

DIN EN 1417:2015-03 (E)

Plastics and rubber machines - Two-roll mills - Safety requirements

| Contents | | Page |
|---|--|-------------|
| Foreword | | 4 |
| Introduction | | 5 |
| 1 Scope | | 6 |
| 2 Normative references | | 6 |
| 3 Terms and definitions | | 7 |
| 4 List of significant hazards | | 10 |
| 5 Safety requirements and/or protective measures | | 13 |
| 5.1 General | | 13 |
| 5.1.1 Basic requirements | | 13 |
| 5.1.2 Emergency stop | | 14 |
| 5.2 Mechanical hazards | | 14 |
| 5.2.1 Requirements applicable to all types of two-roll mills | | 14 |
| 5.2.2 Specific requirements applicable to large two-roll mills (D 400 mm) | | 15 |
| 5.2.3 Specific requirements applicable to small two-roll mills (D 200 mm) | | 23 |
| 5.2.4 Specific requirements applicable to intermediate two-roll mills (200 mm < D < 400 mm) ... | | 26 |
| 5.3 Electrical hazards and hazards due to electromagnetic interference | | 26 |
| 5.4 Thermal hazards | | 26 |
| 5.5 Hazards caused by gases, dusts or vapours hazardous to health | | 27 |
| 5.6 Hazards generated by neglecting ergonomic principles | | 27 |
| 5.7 Hazards generated by noise | | 27 |
| 5.7.1 Main noise sources | | 27 |
| 5.7.2 Noise reduction at source by design | | 27 |
| 5.7.3 Noise reduction by devices | | 27 |
| 5.7.4 Information connected with noise hazards | | 27 |
| 6 Verification of the safety requirements and/or protective measures | | 28 |
| 7 Information for use | | 29 |
| 7.1 General | | 29 |
| 7.2 Instruction handbook | | 29 |
| 7.2.1 General | | 29 |
| 7.2.2 Two-roll mills equipped with a trip bar as in 5.2.2.1 | | 30 |
| 7.2.3 Two-roll mills equipped with light curtains as in 5.2.3.3.3 | | 30 |
| 7.2.4 Noise emission | | 30 |
| 7.3 Marking | | 31 |
| 7.3.1 General | | 31 |
| 7.3.2 Two-roll mills equipped with a trip bar as in 5.2.2.1 | | 31 |
| Annex A (normative) Positioning of the trip devices specified in 5.2.3.3.2 and 5.2.4 | | 32 |
| Annex B (normative) Noise test code | | 35 |
| B.1 Introduction | | 35 |
| B.2 Determination of the A-weighted emission sound pressure level at the workstation | | 35 |
| B.2.1 Basic standards and measurement procedure | | 35 |
| B.2.2 Measurement uncertainty | | 36 |

| | | |
|-------------------------------|--|-----------|
| B.3 | Determination of the A-weighted sound power level | 36 |
| B.3.1 | Basic standards and measurement procedure | 36 |
| B.3.2 | Measurement uncertainty | 36 |
| B.4 | Mounting and operating conditions | 37 |
| B.5 | Information to be recorded and reported | 37 |
| B.5.1 | General | 37 |
| B.5.2 | General data | 37 |
| B.5.3 | Mounting and operating conditions | 37 |
| B.5.4 | Standards | 38 |
| B.5.5 | Noise data | 38 |
| B.6 | Declaration and verification of noise emission values | 38 |
| | | |
| Annex ZA (informative) | Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC | 39 |
| | | |
| Bibliography | | 40 |