

ISO 11553-1:2020-04 (E)

Safety of machinery - Laser processing machines - Part 1: Laser safety requirements

| Contents | Page |
|--|-------------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 2 |
| 4 Hazards generated by laser radiation | 5 |
| 4.1 General..... | 5 |
| 4.2 Laser radiation hazards/sources of laser radiation emission..... | 6 |
| 4.3 Laser radiation hazards induced by external effects (interferences)..... | 7 |
| 4.4 Characteristics of laser radiation..... | 7 |
| 5 Safety requirements and measures | 8 |
| 5.1 General requirements..... | 8 |
| 5.2 Risk assessment with regard to laser radiation hazards..... | 8 |
| 5.3 Implementation of risk reduction measures..... | 9 |
| 5.3.1 General..... | 9 |
| 5.3.2 Safety measures against laser radiation hazards in dependence of the locations.. | 9 |
| 5.3.3 Safety measures against laser radiation hazards..... | 10 |
| 5.3.4 Engineering control measures..... | 13 |
| 6 Verification of the safety requirements and risk reduction measures | 14 |
| 7 Information for use | 15 |
| 8 Labelling | 16 |
| Annex A (informative) Potential hazards | 18 |
| Bibliography | 21 |