



**TO WHOMSOEVER IT MAY CONCERN**

**Stator End Winding Vibration Monitoring System of  
Tata Bhira 25MW Hydro Units 3 & 4**

After issuing a competitive international tender TATA Projects awarded a development order on Mechanalysis (India) Ltd to design, supply, install and commission a state of the art fibre optic vibration monitoring system on two hydro generators at the TATA Bhira Power Station.

Mechanalysis with its Partner QPS Photonics Inc. of Canada installed the system in March 2008 but while the two Mechanalysis microprocessor based monitors, model MIL8800 functioned flawlessly, the FBG VibroFibre® sensors needed some modifications to suit the application. TATA POWER COMPANY engineers assisted MIL/QPS in the development of a new cantilever enclosure for the VibroFibre® sensors. After these were installed and new software algorithms developed, the sensors calibrated very linear providing accurate measurements down to the micron level. The complete system has functioned to specification since October 2008 without fault and meets TATA's expectation.

TATA Projects are delighted they selected Mechanalysis as mechanalysis not only understood the application but worked tirelessly to make the system a success. We were impressed with the way Mechanalysis managed the installation by keeping TATA Projects fully informed all along the way.

It should be noted that this FBG Fibre Optic Stator End Winding installation is not only a first in India but a World First applying the FBG technology in this application. At the appropriate time we plan to extend the system in other TATA generating plants.



(N KANNAN)

DEPUTY GENERAL MANAGER

Place: Mumbai

Date : 19.11.2009

**TATA POWER**

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