

PROJECT FILE:

Cruachan Hydro' Power Station; Penstock Access Platform

Cruachan Power Station is located at the north end of Loch Awe, some 5 miles south east of Taynuilt on the west of Scotland.

Cruachan is a 400 Megawatt pumped storage power station pumping water to the storage reservoir above the loch during off-peak hours, the water then being released during high demand period's generation power for the grid.

The station was constructed in 1966 and in 2003 the main two Penstocks (water shafts) required inspecting and remedial works.

The main contractor Edmund Nuttall invited **ALPS** to offer a solution in order that safe access could be gained to one of the main shafts in order to carry out necessary inspections and repair works.

The access system would have to cope with the 56% angle operating in the 6M diameter steel and concrete shaft.

The depth of travel required was almost 300 Meters to the bifurcation....a 600M round trip.



Drawing of platform in shaft



Platform under construction



The criteria used by ALPS was a light and fast modular inclined access platform powered by an on-board 3000Kg manriding hoist, this protected by an independent secondary safety device and safety rope.

Due to the confined area of work it was most important that the access platform could be recovered quickly and safely from above. To facilitate this, an auxiliary 3000Kg hoist was installed on the hoist rope at the upper termination. A second recovery hoist was also installed to the safety rope in order to recover the complete platform in the unlikely event of both primary hoists failing.

< Looking up at the platform from below

The platform is shown under construction at the top of the shaft. (Horizontal area) once constructed the platform was lowered over the crest and could be powered up and down the 300M shaft at a speed of ~12m per min' A payload of 800Kg was given for this application.

The access system worked successfully around the clock during the shutdown period.



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