ISO 10821:2005-07 (E)

Industrial sewing machines - Safety requirements for sewing machines, units and systems

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Terms and definitions 3

4 Significant hazards 5
4.1 General 5
4.2 Mechanics 5
4.3 Electricity/Control 6
4.4 Thermal hazards 6
4.5 Noise 6
4.6 Radiation 6
4.7 Ergonomics 7
4.8 Special hazards 7
4.9 Danger zones 8

5 Safety measures and requirements 15
5.1 General principles 15
5.2 Requirements for all types of industrial sewing machines 15
5.2.1 Mechanical equipment 15
5.2.2 Electrical equipment/control/control gear 18
5.2.3 Thermal requirements 20
5.2.4 Noise 20
5.2.5 Radiation 21
5.2.6 Ergonomics 22
5.3 Specific requirements for particular types of industrial sewing machines 22
5.3.1 Button, buttonhole and programmable pattern sewing machines, bartacking machines 22
5.3.2 Quilting machines 23
5.3.3 Bag closing sewing machines in the packaging industry 23
5.3.4 Embroidery machines 23
5.3.5 Glove sewing machines 24
5.3.6 Sewing machines for shoe repair 24
5.3.7 Blindstitch sewing machines 24
5.3.8 Linking machines 24

6 Verification of safety requirements or measures 24

7 Information on use and maintenance 26
7.1 General 26
7.2 Marking 26
7.3 Warning of residual risk 27
7.4 Instructions 27
7.4.1 General information 27
7.4.2 Particular information 28

Annex A (normative) Finger deflecting device 29

Annex B (normative) Warning of residual risk 32

Annex C (normative) Noise test code 35

Annex D (normative) Needle breakage protection shield 50

Annex E (normative) Belt guard at sewing machine drive (motor) 51

Annex F (informative) Safe fastening of belt pulley at drive shaft of clutch or positioning drives 53

Annex G (informative) Safe mounting of adaptable positioner/synchronizer at sewing machine shaft 60

Annex H (informative) Safe mounting of sewing machine drives 61

Annex I (informative) Noise declaration examples 66

Annex J (informative) Examples of noise reduction measures at the design stage 69

Annex K (normative) Written warning -- Languages 70

Annex L (informative) Ergonomic principles 74

Bibliography 75