DIN EN ISO 11114-1:2017-05 (E)

Gas cylinders - Compatibility of cylinder and valve material s with gas contents - Part 1: Metallic materials (ISO 11114-1:2012 + Amd.1:2017) (includes Amendment A1:2017)

Contents

Page

Foreword to EN ISO 11114-1:2012 3

〉A1〈 European foreword to Amendment 1 〉A1〈 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 6

4 Materials 7
4.1 General 7
4.2 Cylinder materials 8
4.3 Valve materials 8

5 Compatibility criteria 9
5.1 General 9
5.2 Corrosion 9
5.3 Hydrogen embrittlement phenomenon 10
5.4 Generation of dangerous products 10
5.5 Violent reactions (e.g. ignition) 10
5.6 Stress corrosion cracking 11

6 Material compatibility 11
6.1 Table of compatibility for single gases (see Table 1) 11
6.2 Compatibility for gas mixtures 11
6.3 Using Table 1 11

Annex A (informative) Gas/materials NQSAB compatibility code 41
A.1 General 41
A.2 Material classes and compatibility identification 41
A.3 NQSAB code 42
A.4 Groups of gases 51

Bibliography 57