

## Presentation on the subject of railway transport



# Rail transport

- ▶ Rail transport - a type of ground transport, the transportation of goods and passengers on which is carried out by wheeled vehicles on rail tracks. Unlike automobile transport, where the vehicle simply moves along the prepared surface, railway transport is guided by the paths along which it goes. Railroad tracks usually consist of iron rails mounted on sleepers and ballast along which rolling stock, usually equipped with metal wheels, moves. However, another arrangement of the paths is possible, for example, a ballastless path, where the paths are attached to a cement base.

- ▶ Rolling stock of railway transport usually has less friction resistance than automobiles, and passenger and freight cars can be coupled into longer trains. The driving force in trains is locomotives that use electricity or produce their own power, usually diesel engines. Rail transport is a safe mode of transport compared to its other modes [1]. Rail transport is able to cope with large volumes of passenger and cargo flows and is energy efficient, but usually less flexible and more capital intensive than road transport with less traffic.
- ▶ The oldest railways, where a man himself pulled a load, belong to the VI century BC. e, and Periander, one of the seven sages, is considered its inventor. Railroads flourished after the invention of the steam engine in Great Britain, which became an important source of energy in the 18th and 19th centuries. Steam engines allowed the construction of railways over long distances, which, in turn, became one of the most important components industrial revolution. Railways reduced shipping costs as well as the loss of goods compared to water transport, where ships often sank. The movement of goods from canals that were used in Europe before the advent of railways created a “nationwide market”, where commodity prices were almost the same in different cities.

▶ In the 1880s, trains running on electricity appeared, and the first trams and subways appeared. Since the 1940s, non-electrified railways in most countries began to replace steam locomotives with diesel-electric ones, almost completing this process by the year 2000. In the 1960s, electrified high-speed railways appeared in Japan and some other countries. Some other ground guided transport systems, such as monorail and muggle, are not as widely used.