



UNIVERSITY OF NIŠ
FACULTY OF OCCUPATIONAL SAFETY

WORK SHOP

SEPTEMBER, 17th-18th, 2014.

UNDER THE AUSPICES OF THE
MINISTRY OF EDUCATION,
SCIENCE AND TECHNOLOGICAL
DEVELOPMENT OF THE
REPUBLIC OF SERBIA

IMPROVING THE SYSTEM OF MONITORING AND ASSESSMENT OF LONG-TERM POPULATION EXPOSURE TO ENVIRONMENTAL POLLUTANTS



SMANJENJE EMISIJE MOTORNIH VOZILA KORIŠĆENJEM PRIRODNOG GASA KAO POGONSKOG GORIVA

**Zoran Marjanović (1), Miomir Raos (2), Ljiljana Živković (2), Nenad Živković (2),
Jasmina Radosavljević (2), Emina Mihajlović (2)**

- 1) Grad Kragujevac, Gradska uprava, Služba Inspekcije, Srbija
- 2) FFakultet zaštite na radu u Nišu, Univerzitet u Nišu, Srbija

Kako je automobilska industrija bila svesna negativnih efekata drumskog transporta na životnu sredinu, ona je tokom više decenija intenzivno radila na novim tehnološkim rešenjima u cilju smanjenja negativnog uticaja vozila na životnu sredinu. Zato su prioriteta savremenog i budućeg razvoja vozila, motora i njihove opreme: redukcija potrošnje goriva i smanjenje emisije sa izduvnim gasovima. Jedan od načina rešavanja aktuelnih zadataka automobilske industrije jeste korišćenje alternativnih goriva, odnosno alternativnih energetske potencijala. U radu je analiziran prirodni gas kao alternativno gorivo za pogon motornih vozila. Nakon iznošenja osnovnih fizičko-hemijskih karakteristika i analize upotrebe prirodnog gasa kao pogonskog goriva motora SUS, u ovom radu prikazano je smanjenje emisije motornih vozila korišćenjem prirodnog gasa kao pogonskog goriva.

Cljučne reči: prirodni gas, izduvni gasovi, zaštita životne sredine.

REDUCTION OF MOTOR VEHICLES EMISSION BY USING NATURAL GAS AS AN ENERGY SOURCE

**Zoran Marjanović (1), Miomir Raos (2), Ljiljana Živković (2),
Jasmina Radosavljević (2), Emina Mihajlović (2)**

miomir.raos@znrfak.ni.ac.rs

- 1) City of Kragujevac, City Administration for Inspection Affairs, Serbia
- 2) Faculty of Occupational Safety of Niš, University of Niš, Serbia

As the automotive industry perceived negative effects of road transportation to the environment, it has intensively worked on new technological solutions during several decades, with the goal of reducing the negative effect of vehicles to the environment. That is why priorities of contemporary and future development of vehicles, engines and accompanying equipment are the following: reduction of fuel consumption and reduction of emission of exhaust gases. One of the ways to solve current tasks of the automotive industry is the use of alternative fuels, that is, alternative energy potentials. This paper analyzes natural gas as alternative fuel for motor vehicles. After description of basic physical and chemical properties and the analysis of use of natural gas as a fuel for ICE, this paper presents reduction of motor vehicles emission by using natural gas as a fuel.

Key words: natural gas, exhaust gases, environmental protection.