

Poštovani čitatelji,

Pored aktivnosti vezanih uz primjenu goriva i maziva, uvaženi profesor na Tehničkoj akademiji iz Esslingena u Njemačkoj Wilfried J. Bartz je dio svojih stručnih i znanstvenih interesa u posljednje vrijeme posvetio odnosu maziva i očuvanja čovjekova okoliša. Rezultate svojih radova objavio je 1998. godine u *Elsevier Science Ltd.*, a neka razmišljanja u vezi ove problematike prenosi i *Tribology International*. Približno 1% ukupno korištenih derivata nafte danas se koristi kao mazivo ulje. Gdje god se proizvode ili troše i primjenjuju naftni derivati, posebno treba voditi računa o zaštiti okoliša, posebice živih bića, u prvom redu čovjeka. Korištenje ugljikovodika često nema direktnog utjecaja na žive organizme, ali zato vrlo često oni indirektno, preko okoliša štetno djeluju na floru i faunu, a u tom sklopu i na ljude. U svakom slučaju treba stalno pratiti djelovanje naftnih derivata i to njihov direktni i indirektni utjecaj na žive organizme. Za to postoje razrađene znanstvene i priručne metode i postupci i s njima se moraju upoznati svi oni koji s derivatima dolaze u kontakt i svi oni koji su na bilo koji način uključeni u proizvodni lanac, preko prerade i trgovine do krajnjih korisnika. Jednostavno rečeno, treba na najmanju moguću mjeru smanjiti sve stvarne i potencijalne štetne učinke raznih naftnih proizvoda na zdravlje i okoliš. Posebna pozornost u radovima profesora Bartz posvećena je primjeni rashladnih medija na osnovi minerlanih ulja, motornim uljima i raznim industrijskim mazivim uljima i mastima, nebiodegradabilnima i biodegradabilnima.

Od ukupno potrošenih mazivih ulja u svijetu približno trećina otpada na Europu, trećina na Ameriku i trećina na azijske zemlje. Računa se da se od korištenih maziva u Europi, u više ili manje promijenjenom sastavu, u okoliš vraća oko 13%, a u Americi oko 32% ugljikovodika. U Njemačkoj se oko 40.000 tona istrošenih industrijskih maziva odbacuje u okoliš. U tu količinu su uračunata ispuštanja mazivih sustava i drugih mjesta primjene industrijskih ulja. Toj količini treba dodati i oko 110.000 tona motornih ulja koja se ne rerafiniraju kao i ona koja zaostaju u odbačenim filtrima za ulja i sitnoj ili krupnoj ambalaži koja se odbacuje kao industrijski ili komunalni otpad. Ukupna količina otpadnih maziva u Njemačkoj iznosi približno 150.000 tona godišnje, što predstavlja oko 13% prodanih ulja na tom području.

Zadovoljni smo što vezano uz ovu temu u ovom broju našeg časopisa možemo objaviti i vrijedan prilog naših stručnjaka i čestih suradnika koji su svojim radom obogatili poznavanja i domete postupaka za ocjenu brze biološke razgradljivosti.

Ocjenjujemo da je to prilog iskustvu i znanju razvijenog dijela svijeta koji se sve više brine za zaštitu okoliša.

Vaš urednik, Marijan Kolombo

Dear Readers,

Apart from activities associated with the application of fuels and lubricants, Mr. Wilfried J. Bartz, a distinguished professor at the Technical Academy in Esslingen, Germany, has recently been dedicating a part of his scientific and professional interests to the relation between lubricants and environmental protection. The results of his work were published in 1998 in *Elsevier Science Ltd.*, while some considerations from this field were published by *Tribology International* as well. Approximately 1% of the total current use of petroleum products refers to lubricating oils. Wherever oil products are being produced, used, or applied, special care has to be taken of environmental protection: Particularly that of living beings, and primarily that of man. The use of hydrocarbons often has no direct impact on the living organisms. However, it often harmfully impacts the environment indirectly: Flora, fauna, and, in this sense, also people. In any case, the impact of oil products on living organisms - both direct and indirect - must constantly be monitored. Various both scientific and auxiliary methods and procedures have been elaborated for the purpose. All those who handle oil products or are in any way included in the production chain, processing, trade, and end use, must be aware of them. To put it briefly, all real and potential harmful impacts of various oil products on health or environment must be reduced to the lowest possible level. Special attention has in the papers by Prof. Bartz been paid to the application of mineral based coolants; motor oils, and various industrial lubricating oils and greases, both non-biodegradable and biodegradable.

Approximately one third of the total global lubricating oil consumption refers to Europe, with the remaining two thirds covering America and the Asian countries respectively. It is estimated that around 13% of hydrocarbons from the lubricants used, with a more or less changed composition, are being returned into the environment in Europe, and around 32% in America. In Germany, around 40,000 tons of used industrial lubricants end up in the environment. This volume includes leakage from lubricating systems and other industrial oils application spots. This volume has to be added around 110,000 tons of motor oils which are not being re-refined, as well as those left in the oil filters and both small and large packagings disposed of as either industrial or household waste. The total quantity of waste lubricants in Germany amounts to around 150,000 tons annually, making around 13% of oils sold on that particular market.

It is our pleasure that, in the present issue of our journal, we may also publish a valuable contribution of our experts and frequent associates, having enriched, by their paper, the knowledge and achievements of procedures for the evaluation of ready biodegradability. It is our opinion that it represents a contribution to the knowledge and experience of the developed world, being increasingly concerned for environmental protection.

Your Editor, Marijan Kolombo