

# DIN EN 16116-2:2014-01 (E)

## Railway applications - Design requirements for steps, handrails and associated access for staff - Part 2: Freight wagons

---

<b>Contents</b>		<b>Page</b>
Foreword .....		3
Introduction .....		4
<b>1</b>	<b>Scope .....</b>	<b>5</b>
<b>2</b>	<b>Normative references .....</b>	<b>5</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>5</b>
<b>4</b>	<b>Steps and handrails .....</b>	<b>6</b>
4.1	General requirements .....	6
4.2	Steps .....	6
4.2.1	General .....	6
4.2.2	Shunter's step .....	7
4.2.3	Other steps .....	10
4.3	Handrails .....	10
4.3.1	General .....	10
4.3.2	Shunter handrail .....	10
4.3.3	Other handrails .....	11
<b>5</b>	<b>Shunter's stand .....</b>	<b>12</b>
5.1	General .....	12
5.2	Shunter's stand at wagons with end wall boards .....	14
5.3	Shunter's stand with tilting handrail .....	15
5.4	Shunter's stand for special case flat wagons with fixed handrails .....	16
<b>6</b>	<b>Reserved spaces .....</b>	<b>16</b>
6.1	General .....	16
6.2	Space for shunting staff operation .....	16
6.2.1	Space for shunter during coupling (Berne Rectangle) .....	16
6.2.2	Space for the shunter during temporary travel .....	17
6.3	Clearances for tail light and draw hook .....	19
6.3.1	Position, space envelope and clearance for the tail light .....	19
6.3.2	Clearance for draw hook .....	21
<b>Annex A (normative)</b>	<b>Calculation of space for shunter (Berne Rectangle) in curves when using screw couplings .....</b>	<b>22</b>
<b>Annex B (informative)</b>	<b>Gangways and other access solutions .....</b>	<b>24</b>
B.1	General .....	24
B.2	Steps for gangways and platforms .....	24
B.3	Steps for access to the wagon floor .....	26
B.4	Steps at wagon end .....	26
<b>Annex ZA (informative)</b>	<b>Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC .....</b>	<b>29</b>