

# DIN EN 15807:2021-05 (E)

## Railway applications - Pneumatic half couplings

---

<b>Contents</b>		<b>Page</b>
European foreword .....		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>6</b>
<b>4</b>	<b>Symbols and abbreviated terms .....</b>	<b>7</b>
<b>5</b>	<b>Design and manufacture .....</b>	<b>7</b>
<b>5.1</b>	<b>Requirements .....</b>	<b>7</b>
<b>5.1.1</b>	<b>Brake pipe .....</b>	<b>7</b>
<b>5.1.2</b>	<b>Main reservoir pipe .....</b>	<b>7</b>
<b>5.1.3</b>	<b>Flexible hose .....</b>	<b>7</b>
<b>5.1.4</b>	<b>Sealing washers .....</b>	<b>10</b>
<b>5.1.5</b>	<b>Coupling heads .....</b>	<b>12</b>
<b>5.1.6</b>	<b>Nipple .....</b>	<b>12</b>
<b>5.1.7</b>	<b>Hose clip .....</b>	<b>12</b>
<b>5.2</b>	<b>Compressed air quality .....</b>	<b>18</b>
<b>5.3</b>	<b>Ambient temperature .....</b>	<b>19</b>
<b>5.4</b>	<b>Environmental corrosion conditions .....</b>	<b>19</b>
<b>5.5</b>	<b>Leakage .....</b>	<b>19</b>
<b>5.6</b>	<b>Mechanical strength of assembly .....</b>	<b>19</b>
<b>5.7</b>	<b>External appearance .....</b>	<b>19</b>
<b>5.8</b>	<b>Fire behaviour .....</b>	<b>19</b>
<b>6</b>	<b>Type test methods .....</b>	<b>19</b>
<b>6.1</b>	<b>Sampling for type test .....</b>	<b>19</b>
<b>6.2</b>	<b>Test requirements .....</b>	<b>19</b>
<b>6.3</b>	<b>Test procedure flexible hose .....</b>	<b>20</b>
<b>6.3.1</b>	<b>Nature and proportion of the tests and inspections .....</b>	<b>20</b>
<b>6.3.2</b>	<b>Preparation of the test pieces .....</b>	<b>21</b>
<b>6.3.3</b>	<b>Bend test .....</b>	<b>22</b>
<b>6.3.4</b>	<b>Pressure test .....</b>	<b>23</b>
<b>6.3.5</b>	<b>Bursting test .....</b>	<b>23</b>
<b>6.3.6</b>	<b>Reinforcement adhesion test .....</b>	<b>23</b>
<b>6.3.7</b>	<b>Test of dynamic fatigue through repeated tensile loadings of the tube and cover .....</b>	<b>23</b>
<b>6.3.8</b>	<b>Test for residual deformation through static tensile loading after ageing .....</b>	<b>23</b>
<b>6.3.9</b>	<b>Impact test .....</b>	<b>24</b>
<b>6.3.10</b>	<b>Test for Resistance to ozone cracking of the tube and cover under static conditions .....</b>	<b>26</b>
<b>6.3.11</b>	<b>Deflection at low temperature .....</b>	<b>26</b>
<b>6.3.12</b>	<b>Test for fitting of connections on hoses .....</b>	<b>27</b>
<b>6.3.13</b>	<b>Uncoupling test .....</b>	<b>29</b>
<b>6.3.14</b>	<b>Flare test .....</b>	<b>30</b>
<b>6.3.15</b>	<b>Hardness test .....</b>	<b>31</b>
<b>6.3.16</b>	<b>Kink resistance test .....</b>	<b>31</b>
<b>6.3.17</b>	<b>Influence of oil .....</b>	<b>32</b>
<b>6.4</b>	<b>Test procedure sealing washers .....</b>	<b>32</b>
<b>6.4.1</b>	<b>Nature and proportion of the tests and inspections .....</b>	<b>32</b>
<b>6.4.2</b>	<b>Preparation of the test pieces .....</b>	<b>33</b>
<b>6.4.3</b>	<b>Hardness test .....</b>	<b>33</b>

6.4.4	Tensile strength test .....	33
6.4.5	Deformation tests .....	33
6.4.6	Water tightness test .....	35
6.4.7	Influence of oil .....	36
6.5	Test procedure pneumatic half coupling .....	36
6.5.1	Principle .....	36
6.5.2	Check of physical and geometrical characteristics .....	37
6.5.3	Hydraulic test of the assembly at given pressure .....	37
6.5.4	Leakage .....	37
6.5.5	Corrosion test .....	39
6.5.6	Pull test .....	39
6.6	Documentation .....	40
7	Routine test .....	40
8	In-service assessment .....	41
9	Identification and marking .....	41
Annex A(informative) MRP pneumatic half coupling for use in the United Kingdom .....		42
A.1	Main reservoir pipe hose incorporating pneumatic half coupling with sealing star valve ..	42
A.2	MRP rescue hoses .....	44
A.3	MRP rescue coupling head .....	44
A.4	MRP rescue coupling head identification .....	44
Annex B(informative) In-service trial .....		45
B.1	General .....	45
B.2	Test set-up and sampling .....	45
B.3	Procedure .....	45
Annex ZA(informative) Relationship between this European Standard and the essential requirements of Directive 2016/797/EU aimed to be covered .....		46
Bibliography .....		48