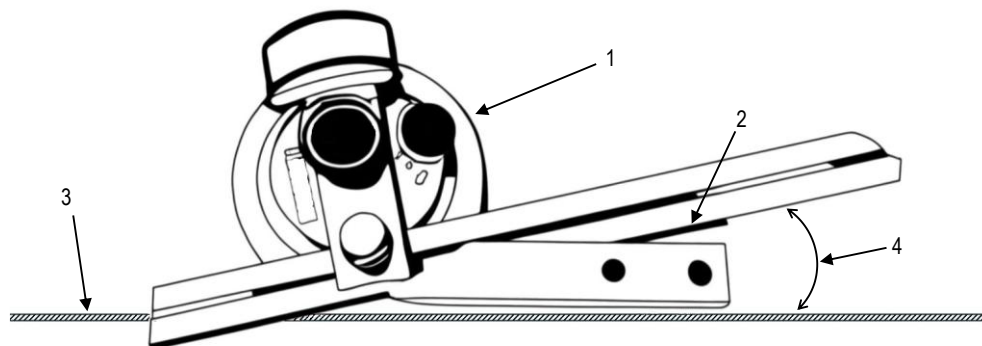
In addition, the manufacturer shall maintain documentation relating to:

(Add the following text at the end of the list)

- e) Documented capability assessment for oblique notch angle tolerance.

Annex D (normative) Figures in SI (USC) Units

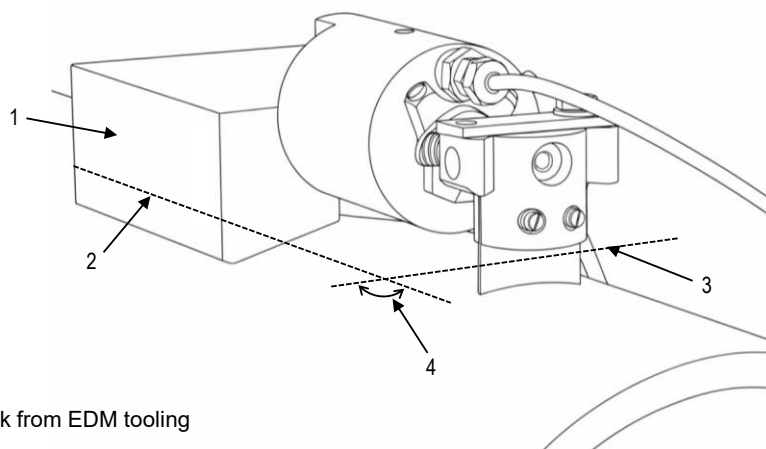
(Add new figures)



Key

- 1 Mechanical protractor with resolution of 1-degree increments
- 2 Notch (either physical or on a replica)
- 3 Taut string or wire following the longitudinal or transverse reference standard axis
- 4 Measured angle

a) Example of a direct artificial reference indicator orientation measurement technique



Key

- 1 V-Block from EDM tooling
- 2 Axis from a machined surface of the V-Block
- 3 Axis from the electrode once installed in the EDM tooling
- 4 Angle to be measure between the V-Block and the electrode axis

b) Example of an indirect artificial reference indicator orientation measurement technique

Figure D.29 – Example Artificial Reference Indicator Orientation Measurement