

has saved technology, has not dropped the brand and the level of quality and is ready to supply the world markets with unique equipment, one of the best on the planet !!

Released at the BelAZ plant (Byelorussia), this giant of engineering thought has rightfully taken the first place in terms of size and payload - after all, it takes on board 450 tons! This is a record, the nearest competitors from America and Europe are capable of a maximum of 363 tons.

The mass of the car giant is already 810 tons, while the BelAZ-75710 can reach speeds of up to 64 km / h, which, you will agree, is quite impressive for this class of cars.

Four coupled pair of giant wheels are driven by electric motors powered by two diesel generators with a capacity of 4,600 horsepower (BelAZ broke the record of not only the carrying capacity, but also the engine power, since there are no dump trucks with so many "horses").

The car has two modes of operation of the engines, both diesel generators are running in full load, and the car is all-wheel drive, and while the dump truck is empty, the second engine is cut off to save fuel.

The Belarusian enterprise BelAZ not only has not lost the old technologies, but is also confidently moving towards new technological standards, because it is not enough to make a car just twice the size by increasing the size of the parts.

The Belarusian automobile plant, releasing a wide range of machines that are necessary for the work of mining and processing enterprises, is one of the best among the world's producers of mining equipment. Today, such a wide range of career dump trucks, as BelAZ, can not boast any enterprise in the world. And literally six months ago, on September 25, 2013, on a specially prepared testing ground for these purposes, a presentation of the 450-tonne giant truck dump truck BelAZ 75710 took place.

In January 2014, a record was set, due to which the plant in Belarus should once again be in the Guinness Book of Records - the novelty moved around a test area with a cargo of 503.5 tons! This event completely changed the situation on the world market, because BelAZ, having released the largest dump in the world, has left not far, but still behind its main competitors - Liebherr, Caterpillar and Terex. Well, the plant, which is a pride of the former USSR, has once again proved that the special equipment it produces fully meets the latest requirements and trends that have emerged in the mining industry, and on this the designers are not going to stop.

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ENERGY EFFICIENT TRANSPORT AND EQUIPMENT

Energy efficiency is the priority in economic policy of both developed and developing countries. The world practice demonstrates that increase in energy efficiency is the most effective direction of ensuring energy security of the country, mitigation of social and economic consequences of increase in prices for energy and climate changes.

Energy efficiency measures not only fuel consumption reduction but also contribute to overcome other related problems arising from the use of different modes of transport. Efficient transport operation contributes to the effective reduction of fuel costs, air pollution, reduces greenhouse gas emissions and creates economic growth.

Transport is one of the most important components of the life of a modern person. And this is particularly evident in large metropolises filled with all possible modes of transport, the lion's share of which is the public transport network, which should have not only an appropriate level of comfort, but also meet all modern environmental norms and requirements.

The greatest distribution among the energy-efficient vehicles, hybrid vehicles and electric vehicles can be seen in Western countries. As public transport is affordable, comfortable, sustainable and efficient, it is impossible to overestimate its importance.

Bus transport is one of the most rapidly evolving modes of energy-efficient technology, because its use makes the owners think about reducing operating costs. This issue was particularly acute after the introduction of rigid environmental standards, which also stimulated the development of hybrid and electro-technology in various types of vehicles.

Hybrid buses allow minimizing fuel consumption, ensuring minimal emissions of harmful substances into the atmosphere. The hybrid power plant saves up to 60% of energy compared to traditional diesel units, not to mention reducing harmful emissions to the atmosphere by 70%.

The electric bus is charged from super-fast charging devices during boarding-disembarkation of passengers. There is also a type of electric bus with special roof joints for quick recharging. There are brackets with plugs inserted into bus terminals at the stops along the route. One such charge provides a mileage of up to 5 km. It works thanks to ultra-capacitors, designed for a million cycles of recharging and 12 years of service. Such charging stations should be equipped in accordance with environmental safety standards with maximum application of renewable and alternative sources of electricity.

All this led to the creation of a complex system under the general name "Smart roads", which includes: interactive lighting and indication of the condition of the surface of the road depending on weather conditions, wireless charging of electric vehicles while driving etc.

The choice of one or another type of electric car for an electric bus can not be carried out in isolation from the choice of other elements of the electric drive traction. The use of each type of engine requires significant changes in power converter, mechanical elements (reducers, brakes), a set of primary meters (position sensors, speed, etc.), and also defines the construction of a control system.

The most economical, in terms of operating costs, are electric buses on accumulators, but the high cost and short lifetime of Li-Ion batteries can completely dampen their attractiveness. Therefore, the electric bus on the ultra-capacitors for the category of city traffic looks rather attractive and promising, because at the local production of this type of energy storage, their cost is less than the Li-Ion battery life, and the service life exceeds the life of the buses themselves.

Today, the concern about the environment has become not only a trend, but also a necessity. The proof of this is the success of the use of electric buses for urban transport in developed countries.

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ROBOTS IN OUR LIFE

People have always tried to invent something new that can simplify our life or daily routine or solve some technological or medical problems, for example. The idea of using robots is quite interesting. They are used in different fields of modern life [1]. Robots are machines of a special type [3]. These mechanical agents were created to help people. And, indeed, they are capable of doing many things. [2] They can replace man everywhere where he has to do hard, monotonous or dangerous work.

The idea of robotic technology appeared in the 1940s, when the foundations of atomic power engineering – the basis of technological progress – were laid [3]. Scientists must deal with