ISO 10252:2020-02 (E)

Bases for design of structures - Accidental actions

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Symbols and abbreviated terms 3
4.1 General 3
4.2 Latin upper case letters 3
4.3 Latin lower case letters 4
4.4 Greek letters 4
4.5 Subscripts 5

5 General principles and conceptual approach 5
5.1 Types of accidental actions 5
5.2 Conceptual approach 6
5.2.1 Target reliability level 6
5.2.2 Strategies 6
5.2.3 Identified and unidentified actions 6
5.2.4 Types of analysis 6
5.2.5 Classification of structures based on consequences 7
5.2.6 Appropriate methods of analyses based on consequences 7
5.3 Modelling of accidental actions 8
5.3.1 Identified actions 8
5.3.2 Unidentified accidental actions 9
5.3.3 Representative values for accidental actions 9
5.4 Structural analysis involving accidental actions 10

6 Impact action 10
6.1 General 10
6.1.1 Sources of impact loading 10
6.1.2 Nature of the impact 11
6.1.3 Structural analysis and simplifications 11
6.2 Impact from specific causes 14
6.2.1 Impact from road vehicles 14
6.2.2 Impact from derailed trains 14
6.2.3 Impact from ships 14
6.2.4 Impact from aircraft 15
6.2.5 Impact from helicopters 15
6.2.6 Impact from forklift trucks 15
6.2.7 Other types of impact 15

7 Explosion 16
7.1 General 16
7.1.1 Explosion types to be considered 16
7.1.2 Nature and schematisation of explosion loading 16
7.1.3 Structural analysis and simplifications 17
7.2 Explosions of various types 18

7.2.1 Interior explosions 18
7.2.2 Exterior explosion 18
7.2.3 Explosions in tunnels 18
7.2.4 Dust explosions 18
7.2.5 High energy explosions 19

8 Unidentifiedactions 19
8.1 General 19
8.2 Notional removal of or damage to elements 19
8.3 Notional loads on key elements 20
8.4 Risk-based design for unidentified accidental actions 20

Annex A (informative) Guidance for detailed impact analysis 21

Annex B (informative) Guidance on detailed explosion analysis 58

Annex C (informative) Design for accidental actions 86

Bibliography 103