RYNINH II Hydroelectric Power Plant

SIRIUS success story...

HYDRO POWER

The newly constructed hydroelectric power plant of SONGDA construction corporation in RYNINH, Vietnam was built by VATECH Escher Wyss Flovel Limited, a leading multi-national company in the field of hydroelectric power plants.

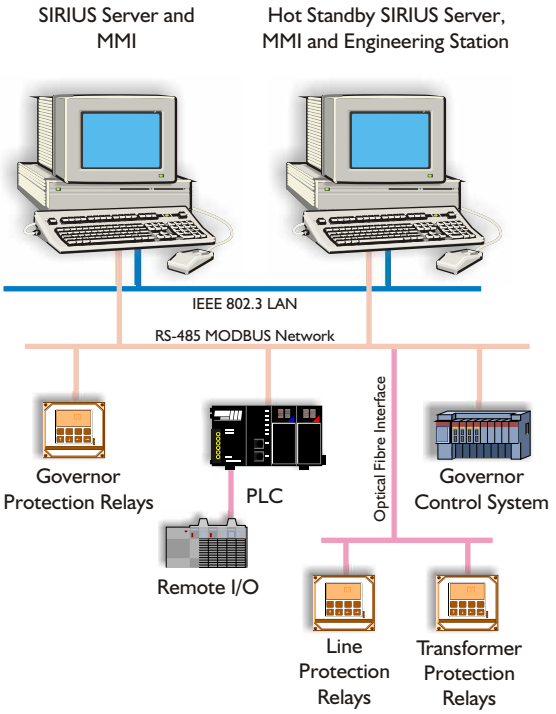
The plant is located in a scenic valley in the RYNINH province. Water falls down from a head of about 150m straight into the turbines. Three Francis turbines provided by VATECH use this energy of the falling water to rotate the generator units, which are connected to a local grid. The plant is designed to generate 3x2700 KW of power. A SCADA system was required to monitor and control the turbines, generator units, transformers, and other auxiliary equipment.

A SIRIUS SCADA system is installed, which monitors and controls these equipments in the plant.

'...interfacing with IEDs from ABB, Alstom, VATECH...'

The interfacing with these equipments is done via IEDs like numerical relays from Alstom, governor control systems from VATECH.

ABB's AC110 PLC is used to control and monitor the field equipments. The interfacing between SIRIUS and the PLC, IEDs is done on MODBUS protocol on a multi-dropped RS-485 serial communication network. Communication with equipment at the remote switchyard is via the optical fibre interface.

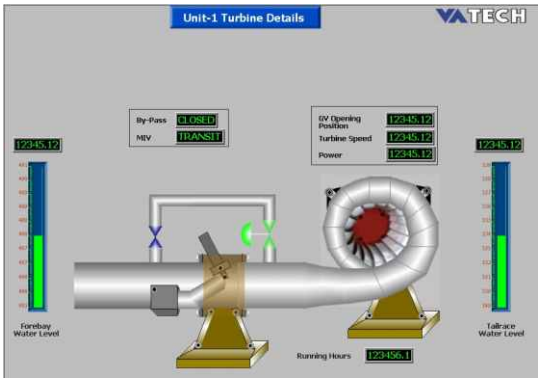


SIRIUS is configured in dual redundant configuration with one server in hot standby mode, ready to takeover in case of failure of the online server.

'...dual redundant SIRIUS systems, with data synchronization in real-time...'

Data synchronization is achieved between the servers in real-time over Local Area Network.

SIRIUS is configured to handle a total of 1000 nos. inputs and outputs. Application-specific sequence control logics are programmed for performing automatic start/stop of unit auxiliaries, interlock conditions checking, etc.



Application specific process graphics designed using SIRIUS Picture Editor, provide the operators with real-time information on the SIRIUS Man Machine Interface.

Daily and shift reports made in Crystal Reports, provide information from the SIRIUS historical data server, for analysis and troubleshooting.

Engineering tools - SIRIUS Data Configuration Tools, SIRIUS Picture Editor - required for future upgrading of the system, were also provided.

The project scope included design, engineering and supply of redundant SIRIUS SCADA Software licenses, SCADA system hardware, Programmable Logic Controller, networking equipments, and inverter system.

The project was successfully commissioned in June, 2002.