



ALTERNATIVES TO HYDRAULIC TESTING OF GAS CYLINDERS

Doc 96/23

Revision of Doc 96/17

EUROPEAN INDUSTRIAL GASES ASSOCIATION AISBL

AVENUE DE L'ASTRONOMIE 30 • B – 1210 BRUSSELS

Tel: +32 2 217 70 98

E-mail: info@eiga.eu • Internet: www.eiga.eu

 **Documents**
Document Sharing Hub



ALTERNATIVES TO HYDRAULIC TESTING OF GAS CYLINDERS

Prepared by WG-2 Gas cylinders and pressure vessels

Disclaimer

All technical publications of EIGA or under EIGA's name, including Codes of practice, Safety procedures and any other technical information contained in such publications were obtained from sources believed to be reliable and are based on technical information and experience currently available from members of EIGA and others at the date of their issuance.

While EIGA recommends reference to or use of its publications by its members, such reference to or use of EIGA's publications by its members or third parties are purely voluntary and not binding.

Therefore, EIGA or its members make no guarantee of the results and assume no liability or responsibility in connection with the reference to or use of information or suggestions contained in EIGA's publications.

EIGA has no control whatsoever as regards, performance or non performance, misinterpretation, proper or improper use of any information or suggestions contained in EIGA's publications by any person or entity (including EIGA members) and EIGA expressly disclaims any liability in connection thereto.

EIGA's publications are subject to periodic review and users are cautioned to obtain the latest edition.

© EIGA grants permission to reproduce this publication provided the Association is acknowledged as the source

EUROPEAN INDUSTRIAL GASES ASSOCIATION AISBL
Avenue de l'Astronomie 30 B 1210 Brussels Tel: +32 2 217 70 98
E-mail: info@eiga.eu Internet: www.eiga.eu



Document Sharing Hub

Table of Contents

1. Introduction	1
2. Scope and purpose	2
2.1 Scope	2
2.2 Purpose	2
3. Definitions	2
3.1 Publication terminology	2
4. Discussion of Type 1 cylinders	3
4.1 UET and AET: Comparison with hydraulic pressure test (proof test or volumetric expansion test) 3	
5. Ultrasonic testing (UET)	3
5.1 Experience, prospects, and legal situation	3
5.2 Test procedure	4
6. Acoustic emission testing (AET)	4
6.1 Experience, prospects and legal situation	4
6.2 Test methods and procedure	5
7. Other NDT Methods	5
7.1 Discussion of composite Type 2, Type 3 and Type 4 cylinders	5
7.2 UET for composite cylinders	5
7.3 AET for composite cylinders	6
8. References	6

Amendments from 96/17

Section	Change
	Editorial to align to EIGA Style Manual
7	Reference to MAE Testing added
7	New Section 7 added
8	New Section 8 References added and Appendix A deleted

Note: Technical changes from the previous edition are underlined

Note: Where there is no risk of ambiguity, the cylinders and tubes are addressed with the collective term “cylinder” within this document