



## ABOUT THE CLIENT

The electricity sector in Norway relies predominantly on hydroelectricity. Average annual hydropower generation capacity in 2019 was around 131 TWh (around 35 GW installed), making it one of the top 10 producers in the world.

Most of the power plants are either owned by Statkraft (state owned utility company) or municipalities.

IKM Instrutek has been our distributor in Norway for more than 15 years. They have installed hundreds of VM600Mk1 systems in hydro power plants and oil rigs (Snorre, Sleipner etc.)

## KEY LEARNINGS

First VM600<sup>Mk2</sup> successfully installed and commissioned outside Switzerland

Good preparation and remote support from the TCoE were key to validate the configuration of the VM600<sup>Mk2</sup> before commissioning

Commissioning the new VM600<sup>Mk2</sup> constitutes a first reference in the country and contributes to bring further upgrade and retrofit opportunities.

With the necessary knowledge and training, distributors can easily commission the new VM600<sup>Mk2</sup>

**Note: For Meggitt Sales Partners**

# SUCCESS STORY

vibro-meter<sup>®</sup>

## FIRST VM600<sup>Mk2</sup> COMMISSIONED AND INSTALLED OUTSIDE SWITZERLAND

### BACKGROUND

In March 2021 we won an order for the retrofit of two Francis turbines (70 MW each).

Customer wanted an up-to-date machine monitoring solution with no risk of obsolescence and a system offering the possibility of continuous improvement over the next years.

**Key goal was to be able to utilize condition monitoring features in near future, CMS/Big Data digitalization.**

Delivery and installation were critical, as the retrofit needed to be completed by end of August.

### SOLUTION



Figure 1: VM600Mk2 successfully installed at client plant

Due to delay on the end-user's side, we decided it was a good opportunity to supply the VM600 Mk2 instead. Although, system was at early birth when received, IKM and Meggitt managed to get it work in time for installation in August.

The final scope of supply for each turbine was:

- 7x Proximity probe TQ402 / and IQS900 for relative shaft vibrations and phase reference
- 1x TQ403 / IQS900 for axial measurement
- 4x accelerometers (CE620 equivalent) for absolute vibration
- Machine monitoring system: VM600<sup>Mk2</sup> with 2 MPC4<sup>Mk2</sup> and 1 CPUM<sup>Mk2</sup> each



Figure 2: Meggitt TQ402 proximity probes

Engineering (Signal list), installation and commissioning have been done by IKM Instrutek.

## BENEFIT

Axial measurement can be connected to auxiliary channels, optimising the use of channels on MPC4<sup>Mk2</sup> cards

- **Possibility to upgrade easily the MPC4<sup>Mk2</sup> cards with condition monitoring features**, as soon as the new firmware and Vlbrosight Capture will be available (planned for Q1 2022)
- Following the success, **6 additional machines will be equipped with VM600<sup>Mk2</sup> in Norway**, in four other power plants by October -21.
- **Potential to retrofit older VM600<sup>Mk1</sup> installed in more than 70 HPP in Norway**