

# DIN EN ISO 11553-1:2021-01 (E)

## Safety of machinery - Laser processing machines - Part 1: Laser safety requirements (ISO 11553-1:2020)

---

<b>Contents</b>	<b>Page</b>
European foreword .....	3
<b>[A1]</b> European foreword to Amendment <b>[A1]</b> .....	4
<b>[A1]</b> Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered <b>[A1]</b> .....	5
Foreword .....	6
Introduction .....	7
<b>1 Scope</b> .....	<b>8</b>
<b>2 Normative references</b> .....	<b>8</b>
<b>3 Terms and definitions</b> .....	<b>8</b>
<b>4 Hazards generated by laser radiation</b> .....	<b>12</b>
4.1 General .....	12
4.2 Laser radiation hazards/sources of laser radiation emission .....	13
4.3 Laser radiation hazards induced by external effects (interferences) .....	14
4.4 Characteristics of laser radiation .....	14
<b>5 Safety requirements and measures</b> .....	<b>15</b>
5.1 General requirements .....	15
5.2 Risk assessment with regard to laser radiation hazards .....	15
5.3 Implementation of risk reduction measures .....	16
5.3.1 General .....	16
5.3.2 Safety measures against laser radiation hazards in dependence of the locations .....	16
5.3.3 Safety measures against laser radiation hazards .....	17
5.3.4 Engineering control measures .....	20
<b>6 Verification of the safety requirements and risk reduction measures</b> .....	<b>21</b>
<b>7 Information for use</b> .....	<b>22</b>
<b>8 Labelling</b> .....	<b>23</b>
<b>Annex A (informative) Potential hazards</b> .....	<b>25</b>
<b>Bibliography</b> .....	<b>28</b>