

VEHICLES FOR THE 21ST CENTURY – PERSPECTIVES FOR THE FUTURE

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*Putuju zagrljene daljine i vreme
/ Hugged distances and time travel/.*

Abstract: *Since January this year, all trains of the Dutch Railways use electricity from wind energy. The electricity from this renewable source is increasingly being used in the world. Insight into the future of transportation will provide versions of "Hyperloop" transportation system, a super fast train that can develop a speed of 1.200 kilometers per hour.*

At 23rd of January 2017 in Paris started to run the bus without driver also with aim to reduce pollution in the city. In February 2017 the public learnt of a new taxi service in Dubai that will be implemented from June 2017. These are drones on batteries, which are made in China, EHANG 174.

Authorities in Norway have reported that electric or hybrid cars make half of newly registered vehicles in the country during 2017. It is believed that this is a turning point on the way to the Norwegian fleet of electric vehicles and serves as the proof that policy of green transport produces results.

Lot of work is being done to make hydrogen-powered cars a reality. So many automakers are developing hydrogen-powered cars. These hydrogen-powered cars we can expect to see in the near future. Not many people have heard of the technology and from an infrastructure standpoint, purely electric vehicles make more sense. In the new 2017 „Faraday Future“, American manufacturer of electric cars in Las Vegas presented the "new kind of car," electric sedan that will have acceleration of the "Formula 1" and the ability to learn and adapt to the driver. Did "Tesla" won the competition, and it is FF-91, which should be produced in 2018?

KEY WORDS: VEHICLES, FUTURE, ECOLOGY, WORLD.

INTRODUCTION

*Experience taught me that only creativity is the road out of stony
forts of habits.*

Today, at the beginning of 2017 drivers agree that the most reliable are Japanese cars¹. Also "Audi" buys technology for cars using hydrogen. Since January this year, all trains of the Dutch² Railways use electricity from wind energy. The electricity from this renewable source is increasingly being used in the world. And in the Norwegian capital, Oslo, driving diesel cars is prohibited from 6 am to 22 hours in the evening and this will last until the air pollution is reduced.³ After the "Folkswagen" 's scandal with fixing data related to harmful gases emissions, we learn that sports car producer "Porsche"⁴, which is owned by "Folkswagen" - Group withdraws 16,429 vehicles because of problems with screws – the reason was problematic connection with the distribution pipes for fuel.

In the Republic of Serbia Agency for traffic safety and company NIS organized a joint campaign on the theme of road traffic safety in winter conditions. The campaign was implemented by the company NIS in the year 2016 declared as the Year of HSE-a (Health, Safety, Environment).

ENVIRONMENTAL PROTECTION AND NEW TRENDS IN CAR INDUSTRY

The European Parliament adopted more strict regulations with aim to prevent repetition of "Volkswagen's" scandal with manipulations by harmful gases emissions. For the draft law that will strengthen control and allow passing sentences⁵ to car manufacturers, from the Brussels Parliament voted 585 deputies, while 77 of them were against. So the new measures will ultimately remove diesel cars from the roads, and the EU member states will, according to the new law, have to finance centers for testing the exhaust gases. The official Brussels will get authorization to carry

¹ "Toyota C-HR" /means cupe-high rider/ is the type Eu 6, with a maximum speed of 190 km per hour, and in the winter of 2017, on temperatures in the minus, proved to be a true samurai on ice and snow in Belgrade.

² Dutch energy company "Eneko" communicated to operate without prejudice to the environment, and that one windmill for an hour produces enough electricity for train to run 200 kilometers.

³ This temporary ban is valid for all urban roads, but not for the national highway passing through Oslo.

⁴ It is being discussed on the "Porche" models "911", "Boxster" and "Cayman" produced in the period from September 2015 to October 2016.

⁵ The amount of the penalty would be 30 000 euros per vehicle.

out checks of vehicles and to determine the punishment in case of violation.

In response to information that the French authorities have begun an investigation "Renault" has issued a statement in which they insisted that their diesel vehicles do not have the software for cheating on tests of harmful gases emissions. They also emphasized that they observe all French and European laws. The question is whether the "Renault" will bear the brunt of the prosecution? Although during year 2016 "Renault" has withdrawn 15,000 vehicles because they emitted elevated levels of harmful gases.

An interesting example of Mexico City is showing that limiting of the use of cars is not the safe way to reduce the level of harmful substances in the air. 25 years ago this lovely city that I had the opportunity to visit in 1999, was proclaimed by the United Nations, the most polluted city on the planet. Although from year 2008⁶ the measure that prohibits driving on Saturday to the inhabitants of Mexico City is in effect, the latest study suggests that the air pollution in this metropolis was not reduced.

While some scientists consider our Planet to be the chronical ecological patient, from Scandinavia come the information that authorities in Norway have reported that electric or hybrid cars make half of newly registered vehicles in the country during 2017. It is believed that this is a turning point on the way to the Norwegian fleet of electric vehicles and serves as the proof that policy of green transport produces results. This Scandinavian country has adopted a strategy to encourage the purchase of environmentally friendly cars, under which owners of electric cars are exempted from almost all taxes.⁷

At 23rd of January 2017 in Paris started to run the bus without driver also with aim to reduce pollution in the city. Bus E310 possesses sensors and cameras that show when they go and when to stop, in which direction to go and how fast. This bus runs on the test route between the railway stations "Lion" and "Austerlitz", and this year there will be, according to the announcement of the city authorities, other established routes. Also superfast trains become a reality. Insight into the future of transportation will provide versions of "Hyperloop" transportation system, a super fast train⁸ that can develop a speed of 1.200 kilometers per hour.

⁶ Already in 1989 driving during one day, from Monday to Friday, depending on the last digit on the license plates, was prohibited to the drivers in Mexico.

⁷ The owners of these cars enjoy other benefits, like for example the free use of the roads where tolls are charged, as well as public parking lots, but also the possibility of driving in bus lanes.

⁸ It is the structure on the pressure, with the brake system and electronics, i.e. works on the principle of passive magnets, but still

In February 2017 the public learnt of a new taxi service in Dubai that will be implemented from June 2017. These are drones⁹ on batteries, which are made in China, EHANG 174, range up to 100 km/h, and with single charge cover 50 kilometers.

NEW MODELS AND ENVIRONMENTAL FRIENDLY CARS

From 24th of March till 2nd April 2017, under the cupolas of the Belgrade's Fair more than 410 exhibitors from thirty countries, 34 automobile brands, 10 manufacturers of light commercial vehicles, 39 models of motorcycles presented themselves. This international Motor Show is the oldest regional review of the car industry and this year with slogan "Years pass, passion does not stop" and emphasis is placed on alternative hybrid and electric drives.¹⁰

However, the most stylish Japanese cars ever are "Toyota 2000 GT", it was the "Japanese E-type". The "Corolia" might be Japan's most successful export, but the "2000 GT" is its most beautiful. Then "Mazda RX-7 FD", "Toyota Celica" A 20 (the "Toyota MR 2" will go down in history as Japan's first mass production mid-engined car, but it also happened to be a very fine sport car).

"Hyundai Santa Fe" was named in 2014 as the best family car in the choice of the US site Cars.com. Many are also interested to become owners of the sport edition of the LEXUS CT 200h, le luxe version hybride.

It is interesting to note that even in 1939 the Government of Japan expelled from the country "General Motors" and "Ford" and in 1949 saved "Toyota" of bankruptcy with the money that was taken from the Central Bank of Japan. "Toyota" started as a factory for the production of textile machines - Toyota automatic looms. A first car with the name "Tojopet"¹¹ suffered a debacle, while half a century later the luxurious brand "Lexus" has become something like an icon of globalization.

The first generation "Celica" was the "Japanese Mustang", then "Datsun 240 Z", "Nissan skyline GT-R PGC 10" and "Nissan 300 ZX Z 32", "Lexus LFA", "Acura NSX", "Mazda Cosmo 110 S", "Subaru XT", "Datsun Cherry E 10", "Honda CR-X".

Today, the "Hyundai ioniq", Korean brand that with a modified "ioniq" achieved a speed of 253.94 km/hour for the world record in the class of hybrid cars (FIA Category A, Group XI).

All of us know that the most popular European cars in USA are "Volkswagen¹² Jetta" produced in 1979, "BMW 3" -series produced in six different generations, "Mercedes-Benz" C-class introduced in 1993, "Volvo S 80", that came out in 1998, etc. But

works as the science fiction. The author of this project is the team from Delft University.

⁹ It weighs 227 kilograms and it can transport one passenger of weight to 100 kg and a small luggage /bag, which is placed in a special compartment.

¹⁰ Importers and distributors presented 67 novelties.

¹¹ It was the first passenger car exported by "Toyota" to the US market.

¹² Today, the "Volkswagen" is seriously turning toward electric models. At the Motor Show in Los Angeles "Volkswagen" presented redesigned and improved electric "e-golf" which now in ideal conditions can travel up to 300 kilometers on a single charge. Otherwise battery technology is evolving very quickly. Model S of company "Tesla Motors" can travel 500 kilometers with a single charge of the battery. Models "Nissan" and "Kia-e" can cross about 160 km after charging during the night, what is enough for an average driver. Power of battery enters in the public transport: the bus produced by "Mercedes" with a battery that is charged by solar energy.

In Sweden the ferry "AiriEl" that runs on batteries and uses a new type of power, that makes no vibration, was tested. This ferry does not pollute the environment and moves faster than traditional ferries on diesel fuel. The ferry "AiriEl" is moving on lithium-titanium battery rechargeable in about 15 minutes, so the vessel can run more than 25 kilometers.

little is known that a lot of work is being done to make hydrogen-powered cars a reality. So many automakers are developing hydrogen-powered cars. These hydrogen-powered cars we can expect to see in the near future. Not many people have heard of this technology and from an infrastructure standpoint, purely electric vehicles make more sense. For example, there are 14.618 electric stations in United States, and hydrogen stations are really only available in California.

From the City of Light, from Paris Motor Show 2016 the favorite cars were: **1. Renault -Tresor, 2. GLM -G4 - Electric social supercar, 3. 2018 Honda Civic, Type R, 4. Citroen-CXperience Concept, 5. Volkswagen -ID Concept, 6. Mercedes Benz- Generation EQ Concept, 7. Hyundai -RN 30, 8. BMW - X2 Concept, 9. Ferrari-Laferrari Aperta, 10. Land Rover - Discovery, 11. Mercedes AMG-GT-R, 12. 2018 Audi SS-Sportback.**

Of significance is the city car for all purposes whose customers are mostly women, and it is "Opel Adam Roc 1.0-115 KS"¹³. Carbon dioxide emissions with this car are 119 grams/kilometer, and a multitude of electronics makes it easier to drive, and Electronic Stability Control, Brake Assist, as well as warnings on vehicles in the "blind spot". Finally we should mention the "Renault talisman"¹⁴ French giant's car, with 4.85 meters in length.

The wider European project Central European Green Corridors (CEGC) included Slovakia, Germany, Austria, Croatia and Slovenia where a dense network of 115 modern high speed charging for electric cars is placed.

CONCLUSION

Way back in 1935, the trams have forever changed the destiny of our capital Belgrade and Zemun.

In the new 2017 „Faraday Future“¹⁵, American manufacturer of electric cars in Las Vegas presented the "new kind of car," electric sedan that will have acceleration of the "Formula 1" and the ability to learn and adapt to the driver. Did "Tesla" win the competition, and it is FF-91, which should be produced in 2018? American company "Apple" in California tested the car without driver too. Is was incredible few years ago? Significant research is also carried out today in Technological Institute in Massachusetts in America.

It is well known that transport produces a quarter of the load of all Greenhouse Gas in European Union. Let's make our planet not to be environmentally patient, although unfortunately some plant and animal species disappear. Nowadays the fight for health of the planetary ecosystem continues as well as for alternative fuels such as electricity and auto-gas.

However primary concern should be the safety and the exchange of experience of experts in the field of traffic both on land and on water and air is necessary. And while experts are monitoring the melting of ice on our planet by satellite photographs, the American satellite "Landsat 8" is collecting photos of the whole surface of the Earth every 16 days, and the picture of the rising sea level on the Planet is more precise.

In the final version of the Climate Action Plan German government has lowered its goals on reducing carbon dioxide emissions in the industrial sector for only 20% by year 2030 in relation to the year 2014.

In this paper new trends in the car industry are presented together with new models in the world and especially environmental friendly cars. It is necessary to provide a cleaner

¹³ The basic version of this car is shown back in 2012 at the Paris Motor Show. With great width (1,720 mm) and length (3,747 mm) it is very stable real small tank and fulfills the EU 6 standard.

¹⁴ This car is larger and more luxurious model than "Renault Laguna", possesses comfort, safe brakes and French charm.

¹⁵ The founder is a Chinese billionaire, who is dedicated to this project and looks for investors and highlights that this is a "global ecological system of mobility".

mobility in cities and provide infrastructure for environmentally friendly fuel.

Fabula docet, i.e. story teaches us, that hence we can conclude that with the advancement of technology and our know-how in the field of transport is significant, but continued vigilance is always required...

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