



STRUCTURES AND DEVICES OF ROAD ECONOMY

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ABSTRACT

The article describes the upper and lower parts of the railway device, their structure and types.

All elements of the railway (soil lift, superstructures and artificial structures) must ensure the safe and smooth movement of trains at the specified speed on this section in terms of strength, stability and condition. Road plan and profile. The railway should conform to the approved track plan and profile with respect to the radius of the curves, straight and curved junctions, slope steepness. The station, razd and overtaking points must be located on a horizontal surface: in some cases, they are allowed to be located on slopes not exceeding 0.0015, in difficult conditions, on slopes not exceeding 0.0025. In the necessary cases, to prevent wagons from leaving on other tracks by themselves, a protective barrier, a protective arrow, lowering spikes, or systems of arrow devices should be provided. Stations, interchanges, overtaking points, as well as some parks and towing roads should be located in the correct sections. In difficult conditions, it is allowed to place them on a curve with a radius of not less than 1500 m. In extremely difficult conditions, it is allowed to reduce the radius of curvature to 600 m, in mountain conditions to 500 m. The plan and profile of the main and station roads, as well as the subsidiary roads belonging to the railway, must undergo periodic equipment inspection. ylama profiles are checked at least once every three years, and on the rest of the station roads, the profile is checked at least once every 10 years. The longitudinal profile of the main roads in Peregons is checked during the period of basic and intermediate repair of roads.

The ground sheet is a complex of earthen structures created as a result of working on the surface of the earth. It is intended for placing railway superstructures, ensuring the stability of the road, and protecting it from the effects of atmospheric and underground water. . The top width of the soil rise should correspond to the upper structure of the road in the right sections. In existing lines, before their reconstruction, the width of the soil rise should not be less than 5.5 m in one-way lines, and 9.6 m in two-way lines; and on rocky and swampy lands, it should not be less than 5.0 m on one-way lines, and 9.1 m on two-way lines. The minimum width of the soil raised edge should be 0.4 m on each side of the road. In curved

sections with a radius of less than 2000 m, the soil uplift is expanded according to the established standards.

The sleepers are the basis for the rail and serve to receive the stress from the rail and transfer it to the ballast layer, to install the rails on the sleepers and to ensure the regular width of the road. Sleepers should be strong, elastic, cheap and have sufficient resistance to electric currents. Wood, reinforced concrete and metal are used as sleeper material. The length of the wooden sleepers is 2.75 m and the average weight is 70-80 kg, the service life is 15-18 years. The length of reinforced concrete sleepers is 2.70 m and the average weight is 265 kg, BF-70 type is 320 kg, the service life is 50 years on average.

The rail is designed to direct the wheels of the rolling stock, take the load from it and transfer it to the sleepers. In addition, rails are used as conductors of signal currents in self-blocking sections, and return currents in electric traction. Classification of rails. According to GOST R 51685_2000, railway rails are divided into:

- by type: P50, P65, P65K (for outer threads of curved road sections) and P75;
 - by quality categories: B - heat-strengthened rails of the highest quality, T₁ and T₂ - heat-strengthened rails of the first and second quality categories, N - non-heat-strengthened rails;
 - with the presence of bolt holes with and without holes at both ends;
- Feather height m (on top) 10.5 11.2 11.2 13.5
Heel part width B 132 150 150 150
- according to the steel melting method: M - furnace steel, K - converter steel, E -

Dimension name	Dimensions by rail type, mm			
	P50	P65	65 K	P75
Rail height N	152	180	18	192
Neck height h	83	105	10	104
The width of the head is b	72	75	75	75
Head height	42	45		55,3
Neck thickness e	16	18	18	20
Vysota pera m (Thickness of Padoshva)	10,5	11,2	11,	13,5
The width of the heel is B	132	150	15	150

electric steel.

Rails are produced in a standard length of 25 m. In addition, shortened rails of 24.92 m and 24.84 m are prepared for laying on turning curves. In trackless roads and when laying arrow conductors, rails of the previous standard length of 12.50 m and shortened (12.46, 12.42 and 12.38 m) are used as correcting rails. Rail decays:

Side clearance - 15mm for R-65, 13mm for R-50 on main roads.

18mm for R-65, 16mm for R-50 on receiving-dispatching roads.

Clearance from the top - 13mm.

On straight sections and on curves with a radius of 350 m and more, the width of the iron tracks measured at the inner borders of the iron track heads is 1520 mm. On steeper curves, the width of the tracks should be as follows:

350 m and more - 1520 mm

In a radius from 349 to 300 m - 1530 mm

for example, in reinforced concrete sleepers - 1520 mm

At a radius of 299 m and less - 1535 mm.

The nominal width of railway tracks is allowed to be 1524 mm on the sections of the railway lines and on the straight track and curved section roads with a radius greater than 650 m of the roads where the track-sleeper bars have not been comprehensively replaced. At the same time, on steeper curves, the width of iron tracks is accepted as follows:

in the radius from 650 to 450 m - 1530 mm

in the radius from 449 to 350 m - 1535 mm

In the radius of 349 m and smaller - 1540 mm.

The width of the iron tracks is not allowed to be less than 1512 mm and greater than 1548 mm.

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