

# ISO/TS 10839:2022-07 (E)

## Polyethylene pipes and fittings for the supply of gaseous fuels - Code of practice for design, handling and installation

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms, definitions and abbreviated terms .....</b>	<b>2</b>
<b>3.1</b>	<b>Terms and definitions .....</b>	<b>2</b>
<b>3.2</b>	<b>Symbols and abbreviated terms .....</b>	<b>3</b>
<b>4</b>	<b>Design .....</b>	<b>4</b>
<b>4.1</b>	<b>General .....</b>	<b>4</b>
<b>4.2</b>	<b>Material, components and jointing equipment .....</b>	<b>4</b>
<b>4.3</b>	<b>Maximum operating pressure .....</b>	<b>5</b>
<b>4.4</b>	<b>Assembly techniques .....</b>	<b>5</b>
<b>4.5</b>	<b>Squeeze-off properties .....</b>	<b>5</b>
<b>5</b>	<b>Construction .....</b>	<b>6</b>
<b>5.1</b>	<b>Competences .....</b>	<b>6</b>
<b>5.2</b>	<b>Storage, handling and transport .....</b>	<b>6</b>
<b>5.2.1</b>	<b>General .....</b>	<b>6</b>
<b>5.2.2</b>	<b>Storage .....</b>	<b>6</b>
<b>5.2.3</b>	<b>Handling .....</b>	<b>7</b>
<b>5.2.4</b>	<b>Transport .....</b>	<b>7</b>
<b>5.3</b>	<b>Jointing .....</b>	<b>8</b>
<b>5.4</b>	<b>Laying .....</b>	<b>8</b>
<b>5.4.1</b>	<b>General .....</b>	<b>8</b>
<b>5.4.2</b>	<b>Trench .....</b>	<b>9</b>
<b>5.4.3</b>	<b>Drag forces .....</b>	<b>9</b>
<b>5.4.4</b>	<b>Valves .....</b>	<b>10</b>
<b>5.4.5</b>	<b>Connection to working systems .....</b>	<b>10</b>
<b>5.4.6</b>	<b>Backfilling .....</b>	<b>10</b>
<b>5.5</b>	<b>Pressure testing and commissioning .....</b>	<b>10</b>
<b>6</b>	<b>Quality control .....</b>	<b>11</b>
<b>6.1</b>	<b>General .....</b>	<b>11</b>
<b>6.2</b>	<b>Inspection prior to laying .....</b>	<b>11</b>
<b>6.3</b>	<b>Inspection during laying .....</b>	<b>11</b>
<b>6.3.1</b>	<b>Laying .....</b>	<b>11</b>
<b>6.3.2</b>	<b>Joint integrity .....</b>	<b>12</b>
<b>Annex A (normative) Butt fusion jointing procedure .....</b>		<b>20</b>
<b>Annex B (normative) Electrofusion jointing .....</b>		<b>25</b>
<b>Annex C (normative) Mechanical jointing .....</b>		<b>30</b>
<b>Annex D (informative) Socket fusion and saddle fusion fittings jointing procedures .....</b>		<b>31</b>
<b>Annex E (informative) Derating coefficient for various operating temperatures .....</b>		<b>32</b>
<b>Bibliography .....</b>		<b>33</b>