

# ISO/TR 4340:2022-06 (E)

## Water aggressiveness evaluation and optimized lining choice

---

<b>Contents</b>		<b>Page</b>
	<b>Foreword</b> .....	<b>iv</b>
<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>1</b>
<b>4</b>	<b>Water aggressiveness evaluation</b> .....	<b>2</b>
4.1	Normal internal corrosion mechanics.....	2
4.2	Internal protection of ductile iron pipe.....	2
4.3	Water aggressiveness evaluation for ductile iron pipe system.....	3
4.4	Main corrosive aggressive factors.....	3
4.5	Water evaluation indicators and their trigger value.....	4
4.5.1	Langelier saturation index (LSI).....	5
4.5.2	Ryznar stability index (RSI).....	5
4.5.3	Calcium carbonate precipitation potential (CCPP).....	5
4.5.4	Larson ratio (LR).....	6
4.5.5	Aggressive index (AI).....	6
4.5.6	Evaluation chart.....	6
<b>5</b>	<b>Sampling and testing</b> .....	<b>7</b>
5.1	Sampling.....	7
5.2	Testing.....	8
<b>6</b>	<b>Optimized lining choice based on water evaluation</b> .....	<b>8</b>
<b>7</b>	<b>Steps for water aggressiveness evaluation and optimized lining choice</b> .....	<b>8</b>
	<b>Annex A (informative) <math>pH_s</math></b> .....	<b>9</b>
	<b>Annex B (informative) Relevant test standards</b> .....	<b>12</b>
	<b>Annex C (informative) Type and characteristics of water-related concrete corrosion</b> .....	<b>18</b>
	<b>Bibliography</b> .....	<b>19</b>