

# DIN EN 15734-2:2022-04 (E)

## Railway applications - Braking systems of high speed trains - Part 2: Test methods (includes Amendment A1:2021)

---

<b>Contents</b>		<b>Page</b>
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, units and abbreviations .....</b>	<b>6</b>
<b>5</b>	<b>Requirements .....</b>	<b>7</b>
5.1	General .....	7
5.2	Test procedure .....	8
5.2.1	General .....	8
5.2.2	Identification of the parts to be tested .....	8
5.2.3	General conditions for the tests .....	8
5.2.4	Specification of the test equipment .....	8
5.2.5	Test program .....	9
5.2.6	Reports .....	9
5.2.7	Documentation .....	10
5.3	Methodology .....	10
5.3.1	Measurement of the application time at the brake cylinder .....	10
5.3.2	Measurement of the release time at the brake cylinder .....	10
5.3.3	Measurement of the pressure drop time in the brake pipe or the equalising reservoir of the driver's brake valve .....	10
5.3.4	Measurement of the pressure rise time in the brake pipe or the equalising reservoir of the driver brake valve .....	10
5.3.5	Measurement of the dead time of the WSP dump valves .....	11
5.3.6	Measurement of the exhaust time of the WSP dump valves .....	11
5.3.7	Measurement of the fill time of the WSP dump valves .....	11
5.3.8	Measurement of air tightness .....	11
5.3.9	Measurement of lowering time of the MTB .....	11
5.3.10	Measurement of rising time of the MTB .....	11
5.3.11	Measurement of application and release times of EP assist brake .....	11
5.3.12	Measurement of the contribution of the different brakes .....	11
5.3.13	Evaluation of the longitudinal brake force applied to the track by Magnetic Track Brake or Eddy Current Brake .....	12
<b>6</b>	<b>Static tests programme .....</b>	<b>13</b>
6.1	Test on vehicle (Level 1) .....	13
6.2	Test on Single Unit (Level 2) .....	30
6.3	Test on Multiple Unit maximum consist (Level 3) .....	39
<b>7</b>	<b>Dynamic tests programme .....</b>	<b>44</b>
7.1	General for dynamic tests .....	44
7.1.1	Preconditions .....	44
7.1.2	Test conditions .....	44
7.1.3	Measured variables to be recorded .....	45
7.1.4	Verification of deceleration and braking distance .....	46
7.1.5	Definition of braked weight .....	46
7.2	Test program .....	47

<b>7.2.1</b>	<b>Test on Single Unit (Level 2)</b> .....	<b>47</b>
<b>7.2.2</b>	<b>Test on Multiple Unit maximum consist (Level 3)</b> .....	<b>59</b>
	<b>Annex A (normative) Typical format for a test report for type or routine test</b> .....	<b>65</b>
	<b>Annex B (informative) Principle of the automatic function test</b> .....	<b>66</b>
<b>B.1</b>	<b>Purpose of the automatic function</b> .....	<b>66</b>
<b>B.2</b>	<b>Adjustment of the driver's brake valve feed choke to comply with the automatic function</b> .....	<b>66</b>
	<b>Bibliography</b> .....	<b>68</b>