DIN EN ISO 11114-1:2012-07 (E)

Gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 1: Metallic m aterials (ISO 11114-1:2012)

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Materials 6
4.1 General 6
4.2 Cylinder materials 7
4.3 Valve materials 7

5 Compatibility criteria 7
5.1 General 7
5.2 Corrosion 8
5.3 Hydrogen embrittlement phenomenon 9
5.4 Generation of dangerous products 9
5.5 Violent reactions (e.g. ignition) 9
5.6 Stress corrosion cracking 9

6 Material compatibility 9
6.1 Table of compatibility for single gases (see Table 1) 9
6.2 Compatibility for gas mixtures 9
6.3 Using Table 1 10

Annex A (informative) Gas/materials NQSAB compatibility code 37

Bibliography 51