

TRANSPORT OF DANGEROUS GOODS

student Kosmovich K.A.

scientific supervisor – senior lecturer Ladutska N.F.

Belarusian National University of Technology

Minsk, Belarus

International transport of dangerous goods must be safe, innovative and efficient. The transport of dangerous goods by road is regulated to prevent accidents and damage to people and the environment as well as to facilitate their transport.

Dangerous goods are considered to be substances that can cause an explosion, fire and damage to a vehicle, people and animals during their transport. That is why the safety regulations must be followed precisely during the transport of dangerous goods, and the special marking and labelling of packages is required to indicate the hazard of freight. Not every lorry driver is allowed to transport dangerous goods, only the drivers with an ADR license after the training course where the drivers are instructed what to do in the case of an accident and goods damage. There are nine classes that help to identify the hazard of goods.

Class 1 "Explosives". This class includes solid or liquid substances that can cause a chemical reaction. So, every lorry driver must have a first aid kit and a fire extinguisher. Special rules for such vehicles operation and maintenance must be followed.

Class 2 "Gases". This class includes compressed and liquefied gases, and mixtures of gases with other vapours. These substances can be toxic and can react with oxygen. So, the lorry must be equipped with a special equipment, as well as appropriate license plates and identification marks. Non-flammable gas is transported in white or black cylinders. Toxic gases are transported in cylinders with the image of skull and crossbones.

Class 3 "Flammable liquids". This class includes acetone, benzene, gasoline, diesel fuel and others. There is a high risk for such liquids to ignite during transport because they need a much lower temperature to ignite than other substances. Two self-powered and orange-lit lanterns should be installed on the lorry. Information tables about the risk of ignition are placed vertically on the bumper and behind the lorry, without obscuring the license plate and lighting devices.

Class 4 "Flammable solids". This class includes self-reactive substances, as well as substances that react with water and produce flammable gases.

Class 5 "Oxidizing agents and organic peroxides". These substances react with other flammable materials, as a result it is difficult to extinguish them.

Classes 6-9 "Toxic and infectious substances", "Radioactive material", "Corrosives", "Miscellaneous dangerous goods". All of these goods must be handled, packed and labelled according to the special requirements to prevent devastating damage to human health and infrastructure [1].

All participants of a transport chain involved in the carriage of dangerous goods by road have a mutual responsibility and include a consignor, a carrier, a consignee, a driver, a loader, a packer, etc. The participants must take all necessary actions to reduce the risk of an incident involving dangerous goods.

The transport of dangerous goods by road is a process that requires special competence, attention and responsibility.

References

1. Пильгун, Т. В. Товароведение (Грузоведение) : учебно-методическое пособие / Т. В. Пильгун. – Минск : БНТУ, 2018. – 59 с.