

## The Service Life of the Nuclear Power Plant in Dukovany Can be Extended by at Least Ten Extra Years – also Thanks to the Control Systems Supplied by ZAT

The planned service life of the first production unit of the Dukovany Nuclear Power Plant is to expire at the end of 2015. The ZAT control systems have greatly contributed to extending its service life by at least ten extra years. “After five planned service interruptions of the third unit we were **charged with the most difficult part of the renovation**. We were to replace the control systems while maintaining the production capacity of the power plant, which was a challenge for us. According to available information, **a similar project, when the production capacity of the power plant was maintained during renovation, has not been implemented anywhere in the world before**”, says Karel Stočes of ZAT.

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PŘÍBRAM, DUKOVANY, April 3, 2013 – Nuclear experts carried out the planned service shut-downs of the third unit of the Dukovany power plant for the fifth and last time in the previous month in order to finalize the planned renovation of the technological control systems of the unit. This has been **one of the largest investments made in the Dukovany power plant in the past ten years. The most important part**, i.e. the control systems, were designed and **manufactured** by ZAT and implemented in cooperation with other sub-contractors and under the leadership of the general contractor ŠKODA JS a.s. **ZAT is one of the four companies in the EU manufacturing and delivering their own digital control systems for primary parts of nuclear power plants.**

Today, after several years of designing, implementing, and performing trials and tests, the last phase of the renovation is finalized, during which the so-called Non-System has been completely renewed. With its scope, this project can be compared to the first stage implementation representing the control system modernization for turbo-set control including the hydraulic part, unit and emergency control rooms. According to Karel Stočes, the director of the Automation Division, **the ZAT systems will control all the other systems of the primary and secondary parts of the power plant** apart from the non-unit operating technologies and safety systems once the overhaul is completed in 2016. The island operation, monitoring of the unit’s home consumption, control of reactor control rods positions as well as computer systems for the unit and emergency control rooms etc. will also be equipped with up-to-date control systems.

These renovation efforts make it possible for ČEZ to ask for an extension of the service life of the power plant. “*The Dukovany power plant will apply for its operations license to be extended by another ten years. Since the power plant was put to operation, we have invested almost the same amount into its modernization and safety enhancements as into building of the power plant itself. The amount has reached almost CZK 27 billion*”, confirms Petr Spilka, the spokesperson of the Dukovany power plant.

The Dukovany power plant has been using the ZAT control systems since it was commissioned in 1985. So far, ZAT has delivered and innovated the power plant’s systems in the course of ten planned service shut-downs of its individual units as part of the Dukovany Nuclear Power Plant control system renovation project of the M3 and M5 modules. Until 2016, the ZAT engineers will work on six more planned service shut-downs.

## The Czech Nuclear Systems Know-How Makes Our Country One of the Global Suppliers of Nuclear Technologies

ZAT is one of the four EU companies developing, manufacturing, designing and supplying their own control systems for nuclear power engineering. **Thanks to ZAT, the Czech Republic ranks among the world suppliers of the most advanced digital control systems for nuclear engineering.** Over the forty years of delivering these solutions, the ZAT engineers gained experience and references while supplying control systems projects for 25 nuclear power plant units worth CZK 4.5 billion. ZAT specializes in monitoring and control systems for primary, secondary and auxiliary operations in the Czech Republic and abroad. The company has also applied its nuclear know-how in its deliveries for the Temelín nuclear power plant.

In the former Czechoslovakia, ZAT participated in the construction of all the country's nuclear power plants; the company has implemented its solutions in nuclear power plants in Slovakia, France, the Ukraine, etc.

*“Nuclear engineering contracts are important for us, they represent almost one half of our turnover. We have developed our own control system for controlling nuclear power plants. Every year we invest over CZK 40 million into innovation, we participate in the CANUT, Centre of Advanced Nuclear Technologies, research project. And we are also a major partner for industrial businesses in terms of control systems deliveries. Our systems are used by production lines, they set into motion revolving stages in theatres, and they control Czech as well as Chinese underground trains as well as railway systems”,* closes Karel Stočes.

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ZAT a.s.

ZAT a.s. is a supplier of advanced ASTPMs (Automated Systems for Technological Processes Management) and acts as a coordinator of all required activities and sub-supplies for power engineering automation and industrial processes. The company is strong in designing and implementing technical concepts and hierarchies of control systems for various safety levels. ZAT a.s. is also a manufacturer of medical devices.

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