DIN EN 12012-4:2010-01 (E)

Plastics and rubber machines - Size reduction machines - Part 4: Safety requirements for agglomerators (includes Amendment A1:200 8)

Contents

Page

Foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 7

4 List of significant hazards 8
4.1 Mechanical hazards 8
4.2 Thermal hazards 8
4.3 Noise hazards 8
4.4 Hazards generated by dust, fumes and gases 8
4.5 Hazards due to electrical energy 9
4.6 Hazards due to unexpected start-up 9
4.7 Falls from height 9

5 Safety requirements and/or protective measures 9
5.1 General 9
5.2 Mechanical hazards 9
5.2.1 Access through openings in the agglomerator chamber 9
5.2.2 Feed material that is not pre-cut 9
5.2.3 Ejection of parts or materials from the agglomerator chamber 10
5.2.4 Strength 10
5.3 Thermal hazards 10
5.4 Noise hazards 10
5.4.1 Noise reduction at source by design 10
5.4.2 Noise reduction by protective measures 11
5.4.3 Information connected with noise hazards 11
5.5 Hazards generated by dust, fumes and gases 11
5.6 Hazards due to electrical energy 11
5.6.1 Electrical equipment 11
5.6.2 Accumulation of electrostatic charges 12
5.7 Unexpected start-up 12
5.8 Falls from height 12

6 Verification of conformity with the safety requirements and/or protective measures 13

7 Information for use 14
7.1 Instruction manual 14
7.2 Marking 15

Annex A (normative) Noise test code 16

A.1 Scope 16
A.2 Determination of sound power levels 16
A.2.1 Basic standards 16
A.2.2 Measurement uncertainty 16
A.3 Determination of emission sound pressure level at the workstation(s) 17

A.3.1 Basic standards 17
A.3.2 Measurement uncertainty 17
A.4 Installation and mounting conditions for the noise measurement 17
A.5 Operating conditions 17
A.6 Information to be recorded and reported 18
A.6.1 General 18
A.6.2 General agglomerator data 18
A.6.3 Agglomerator chamber data 18
A.6.4 Standards 18
A.6.5 Noise data 18
A.6.6 Specified test parameters 19
A.6.7 Installation and operating conditions 19
A.7 Declaration and verification of noise emission values 19

Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC 20

Annex ZB (informative) !!Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC""" 21

Bibliography 22