Lecture 13. Transport and cargo complexes for bulk and dry bulk cargoes of open storage.

Purpose of the lecture: draw up transportation plans, schedules of movement of vehicles, goods - transport, warehouse, and other documents;

Keywords: rolling stock, wagons, fractional, limit of humidity

Types of lectures : Lecture-reasech

13.1. Transport characteristics of bulk and bulk cargo open storage

13.2. Features of transportation and unloading of frozen bulk cargo.

13.1. Transport characteristics of bulk and bulk cargo open storage

Cargoes that do not require protection against atmospheric precipitation are transported in bulk and in bulk in open rolling stock, including in specialized open wagons (for example dump cars, hopper dispensers). Transportation of goods in specialized wagons, including those with a dead body, is permitted if there are unloading means at the consignees. When issuing transportation documents for the carriage of goods in bulk or in bulk in a railway bill of lading in the column "number of seats" the consignor shall indicate, respectively, "bulk" or "in bulk".

When choosing a rational method for their transportation and storage, such properties as density, angle of repose, coefficient of external friction or coefficient of friction against supporting surfaces, fractional (granulometric) composition of the material, moisture, hygroscopicity, freezing, caking, abrasiveness, spontaneous combustion, explosive hazard, tendency to arch formation, harmful to health, etc.

A special group consists of cargoes subject to freezing at low temperatures. They are transported in accordance with the rules established by railway transport.

13.2. Features of transportation and unloading of frozen bulk cargo.

Frozen cargoes include bulk cargoes that lose their usual flowability properties when outside air temperatures are below 0 ° C due to the freezing of cargo particles among themselves and their freezing to the floor and walls of the car body.

The rules for the carriage of goods by rail stipulate that prior to presenting goods subject to freezing for carriage, the consignor must take measures to reduce their moisture to safe limits regarding freezing, established by GOSTs, technical conditions for products.

For each bulk cargo, there is a lower limit of humidity, depending on the structure of the material, its chemical composition and other properties that determine the moisture capacity at which its particles do not freeze even at the lowest outdoor temperatures. This humidity is called safe.

Questions:

1. What are the physical and mechanical parameters of bulk and bulk cargo.

2. Give examples of freezing cargo.

3. Tell about the technology for processing bulk cargo in an open storage warehouse.