



# BRITISH TUNNELLING SOCIETY

## INFORMAL DISCUSSION

THURSDAY 16 MARCH 2006 at 6.00 pm

at

The Institution of Civil Engineers

One Great George Street, Westminster, London SW1P 3AA

## Tunnelling on the Karahnjúkar Hydropower Project

### Presented by

Joseph Kaelin : Electrowatt/KEJV - *Lead Engineer of Design Team*  
Jonathan Parry : Mott MacDonald - *Project Manager of Supervision Team*  
Alun Thomas : - *formerly member of Supervision Team*

The Kárahnjúkar Hydropower Project consists of the construction of 4 dams and a network of tunnels leading to an underground powerhouse. The annual production is estimated to be 4.600 GWh produced by 6 x 115 MW Francis turbines, which will be used to power a nearby aluminium smelter, planned to be commissioned in 2007.

The project comprises almost 75 km of hard rock tunnelling, of which approximately 50 km is being driven by 3 large diameter Robbins TBMs. This is the first use of TBMs in the challenging environment of Icelandic geology. Gently dipping sequences of alternating basalt flows and sedimentary deposits lead to quite variable geology along the drives and potentially long lengths of mixed face conditions.

This presentation will introduce the project in general and will cover both the design and construction aspects the drill and blast and the TBM drives. In addition, some of the difficult tunnelling conditions encountered will be discussed.

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Tea and biscuits will be available at 5:30pm

In case of any query please

contact The Secretary, BTS tel: 020 7665 2233 or e-mail: [bts@britishtunnelling.org](mailto:bts@britishtunnelling.org)

or visit <http://www.britishtunnelling.org>