

Based on decree

-

Replaces/amends

Technical specifications for 54E1 and 60E1 rails (4483/068/2013)

Targeted at

-

Period of validity

Key words

Railway, Technical specification, rail

Technical specifications for 54E1 and 60E1 rails

The Finnish Transport Agency has approved these Technical specifications for 54E1 and 60E1 rails.

These Technical specifications shall be followed in purchasing new 54E1 and 60E1 rails for the Railway Network Administrated by the Finnish Transport Agency. These Technical specifications are valid from 27 June 2018.

Technical Director

Markku Nummelin

Senior Officer

Henri Seppälä

Further information
Henri Seppälä
Finnish Transport Agency
Mobile +358505160649

27 June 2018

1 Scope

These technical specifications are valid for new 54E1 and 60E1 rails specified in the European standard EN 13674-1:2011 + A1:2017 /1/.

Requirements for 54E1 and 60E1 rails used for manufacturing 54E1 and 60E1 railway turnouts are specified in technical specifications for 54E1 and 60E1 railway turnouts /2/.

2 General requirements

Rails shall be manufactured, inspected and tested in accordance with European standard EN 13674-1:2011 + A1:2017 /1/.

Rails shall be guaranteed for years ending in the end of the fifth calendar year following the year of manufacture in the accordance with the UIC leaflet 860-R /3/.

3 Length of rails

The purchaser shall specify the length of rails

The minimum length of 54E1 rails shall be 30 meters.

The minimum length of 60E1 rails shall be 50 meters.

The length of rails delivered directly to the installation site is usually at least 80 meters.

NOTE: Shorter rails can be purchase for railway maintenance and manufacturing railway equipment such as rail stops, etc.

4 Steel grades

The steel grade is R260 /1/ if not specified otherwise by the purchaser.

Other approved steel grades are R220 (only 54E1 rails purchased for railway maintenance), R350HT and R350LHT.

5 Dimension tolerances

Dimension tolerances shall be in accordance with the European standard EN 13674-1:2011 + A1:2017 /1/.

The profile class of rail shall by 'X'.

The straightness class of rails shall be 'A'.

27 June 2018

NOTE: The straightness class 'B' is accepted for 54E1 rails only purchased for maintenance.

6 Drilling

Rails shall be delivered as undrilled if not specified otherwise by the purchaser.

All drilled holes shall be deburred by chamfering to the depth of 1 mm/45°.

Dimensions and positions of drilled holes are specified in Table 1. All dimensions are millimeters.

Table 1. Dimensions and positions of drilled holes.

Rail profile	Diameter	Distance from the end of rail ¹		Distance from the base of rail
54E1	34 ± 0.5	65 ± 0.5	265 ± 0.5	70 ± 0.5
60E1	33 ± 0.5	65 ± 0.5	230 ± 0.5	76.25 ± 0.5

¹Only the innermost holes (the second column) are drilled if rails are purchased with drilled holes and if not specified otherwise by the purchaser.

7 Quality documents

The manufacturer shall deliver documents from acceptance tests to the purchaser with each lot.

The documents shall be delivered as printed (two sets) and in the Portable Document Format (PDF) file format.

The manufacturer shall store all quality documents minimum ten (10) years from the date of delivery.

8 Other requirements

The manufacturer shall deliver to the purchaser an EC declaration of conformity to guarantee the fulfillment of requirements for dimensions and hardness of the rail head. The dimensions of the railhead shall fulfill the requirements specified in the Commission decision 2008/217/EC /4/ and the hardness of the railhead shall fulfill the requirement specified in the Commission decision 2011/275/EU /5/.

The manufacturer shall have a quality management system accredited in accordance with the international standard ISO 9001 /6/ and an environmental management system accredited in accordance with the international standard ISO 14001 /7/.

List of references

1. EN 13674-1:2011+A1:2017, Railway applications. Track.Rail. Part1: Vignole railway rails 46 kg/m and above, December 2016.
2. Technical specification for 54E1 and 60E1 railway turnouts, the Finnish Transport Agency, 13 October 2014.
3. UIC leaflet 860-R, Technical specifications for the supply of rails, 9th edition, January 2008.
4. Commission decision concerning a technical specification for interoperability relating to the 'infrastructure' sub-system of the trans-European high-speed rail system (2008/217/EC).
5. Commission decision concerning a technical specification for interoperability relating to the 'infrastructure' subsystem of the trans-European convention rail system (2011/275/EU), 26 April 2011.
6. ISO 9001, Quality managements systems. Requirements, 2015
7. ISO 14001, Environmental management systems. Requirements with guidance for use, September 2015.

Tämä asiakirja on allekirjoitettu

Lista allekirjoittajista

Allekirjoittaja

Todennus