

# ISO/TR 13086-1:2011-09 (E)

## Gas cylinders - Guidance for design of composite cylinders - Part 1: Stress rupture of fibres and burst ratios related to test pressure

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative reference .....	1
3	Terms and definitions .....	1
4	Factors of safety related to stress rupture .....	2
4.1	Stress ratio .....	2
4.2	Field experience and background .....	3
4.3	Stress rupture test programs .....	3
4.4	Stress rupture field experience .....	6
4.5	Other discussion .....	7
4.6	Summary .....	7
5	Factors of safety related to test pressure .....	8
5.1	General .....	8
5.2	Burst .....	8
5.3	Cyclic fatigue .....	8
5.4	Stress rupture reliability .....	9
5.5	Damage tolerance .....	9
5.6	Evaluation of burst ratios .....	10
5.7	Summary .....	12
6	Technical Report Summary .....	13
Annex A (informative) Verification of stress ratios using strain gauges .....		14
Bibliography .....		15