DIN EN 13001-2:2014-12 (E)

Crane safety - General design - Part 2: Load actions

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms, definitions, symbols and abbreviations 5
3.1 Terms and definitions 5
3.2 Symbols and abbreviations 6

4 Safety requirements and/or measures 10
4.1 General 10
4.2 Loads 10
4.2.1 General 10
4.2.2 Regular loads 11
4.2.3 Occasional loads 18
4.2.4 Exceptional loads 25
4.3 Load combinations 33
4.3.1 General 33
4.3.2 High risk situations 34
4.3.3 Favourable and unfavourable masses 34
4.3.4 Partial safety factors for the mass of the crane 35
4.3.5 Partial safety factors to be applied to loads determined by displacements 36
4.3.6 Load combinations for the proof of competence 37
4.3.7 The proof of crane stability 40

Annex A (informative) Aerodynamic coefficients 42

A.1 General 42
A.2 Individual members 45
A.3 Plane and spatial lattice structure members 51
A.4 Structural members in multiple arrangement 53

Annex B (informative) Illustration of the types of hoist drives 55

Annex C (informative) Calculation of load factor for indirect lifting force limiter 58

Annex D (informative) Guidance on selection of the risk coefficient 60

Annex E (informative) Selection of a suitable set of crane standards for a given application 62

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC 63

Bibliography 64