

# DIN EN ISO 3845:2026-04 (E)

Oil and gas industries including lower carbon energy - Full ring ovalization test method for the evaluation of the cracking resistance of steel line pipe in sour service (ISO 3845:2024); English version EN ISO 3845:2026

---

<b>Contents</b>		<b>Page</b>
Foreword	.....	v
Introduction	.....	vi
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Normative references</b> .....	<b>1</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>2</b>
<b>4</b>	<b>Symbols and abbreviated terms</b> .....	<b>6</b>
<b>5</b>	<b>Principle</b> .....	<b>6</b>
<b>6</b>	<b>Reagents</b> .....	<b>7</b>
<b>7</b>	<b>Apparatus</b> .....	<b>8</b>
7.1	Containment materials.....	8
7.1.1	General.....	8
7.1.2	Lid and base.....	8
7.1.3	Seal rings.....	8
7.2	Internal loading components.....	8
7.3	External loading components.....	10
7.4	Loading component treatment.....	11
7.5	Ancillary components.....	11
<b>8</b>	<b>Sampling</b> .....	<b>12</b>
8.1	General.....	12
8.2	Ultrasonic testing.....	12
8.3	Magnetic particle testing/penetrant testing.....	12
<b>9</b>	<b>Procedure</b> .....	<b>12</b>
9.1	General.....	12
9.2	Test specimen.....	12
9.2.1	Machining/Preparation.....	12
9.2.2	Surface preparation.....	13
9.2.3	Specimen loading.....	13
9.3	Preparation of the test cell.....	17
9.4	Test duration and solution parameters.....	17
9.5	Test commencement.....	18
9.6	Monitoring.....	18
9.6.1	Test solution.....	18
9.6.2	Ultrasonic testing.....	19
9.6.3	Hydrogen permeation.....	19
9.6.4	Galvanic coupling.....	19
9.7	Test completion.....	19
9.8	Secondary testing.....	19
9.9	Evaluation of test specimen.....	19
9.9.1	General.....	19
9.9.2	Post-test non-destructive testing.....	20
9.9.3	Metallographic examination.....	20
<b>10</b>	<b>Test report</b> .....	<b>22</b>

<b>Annex A (normative) Ultrasonic testing (UT)</b> .....	<b>24</b>
<b>Annex B (normative) Strain gauge installation</b> .....	<b>29</b>
<b>Annex C (normative) Analysis of test solution - Iodometric titration procedure</b> .....	<b>37</b>
<b>Annex D (informative) Summary of the full ring test procedure</b> .....	<b>40</b>
<b>Annex E (informative) Examples of types of cracking</b> .....	<b>46</b>
<b>Annex F (informative) Example of full ring test report and loading report</b> .....	<b>48</b>
<b>Annex G (informative) Guidance on acceptance criteria</b> .....	<b>51</b>
<b>Bibliography</b> .....	<b>52</b>