

# ISO 4126-7:2013-07 (E)

## Safety devices for protection against excessive pressure - Part 7: Common data

---

<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 and definitions .....</b>	<b>1</b>
<b>4</b>	<b>Symbols and units .....</b>	<b>3</b>
<b>5</b>	<b>Determination of safety valve performance .....</b>	<b>4</b>
<b>5.1</b>	<b>Determination of coefficient of discharge .....</b>	<b>4</b>
<b>5.2</b>	<b>Critical and subcritical flow .....</b>	<b>4</b>
<b>5.3</b>	<b>Discharge capacity at critical flow .....</b>	<b>4</b>
<b>5.4</b>	<b>Discharge capacity for any gas at subcritical flow .....</b>	<b>5</b>
<b>5.5</b>	<b>Discharge capacity for non-flashing liquid as the test medium in the turbulent zone where the Reynolds number <math>Re</math> is equal to or greater than 80 000 .....</b>	<b>5</b>
<b>6</b>	<b>Sizing of safety valves .....</b>	<b>6</b>
<b>6.1</b>	<b>General .....</b>	<b>6</b>
<b>6.2</b>	<b>Valves for gas or vapour relief .....</b>	<b>6</b>
<b>6.3</b>	<b>Calculation of capacity .....</b>	<b>6</b>
<b>7</b>	<b>Thermodynamic properties .....</b>	<b>8</b>
<b>7.1</b>	<b>Steam data .....</b>	<b>8</b>
<b>7.2</b>	<b>Value of <math>C</math> as a function of <math>k</math> .....</b>	<b>8</b>
<b>7.3</b>	<b>Theoretical capacity correction factors for sub-critical flow (<math>K_b</math>) .....</b>	<b>8</b>
<b>7.4</b>	<b>Estimating chart for compressibility factor, <math>Z</math> .....</b>	<b>19</b>
<b>7.5</b>	<b>Capacity correction factor for viscosity, <math>K_v</math> .....</b>	<b>21</b>
<b>7.6</b>	<b>Properties of gases .....</b>	<b>22</b>
<b>8</b>	<b>Minimum requirements for helical compression springs .....</b>	<b>23</b>
<b>8.1</b>	<b>General .....</b>	<b>23</b>
<b>8.2</b>	<b>Materials .....</b>	<b>23</b>
<b>8.3</b>	<b>Marking .....</b>	<b>23</b>
<b>8.4</b>	<b>Dimensions .....</b>	<b>24</b>
<b>8.5</b>	<b>Spring plates/buttons .....</b>	<b>24</b>
<b>8.6</b>	<b>Inspection, testing and tolerances .....</b>	<b>24</b>
<b>9</b>	<b>Minimum requirements for safety valve disc springs .....</b>	<b>27</b>
<b>9.1</b>	<b>General .....</b>	<b>27</b>
<b>9.2</b>	<b>Materials .....</b>	<b>27</b>
<b>9.3</b>	<b>Marking .....</b>	<b>27</b>
<b>9.4</b>	<b>Dimensions .....</b>	<b>27</b>
<b>9.5</b>	<b>Inspection, testing and tolerances .....</b>	<b>27</b>
<b>Annex A (informative) Examples of capacity calculations for various media .....</b>		<b>28</b>
<b>Bibliography .....</b>		<b>33</b>