



INTERNATIONAL STANDARD ISO 4705:1983 TECHNICAL CORRIGENDUM 1

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Refillable seamless steel gas cylinders

TECHNICAL CORRIGENDUM 1

Bouteilles à gaz sans soudure en acier destinées à être rechargées

RECTIFICATIF TECHNIQUE 1

Technical corrigendum 1 to International Standard ISO 4705:1983 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 3, *Cylinder design*.

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The following text is to be added to **Scope and field of application**:

WARNING NOTE — ISO 4705 Specification for seamless steel gas cylinders, published in 1983, represented world-wide experience and technology over the preceding period of drafting, that is the 1970s and earlier. During this period it was the practice to use quenched and tempered low alloy steels, typically 34 CrMo 4 (also referred to by its AISI reference as 4130 X) at tensile strengths up to around 1 030 MPa to 1 050 MPa, and occasionally up to 1 100 MPa. The controls and testing requirements of ISO 4705 were designed to accommodate this situation.

From the late 1980s onwards the compressed gas industry has seen the growing introduction of a new generation, high strength, high pressure cylinder operating at tensile strengths in excess of 1 100 MPa. ISO technical experts have been at the forefront of this development and are currently drafting a new ISO standard for such cylinders. In the course of this work it has been recognised as very important from a safety aspect that additional requirements on materials and testing, over and above those included in ISO 4705, are necessary for cylinders with tensile strengths exceeding 1 100 MPa.

Therefore, it is strongly recommended, in the light of present knowledge, that ISO 4705 is not used for cylinders with tensile strengths in excess of 1 100 MPa.

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Descriptors: gas cylinders, steel products, chemical composition, heat treatment, design, manufacturing, tests, mechanical tests, test specimens, bend tests, tension tests, impact tests, hydraulic tests, burst tests, pressure tests, hardness tests, gas permeability tests, certification, marking.

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