

ISO 4126-10:2010-10 (E)

Safety devices for protection against excessive pressure - Part 10: Sizing of safety valves for gas/liquid two-phase flow

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	7
5 Application range of the method	12
5.1 General	12
5.2 Limitations of the method for calculating the two-phase mass flux in safety valves	12
5.3 Limitations of the method for calculating the mass flow rate required to be discharged	13
6 Sizing steps	14
6.1 General outline of sizing steps	14
6.2 Step 1 -- Identification of the sizing case	15
6.3 Step 2 -- Flow regime at safety valve inlet	16
6.4 Step 3 -- Calculation of the flow rate required to be discharged	21
6.5 Step 4 -- Calculation of the dischargeable mass flux through a safety valve	28
6.6 Step 5 -- Proper operation of safety valves connected to inlet and outlet lines	34
Annex A (informative) Identification of sizing scenarios	38
Annex B (normative) Sizing of a safety valve	39
Bibliography	44