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## **A New Way of Transporting Cars by Rail**

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There are issues of transporting cars by rail. Transportation of cars is carried out by both automobile and railway transportation. In railway transport, cars are transported by means of specialized car-cars.

Car-wagons are special purpose freight cars for transporting cars, trailers, minibuses and trolleybuses. They represent a covered car or a platform, with two tiers to increase the capacity. They have a relatively large mass at low carrying capacity.

There are different types of car-car wagons:

- covered wagons for transporting cars;
- car-grids for transporting cars;
- vehicle wagons for transporting cars (platforms have a significant drawback – they do not protect the cargo from external influence, including vandalism);
- special containers SP Stac-Pac (cars are loaded into special containers, which are then loaded onto the railway platform) [1].

In all such cars an average of 4-6 to 12-14 cars are placed. Loading is carried out in 10-15 linked cars, prepared for loading. The end doors are opened in them, and cars, entering from the flyover, consistently fill all the cars. For this, unimpeded travel of cars throughout the structure is ensured.

As an alternative way of transporting cars, a different way of transporting vehicles developed in the USA may be proposed. In 1971, General Motors Corporation, together with

the largest US railway company Union Pacific, created a new type of a car for transporting cars – Vert-A-Pack. The new car allows you to transport just 30 cars instead of 4-14, placed in a standard car or a platform. Cars in this way of transportation are placed vertically, in 2 rows, with the hoods down [2].

Vehicles have four removable lifting eyes mounted on the chassis. When the door of a car rises, the eyes cling to the hooks on the doors and the machine simply hangs on them under its own weight. When a car is fully loaded, and its doors are closed, the cars inside are side by side, the roof to the roof – there is almost no free space inside. The doors of a car are closed with a conventional forklift [3].

This method of transportation allows to increase the number of transported cars up to 30 pieces, which is 2-7 times more than the standard one. Increasing the useful volume of the used car, as a result, the cost of transportation of one car decreases, since if we load more cars into one car, not 4-14, but 30, then the cost of transporting one car will be divided into more cars (30) and thus transportation of one car will be less.

#### References:

1. Vert-A-Pac [Electronic resource]. – Mode of access: <http://chevyvega.wikia.com/wiki/Vert-A-Pac>. – Date of access: 16.03.2018.
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3. A look back in time: The GM/Southern Pacific Vert-A-Pac [Electronic resource]. – Mode of access: <https://www.railwayage.com/mechanical/freight-cars/a-look-back-in-time-the-gm-southern-pacific-vert-a-pac/>. – Date of access: 16.03.2018.