



## YOUR PARTNER IN HYDROPOWER SOLUTIONS

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### MAVEL TECHNOLOGY INCREASES POWER BY 60% AT BENATKY REFURBISHMENT

Benesov, Czech Republic – 19 May 2003 - Mavel a.s., a Czech producer of technology for hydroelectric power plants, announced the successful refurbishment of the Benatky Nad Jezerou hydro-electric power plant. The refurbishment, which was completed in the first quarter of 2003, increased the installed power by 60% to 900 kW from 560kW.

As part of the technological solution, Mavel provided two 1600 mm runner diameter vertical Kaplan turbines with gear box drives and vertical asynchronous generators. Technical parameters are as follows:

- \* maximum water flow: 12 M3s-1
- \* minimum water flow: 2.4 M3s-1
- \* head 4 to 6 meters meters
- \* maximum power output: 450 kW
- \* minimum power output: 80 kW
- \* runner diameter: 1600mm
- \* number of runner blades: 4
- \* turbine speed: 218 rpm

The site, 30 minutes outside of Prague on the Jizera River, originally housed a large mill that was driven by setoff waterwheels. Upon the development of a new plant for the production of silicon carbide in 1893-94, the power plant was reconstructed to run with turbines. The plant was next refurbished in 1918-19 and fitted with two vertical Francis turbines. This configuration, with installed capacity of 560 kW, functioned through the 1960s. After that, power generation was used as a reserve source until the plant was permanently closed in 1989.

Mavel, a.s. was hired by the current owner of the plant to maximize the economic potential at the existing site. The weir, physical structures and powerhouse had deteriorated from disuse and, during the summer of 2000, a major flood caused additional damage.

Mavel worked with another Czech hydro specialty firm to develop a new design utilizing as many of the old structures as possible while recommending a new technology design.

Mavel, in addition to the turbines, provided the two generators, one hydraulic governor, a building crane, a hydraulic gate system, hydraulic trash rack and cleaning machine

Mavel a.s. provides engineering and technology, including Kaplan, Francis and Pelton turbines, for hydroelectric power plants from 2 kW to 20 MW. The company employs 170 persons and has two production facilities in the Czech Republic.

FOR ADDITIONAL  
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