

What do we get from renewable fuels?

In the column Curiosities of the *Fuels and Lubricants* journal, over 400 papers have been published so far. When preparing the column, we are using, as source, scientific and other papers published in both electronic and written media, trying to select interesting and topical subjects that will appeal to a wide circle of readers. It is necessary to cover technological development and application of fuels and lubricants, informing of all the breakthroughs and changes taking place in the area. Our task is all the more complex by trying to cover also the changes in individual market segments, as well as global changes.

If we were to summarize the papers published so far, it would become evident that some titles and topics are frequently repeated, since we always bring in new contents and messages, in keeping with the current requirements or achievements of the profession. Maybe the best example for this is the relationship towards sulphur content in petroelum fuels. Several decades ago, there had not been much concern about the content of sulphur compounds. It was later established that they are troublesome, or even noxious, espacially with the development of environmental protection and nature conservation awareness, as well as environmental requirements in general. Not long afterwards, it was established that these compounds, in their original, natural form, have beneficial physico-chemical, and especially applicative properties. Namely, let us remember that they have detergent and inhibiting properties, and acting as natural antiwear agents. Their removal often requires addition of other compounds, in order to make up for the lost natural useful properties.

Recently, attempts are being made to ensure motor fuels out of biologically renewable sources, in order to reduce dependence on fossil fuels reserves. A number of professional papers mention fuels based on fatty acid esters from vegetable oils, as well as alcohols obtained through fermentation from vegetable feeds. Apart from euphoric expectations of possible substitution of fossil fuels offered by such biologically renewable sources, one must recognize also possible detrimental character of their wide production, as well as environmental problems involved. In the previous issue, we have published a paper by author Mr. Tomislav Kurevija on negative environmental impacts of global biodiesel fuel production. Similar negative effects could be caused by a greater volume of ethanol out of renewable sources, as components for motor gasoline.

Apart from that, attention must be paid to possible problems involved in the application of renewable fuels. The properties of fuels which are added renewable components, such as fatty acid esters or ethanol, are able to significantly alter in terms of significant performances. Experts, researchers, and those in charge of application, must now find proper design solutions and answers to formulations of individual fuels, in order to remove or at least reduce possible shortcomings. In our column Curiosities, we have tried to cover all these changes and bring you a critical review of them.

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