

STATISTICA™ Case Study

Czech Oil Refinery Česká Rafinérská Implements STATISTICA to Monitor Quality of Petroleum Products



About ČESKÁ RAFINÉRSKÁ

Česká rafinérská, a. s., is the largest crude oil processing company and the largest producer of refined petroleum products in the Czech Republic. The company is a collective business of **Unipetrol** and the renowned international companies **Eni** and **Shell**. Established in 1995, the company is operated as a reprocessing refinery / clearing house for its manufacturers, from whom it purchases crude oil and other raw materials for processing in refineries in Litvínov or Kralupy nad Vltavou. It sells its finished products to customers both regionally and abroad.

<http://www.ceskarafinerska.cz/en/index.aspx>

Initial State

For planning needs and quality control processes monitoring, Česká rafinérská previously used traditional tools included with commonly available computer software programs. For superior prediction of process changes—both undesirable and desirable—it became necessary to acquire much more sophisticated software. Česká rafinérská thus started searching for a suitable solution and, through recommendations, it found the right one in **STATISTICA** software from StatSoft CR.

Requirements of Česká rafinérská

The main requirement of the company was to acquire a tool for observing the quality of products in production units. In practice, this meant observing the quality of input values so that the quality of the output values would meet specified requirements. Among the observed variables are temperature, which can influence the properties of raw materials during manufacturing, as well as the density and viscosity of the material. The goal is to monitor a massive volume of measurements with the help of appropriate software in order to achieve maximum quality according to spec, as well as to ensure optimum production scheduling. All of these requirements have been fulfilled by the recommended tools **STATISTICA Base** and **STATISTICA Standard Cz**.

Course of Implementation

“The implementation of **STATISTICA** software was very simple thanks to the user-friendly environment, and it went smoothly, as a matter of fact, with no additional training necessary. The implementation of another module, **STATISTICA Automated Neural Networks™ (SANN) + Code Generator**, was also carried out very easily, which clearly points out the level of advancement of this tool,” says MSc. Václav Křapáček, Head of Technologists in Litvínov, Česká rafinérská.

Cooperation with the Supplier

“Just as during the implementation, no serious problems occurred after the activation of the software, thus the intervention of the supplier was not needed,” says MSc. Křapáček. “When it comes to mutual communication and regular support, I must say that cooperation with StatSoft is pleasant and absolutely professional. I would like to add that the price of the acquired software and its license is certainly an impressive value, given *STATISTICA*’s capacity.”

Results

The new *STATISTICA* software tools are currently employed to maintain consistent product quality and to predict production volumes that will sufficiently meet the actual demands of the Czech and foreign markets. And, in order to produce immediate product composition estimates—which, until recently, was not possible—the company has also started using the *SANN + Code Generator* add-on. As utilization progresses, *SANN* will help the Czech oil refinery appreciably reduce the costs associated with these activities.

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ABOUT *STATISTICA* AND STATSOFT

StatSoft was founded in 1984 and is now one of the world’s largest providers of analytics software, with 30 offices around the globe and more than one million users of *STATISTICA* software. StatSoft’s solutions enjoy an extremely high level of user satisfaction across industries, as demonstrated in the unprecedented record of top ratings in practically all published reviews and large, independent surveys of analytics users worldwide. With its comprehensive suite of *STATISTICA* solutions for a wide variety of industries, StatSoft is a trusted partner of the world’s largest organizations and businesses (including most of the Fortune 500 companies), providing mission-critical applications that help them increase productivity, control risk, reduce waste, streamline operations, achieve regulatory compliance, and protect the environment. <http://www.statsoft.com/company/>