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MV & HV CABLE TESTING TECHNOLOGY

ON SITE CABLE COMMISSIONING

UNDERGROUND FAULT LOCATION

NEWS LETTER FEBRUARY 2011

HUINCO HYDROELECTRIC POWER STATION - PERU – CONTRACTS INDUCOR INGENIERIA SERVICES FOR 220 KV CABLE DIAGNOSTICS

Lima - Perú - February 2011:

Located in Huarochirí Province, 65 km East of Lima, Huinco Hydroelectric Power Plant, which is property of EDEGEL - ENDESA, has been working incessantly since its beginnings in 1964.

Edegel is the largest private electric power generation company in Peru.

The plant is placed in a 108 m long and 31 m wide semicircular cave with access from an 858 m long gallery.

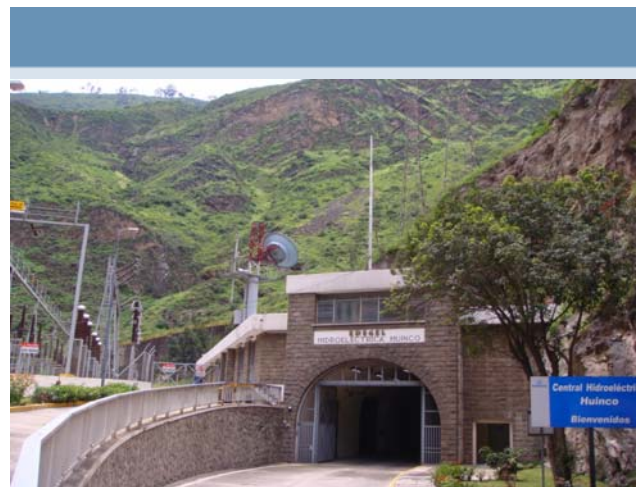
With an installed capacity of 258 MW and 4 Pelton double turbine generator units, the four OF (Oil Fluid) type 220 KV cable circuits of 1 Km long in tunnel, after 48 years of efficient service, will be subjected to a complex battery of electrical and mechanical tests, to determine the years of remaining useful life with a reliability degree over 90%.

The Project entrusted by EDEGEL-ENDESA to INDUCOR INGENIERIA S.A., will include the completion of the following items:

- Partial Discharge mapping
- Differential Reflectometry.
- Joint and terminals X-rays.
- On-line / off-line PD monitoring.
- Directional Acoustic Monitoring of terminals
- Dissipation factor /Low frequency Withstand voltage.
- Thickness and toughness of external cover.
- Physical and Chemical analysis of the dielectric fluid.

With the information obtained, which will allow to determine the current state of the cable system, it will be possible to proceed to the complex Weibull statistical analysis and the Arrhenius variables application, to determine the remaining useful life of each cable with the highest grade of reliability.

The remaining useful life testing, protected by IEEE STD 1425-2001 among others, provide very important information for the assets valuation of a power generator company.



HIDROELECTRICA HUINCO - PERU - DIAGNOSTICO DE VIDA UTIL DE CABLES DE 220KV



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