Draft Tube Liner

Customer: **Scottish and Southern Energy**

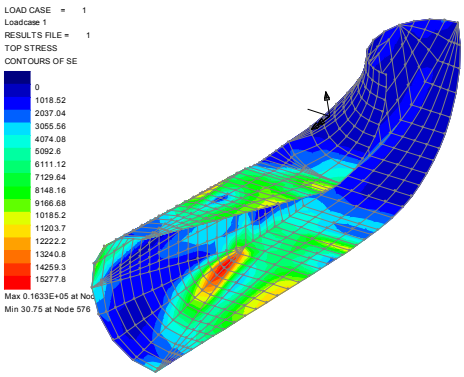
Project Location: **Foyers Power Station, Scotland**

Year of Completion: **2002**

DavyMarkham were appointed to investigate and oversee repair to a catastrophic failure of the Draft Tube for the No1 Pump/Turbine Set at Foyers Power Station in Scotland. In the capacity of Main contractor, DavyMarkham produced a scope of work which included finite element modelling of the structure and a summary of physical tests such as NDT. Drawings recording all works were produced and were included in a final review report.

Mott MacDonald who concentrated on civil aspects, were tasked to carry out a 3rd party review of the main contractor design work with other companies. MEL inspected the failed steelwork in order to assess the possible mechanisms involved on a local level. GE Energy were asked to provide background information on the hydraulic behaviour of the pump/turbine. Highland Rope Access Inspection Ltd carried out NDT of the new and old welded structure. Ritchies carried out grouting between the new lining and the concrete.

A conclusion to the failure was reached and replacement sections of the Draft Tube were designed and installed. New anchors and grouting replaced old, taking into account historical problems. New and old steelwork was again inspected for potential cracks and flaws.



Total Engineering Capability

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