



# Detecting problems in submersible pumps using ifm's Smartobserver solution

***Submersible pumps do the essential – but dirty work – of transporting sewage to treatment plants. Prone to blockages, ragging, and general wear and tear, pumps need to be monitored to avoid events such as overflow and environmental contamination of public and residential areas.***

But how do you monitor a pump submersed in a wet well and pumping sewage? The conditions are at least described as 'hostile'. Not only is it impractical and costly to monitor pumps manually, there are numerous OH&S concerns. However, pumps are expensive assets and difficult to replace. Which is why an online monitoring solution is ideal. With ifm's remote monitoring solution you can visualise the

condition of your submersible pumps and diagnose issues before they become serious problems. It combines ifm's VSE proven diagnostic technology which uses task specific submersible accelerometers. Data from this system is directly coupled to ifm's SmartObserver software to identify pumping issues which in turn provide current data and warnings via email or text.



Sense and Process

↳ Send data to Smartobserver

↳ Download to Smart Device



“ At Lower Murray Water, we have found vibration analysis on our submersible pumps to be very beneficial. The submersible pumps and subsequently the sewer pump station were frequently receiving call-outs due to blockages. The vibration data captured facilitated quicker response time from our maintenance staff and a better understanding of the levels of vibration produced. The ifm technical team were very helpful throughout installation, setting up communications and monitoring the results. ”

**Clinton Taylor, Mechanical Engineer – Lower Murray Water**

**With this solution the following issues can be detected.**

- Ragging
- Blockage by foreign objects
- Faulty or damaged bearings
- Faulty or damaged seals
- Wear issues and rub issues
- Imbalance
- Cavitation
- Looseness
- Unusually high signatures in grinders and macerators

**Optionally, the system can also monitor:**

- Excess Current
- Sewage Level and Control
- Flow and Temperature

**Direct Comms to PLC via front end dedicated ports is also available for:**

- Ethernet Ip
- Modbus TCP/IP
- Ethercat
- Profinet

Interested in a demonstration of how this solution works? Our team would be more than happy to show you – and to discuss how this can be customised to your specific operational needs.



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