

Prospects For The Use Of Polymeric Materials In Repairing Vehicles

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***Abstract:** As it is known that, it is difficult to imagine the design of modern vehicles without polymer materials. The use of these materials is a great way to reduce the cost of production and labor costs, as well as to reduce the design of vehicles, and increase reliability, reduce their mass. The widespread use of polymeric materials is due to the fact that they can directly replace precious metals and wood materials, often surpassing them.*

***Keywords:** polymer material, material waste, electrical insulator (dielectrics)*

The aim of the work: a) comprehensive analysis of the practicability of using polymers; b) study the composition and properties of polymers and products made from them; c) study the use of polymer material in the automotive industry and open up new prospects.

The importance of polymer materials in the improvement of automobile technology is immense and its prospects are growing day by day. This is explained by the unique properties of polymeric materials and the high technical and economic performance of products made from them. The question arises, with what properties do polymer materials differ from other materials?

First of all, polymeric materials are materials that combine unique chemical, physicochemical and physico-mechanical properties, but also differ from them in the ability to make a product with the necessary properties. It should be noted that the product made of polymer material has the ability to maintain its operational quality for a long time.

Another feature is that it can be used to make products of any shape and size (details, assemblies, etc.), as well as the technology of production of products from polymeric materials is convenient, labor and energy consumption is several times cheaper than metal.

The raw material of the polymer material is petrochemical products and the main organic synthesis. So the raw material reserves are unlimited!

These factors indicate that the technical and economic efficiency of the production and use of polymeric materials is extremely high

It should be noted the specificity associated with the use of polymeric materials in the automotive industry, which in some cases requires the transfer of economic efficiency from the production of the product to its use. The materials used in production are new and they are more expensive than traditional materials. Therefore, the replacement of used materials with new ones leads to an increase in the cost of the product. But the manufacture of products from new materials has a positive effect on its reliability, durability.

In the use of polymeric materials, however, it is possible to solve previously unresolved problems, that is, to find a solution by combining several complex properties that are necessary.

In view of the above, the topic of qualified graduate work consists of topical tasks and can be considered as a very promising direction for future automakers.

Unprecedented achievements are being made in the automotive industry in the modern era of machinery and technology. At the beginning of the last century, the earliest notions about the car appeared and were created later, and now the complexity of cars is a modern technical means and a unique experience for car owners. Lack of skills, the need for constant maintenance and repair of cars led to the emergence of a system called car maintenance or car service.

Car service has entered our daily life as a new term: daily service, 1,2-maintenance, seasonal maintenance, supply of fuel and spare parts, model

campsites on highways, car service stations and other types of maintenance includes work to be performed at the provider's outlets. Expenses for the period of operation (depreciation) of the car for all types of work covered by the car service, account for 87% of the total costs. The remaining 13% is spent on the production of a new car. In terms of labor costs, 1.5-3.5% of labor is spent on the production of a new car, while 96.5-98.5% of labor is spent on maintenance of the car during its service life.

In turn, the daily and annual mileage of the car depends on the natural climate and operating conditions at the cost of fuel and lubricants TCI and T service. It depends on the storage of the cars and many other factors.

The quality of fuel and lubricants used during the operation of the car has a sharp impact on the quality of performance, in general, the wear of parts, components, assemblies in the car, wear and tear. If we can bring the quality of fuel and lubricants to the level of normative indicators, we will be able to reduce the demand for TC and T in cars to a certain extent.

The improvement of the conditions of use of cars will depend on the improvement of car storage conditions and the existing road network in the region, the training of drivers, seasonal changes in natural climatic conditions.

Pollution of the environment by toxic gases produced by automobiles, dust particles rising from the roads, the increase in road traffic accidents, the improvement and expansion of road networks are leading to such problems. In order to prevent problems, the owner of a private car should keep his car in good condition for a long time, and always use the car in good condition for its own use. have to go.

Most of the car is now made of polymer material. Therefore, the study of the technology of obtaining car parts under pressure is a topical issue.

The properties of polymeric materials depend on the composition and amount of substances added to them. By varying the amount of these substances, it is

possible to obtain compounds of various, even predetermined properties. Their most important positive properties are the water resistance of many polymeric materials, their ability to withstand the effects of many aggressive substances and petroleum products. Advances in chemistry make it possible to obtain plastics that can operate at both low and high temperatures. Since many polymer materials are good electrical insulators (dielectrics), they can be used in the manufacture of electrical equipment for tractors. The disadvantage of the polymer material is that it is less resistant to heat, as well as changes its properties over time, i.e. prone to wear.

Currently, there are a number of joint ventures and firms that produce parts for cars from polymeric materials. In these enterprises, most of the details are obtained by injection molding of polymeric materials into molds.

“Uz-Koram CO” in the form of closed Joint Stock Company which has a production capacity of more than 200,000 sets of bumpers, instrument panels and door trims per year. In the paint shop, car bumpers have the ability to paint the color of the body.

“Uz-Tong Hong Co” Joint Venture- The company manufactures polyurethane foam seats for all vehicles manufactured by “UzAvtoMotors”.

“Andijan Cable” and “Uz-Kodj” joint ventures produce insulation wires for electrical parts of vehicles.

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