DIN EN 14986:2007-05 (E)

Design of fans working in potentially explosive atmospheres

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Requirements for all fans 6

5 Additional requirements for category 2 fans 16

6 Category 1 fans for use with gas as the conveyed fluid 17

7 Information for use 18

Annex A (normative) Additional requirements for category 1 G fans 21

Annex B (informative) Checklist for verification of the safety requirements and/or protective measures24 Annex C (informative) Examples of types of fans showing ignition minimising features 26

Annex D (normative) List of significant hazards 31

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 94/9/EC 34

Bibliography 35

Figures Figure A.1 -- Test apparatus for the flame transmission test 22

Figure C.1 -- Axial fan with fixed pitch blades and ducted inlet for categories 2 and 3 26

Figure C.2 -- Axial fan with variable pitch in-motion ducted inlet-box arrangement 27

Figure C.3 -- Mixed flow belt driven ducted fan 28

Figure C.4 -- Centrifugal fan - ducted arrangement 29

Figure C.5 -- Typical fan drive belt guard details 30

Tables Page Table 1 -- Permissible material pairings for gas explosion groups IIA and IIB 11

Table 2 -- Permissible material pairings for gas mixtures containing hydrogen 13

Table 3 -- Minimum thickness of linings 13

Table D.1 -- Identification of hazards and required countermeasures 31