

DIN EN ISO 16148:2020-09 (E)

Gas cylinders - Refillable seamless steel gas cylinders and tubes - Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing (ISO 16148:2016 + Amd 1:2020) (includes Amendment :2020)

Contents		Page
European foreword		3
Ⓐ European foreword to Amendment Ⓐ		4
Foreword		5
Ⓐ Foreword to Amendment Ⓐ		6
Introduction		7
1	Scope	8
2	Normative references	8
3	Terms and definitions	8
4	Operational principles	10
5	Personnel qualification	10
6	Special considerations to ensure valid tests	11
6.1	General	11
6.2	Acoustic emission examination methods	11
6.3	Pressurization	11
6.4	Safety precautions	12
7	Acoustic emission examination equipment	12
8	Acoustic emission examination calibration and equipment verification	14
8.1	Calibration	14
8.2	Equipment verification	14
9	Overall procedure	14
10	Real-time evaluation criteria	15
11	AT test report	16
12	Follow-up ultrasonic examination	17
Annex A (normative) Ultrasonic examination (UT) follow-up to acoustic emission examination (AT)		18
Annex B (normative) AT equipment specifications		23
Annex C (normative) Example instrument settings, examination methods and rejection criteria for MAE		25
Annex D (informative) Alternative method for source location		28
Annex E (informative) Distance amplitude correction procedures		30
Bibliography		33