

## Remote Monitoring of Valve Alignment

The SULIVAN remote monitoring system is used by industrial clients to improve the safety and competitiveness of their installations thanks to instantaneous access to the positioning of manual valve alignments.

### Challenge

As with most process industries, nuclear reactors are fitted with large number of manual valves. The open/closed position of such valves is not controlled. Configuration and alignment errors can have significant impacts on the safety and security of installations and subsequently on plant availability.

### Solution

Framatome has designed and patented a system for monitoring valve alignments. Equipped with a wireless sensor, the system can be simply fitted to the handwheel (or operating lever) of the valve to be controlled.

The information, relating to the extent to which the valve is open, is communicated in real time to a digital monitor via a wireless communication network.

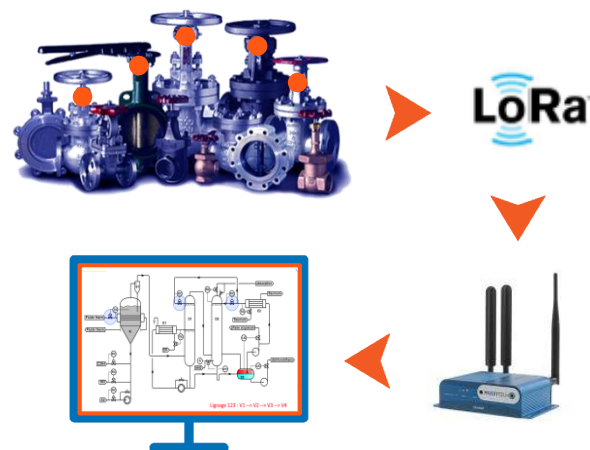
This monitoring system is fully flexible, and can be tailored to the needs of the plant operator in terms of:

- Number of valves to be controlled
- Identification of any alignments that pose a risk and which must therefore be monitored
- Location of the digital monitor (main control room, lockout/tagout room, etc.).
- Characteristics of the wireless network
- The bi-directional real-time interactions with the operator (depending on the use of the valve and the safety rules)

### Customer benefits

- Improved industrial performance thanks to reduced alignment errors
- Lower production losses thanks to reduced equipment damage and installation outages

**Your performance  
is our everyday commitment**



© Framatome – Valvemetal  
Standard example of implementation of the solution - digital transmission of valve position

### Characteristics

- Sensor comprising an inertial measuring unit and accelerometer, which allows for any valve movement to be detected and its position displayed.
- Very easy to install
- Can be fitted to any type of valve
- Wireless communication using LoRa technology
- Cybersecurity by design : can be integrated into the industrial architecture
- Capgemini Engineering multi-application platform fitted with advanced functionalities (position indicator, detection of configurations that pose a risk, etc.)

### Key figures

**100 significant events** / year worldwide linked to incorrect valves alignment

**30 seconds** to transmit a valve position change report to the main control room to bolster the inspection process

**Contact:** [monitoring-and-diagnostics@framatome.com](mailto:monitoring-and-diagnostics@framatome.com)  
[www.framatome.com](http://www.framatome.com)

The data and information contained here in are provided solely for illustration and informational purposes and create no legal obligations by Framatome. None of the information or data is intended by Framatome to be a representation or a warranty of any kind, expressed or implied, and Framatome assumes no liability for the use of or reliance on any information or data disclosed in this document. ©2021 Framatome. All rights reserved.