

DIN EN ISO 19353:2016-07 (E)

Safety of machinery - Fire prevention and fire protection (ISO 19353:2015)

Contents

Page

European foreword	3
Foreword	4
Introduction	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Fire hazards	11
4.1 General	11
4.2 Combustible materials	12
4.3 Oxidizers	12
4.4 Ignition sources	12
5 Strategy for fire risk assessment and risk reduction	12
5.1 General	12
5.2 Determination of the limits of the machinery	13
5.3 Identification of fire hazards	13
5.4 Risk estimation	16
5.5 Risk evaluation	17
5.6 Risk reduction	18
5.6.1 General	18
5.6.2 Inherently safe design measures	18
5.6.3 Safeguarding	19
5.6.4 Complementary protective measures	19
6 Procedure for the selection of complementary protective measures	20
6.1 General	20
6.1.1 Use of the procedure	20
6.1.2 Determination of the residual risk level	20
6.1.3 Specification of requirements for the choice of fire detection and fire suppression system	21
6.1.4 Specification of safety and performance requirements	21
6.1.5 Selection of system parts and suitable fire-extinguishing agent	21
6.1.6 Decision on the need for further complementary protective measures	21
6.1.7 Validation	21
6.2 Selection of the fire prevention and protection system in relation to the expected risk level	21
6.2.1 General	21
6.2.2 Injury to persons	21
6.2.3 Safety considerations	22
6.2.4 Selection of system parts	22
6.2.5 Selection of fire-extinguishing agent	22
6.2.6 Validation	23
7 Information for use	23
Annex A (informative) Examples of ignition sources	25
Annex B (informative) Examples of machines and their typical fire-related hazards	27
Annex C (informative) Example for the design of a fire suppression system integrated in machinery	28
Annex D (informative) Example for the risk assessment and risk reduction of a machining centre for the machining of metallic materials	29
Annex E (informative) Fire risk reduction measures	40
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	41
Bibliography	42