

## Internal Information

DATE  
July 1, 2016

### The hundred tons' rotor heads to Pilsen from Temelín

More than seven hours, the transport of the nearly hundred ton weighing low pressure rotor will last from the Nuclear Power Plant Temelín to Pilsen. From Temelín, the non-traditional cargo will roll off this evening and, at the establishment of the Pilsen manufacturer Doosan Škoda Power, it should arrive at this night. The reason for the rotor transfer is replacing of several blades and the subsequent rotor balancing in the aerodynamic tunnel.

The need to replace 18 out of 970 pieces of blades was found during the inspections during the planned outage of Unit 2. **"Planned outages are not just about refueling; a lot of controlling activities are carried out there. Their purpose is to evaluate the conditions of all vital components and eventually perform appropriate adjustments. In this case, the checking acted as it should have done and the warranty modifications will be performed at the factory, which has the appropriate technology,"** remarked Marek Sviták, spokesman of Temelín NPP.

Six new rotors and one spare rotor supplied Doosan Škoda Power to Temelín in 2014 and 2015. Thanks to them, the Southern Bohemian power plant increased its output by two percents. **"The new rotors enable to produce electricity for another 100 thousand Czech households while saving of approximately a quarter of a million tonnes of CO<sub>2</sub>,"** said Sviták.

So far, the operation of the new rotors was reliable and efficient. In winter in particular, the power plant has repeatedly outperformed the power output maxima. **"To the new rotors, we send the same amount of steam as to the previous ones. New rotors can better use the steam and, at an optimal cooling circuit temperature, the amount of the electricity produced is really high,"** added Sviták. According to the spokesman, the plant recorded the best performance on April 25, when both Temelín units achieved an output of 2198 MW.

Sviták did not dare to estimate how long the adjustments in Pilsen will last. **"It will depend on the outcome of additional inspections and the works course that we will carefully monitor in Pilsen.,"** concluded Sviták.

### Faster than sound

Each of the two Temelín turbine generators produces an output of 1080 MWe. The sixty-meter long turbine set consists of one high-pressure turbine, three low-pressure turbines and

a generator. It weighs two thousand tons and the rotor is turning fifty times per second. The circumferential velocity of the longest, slightly over one meter long blade is 2,500 km/h, approximately twice the speed of sound. It would overcome the distance between Temelín and Prague in three minutes.

*Temelín nuclear power plant produced its first electricity in December 2000. It is currently the largest source of electricity production in the Czech Republic. It covers a fifth of the Czech electricity consumption by its safe and emission-free operation. In 2015, the plant produced 14.23 billion kWh of electrical energy. With a Temelín's annual production, South Bohemia would last out almost 4.5 years and, for all Czech households, it would be enough for one whole year.*

**Ing. Marek Sviták**  
Temelín NPP ČEZ Group Spokesman