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**Evaluation of the Measures to Limit the Corona Noise Implemented on the 400 kV OTL Bericevo – Krško**

## Abstracts

On 18 November 2013 a new 80 km long 400 kV double-circuit OTL Bericevo – Krško fitted with horizontal twin-bundle conductors (conductor 490 AL1/64 A20SA, 400 mm spacing) was put in operation. The hydrophilic conductors, manufactured by glass pearl blasting technology, were installed in two sections. Both sections were selected to serve as a test site for the OTL audible noise investigation based on proven measurements. The purpose of this investigation was to properly assess the improvement, which was mainly audible noise reduction, expected by the usage of hydrophilic conductors, and to gain insight into the correlation between atmospheric conditions (air pressure, temperature, humidity, rain etc.), corona and the audible noise produced by corona. The audible noise measurements were carried out in all weather conditions (during dry weather, at high levels of humidity, as well as during (different intensities), before, and after rain). Because the noise levels of falling raindrops can be very high, the recognition of corona noise was hindered. When the intensity of the falling rain is high, the corona noise and the raindrops contribute the same noise level to the overall measured noise. Due to this fact the measured noise levels are given for intervals before and immediately after it. In the paper the obtained on-site measurements are compared to the high voltage measurements implemented in the laboratory. In the HVL, the measurement of corona was performed on a single phase conductor bundle mock. The comparison was made on the basis of the conductor surface voltage gradient. The gradient on the conductor surface of the mock and observed line spans were calculated using the finite element method.

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More Informations :

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