

# FLUVEIS

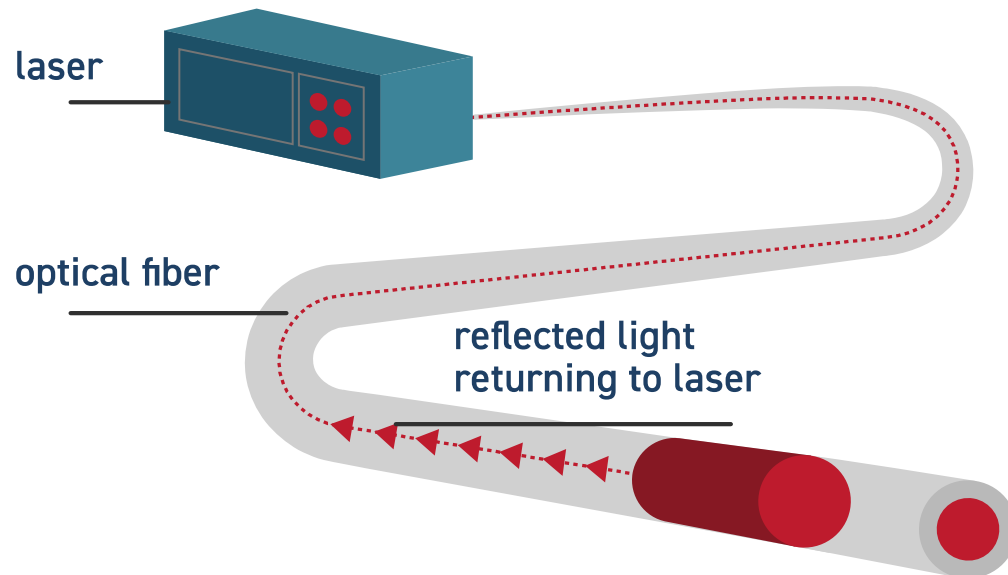
WE CARE ABOUT YOUR CRITICAL EQUIPMENT. WE MONITOR IT.

FLUVES



## MONITOR EVERY METER, EVERY MINUTE FIBER OPTIC SENSING TECHNOLOGY

((( Sensor temperature & acoustic source



ATEX PROOF

EXTREMELY LONG  
RANGES

HIGHLY ACCURATE

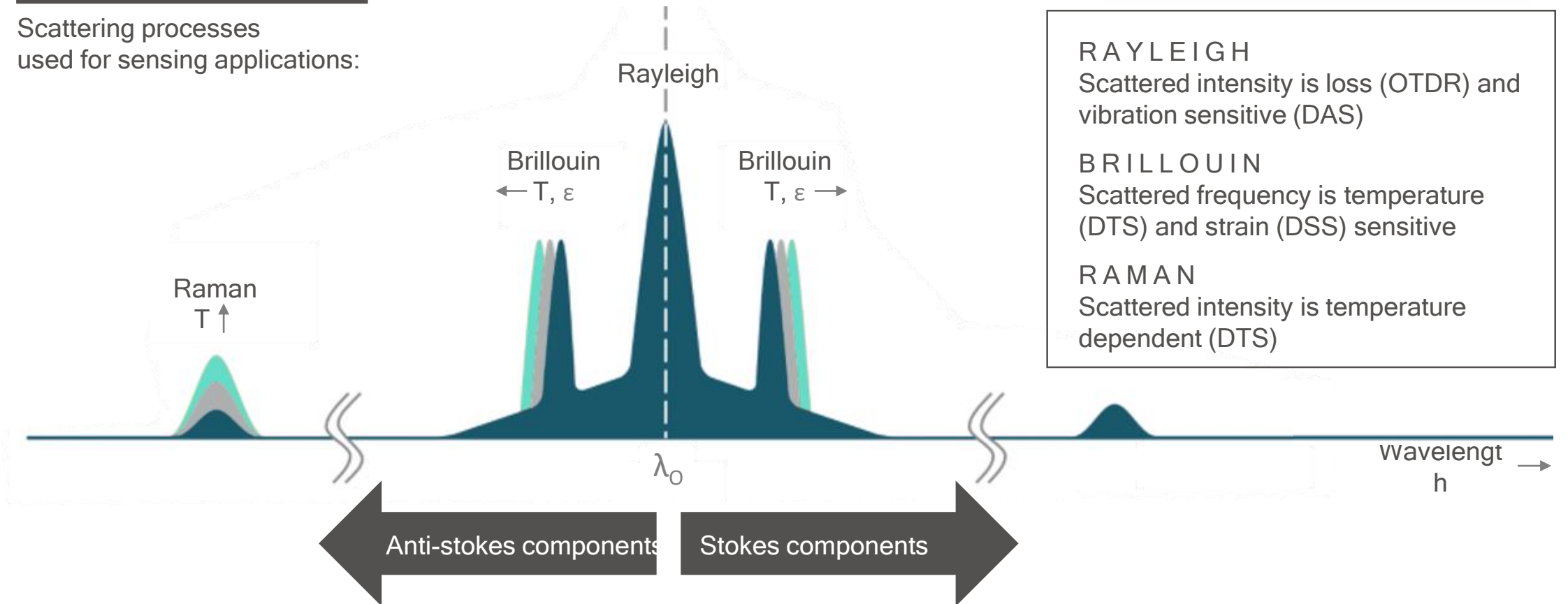
COST EFFECTIVE

## THEORETICAL ASPECTS OF FIBER OPTIC SENSING

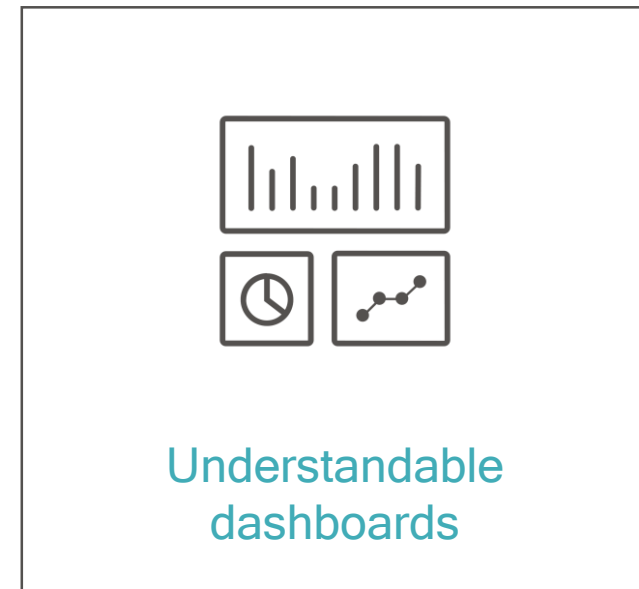
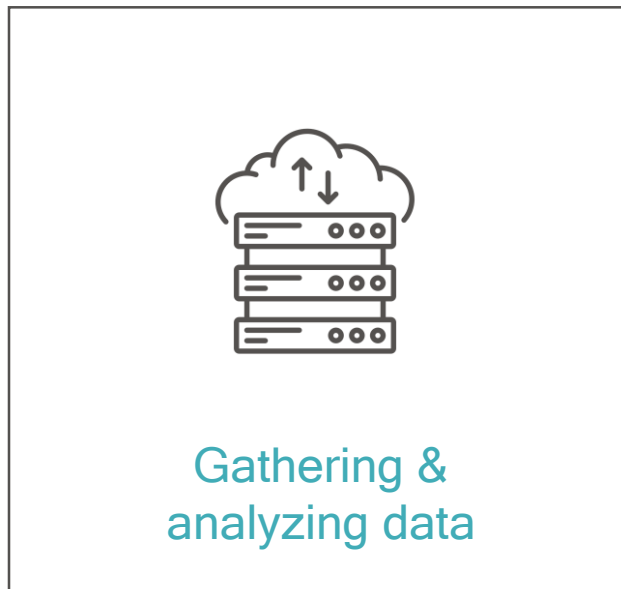
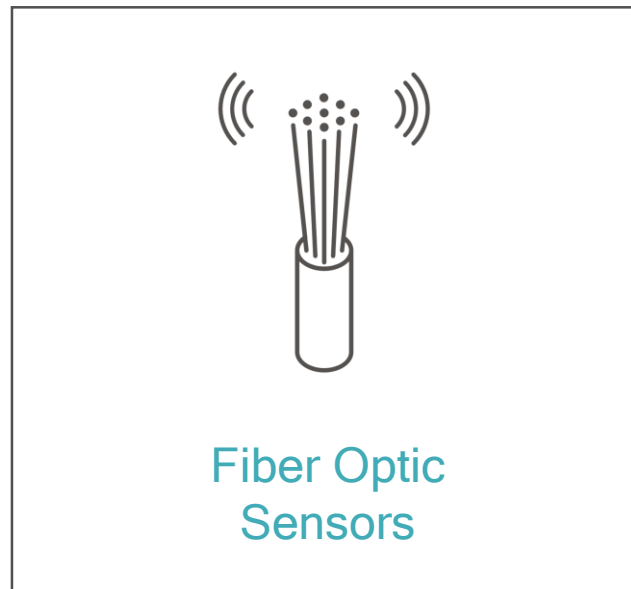
LASER,  $\lambda_0$

Scattering processes used for sensing applications:

Scattering medium

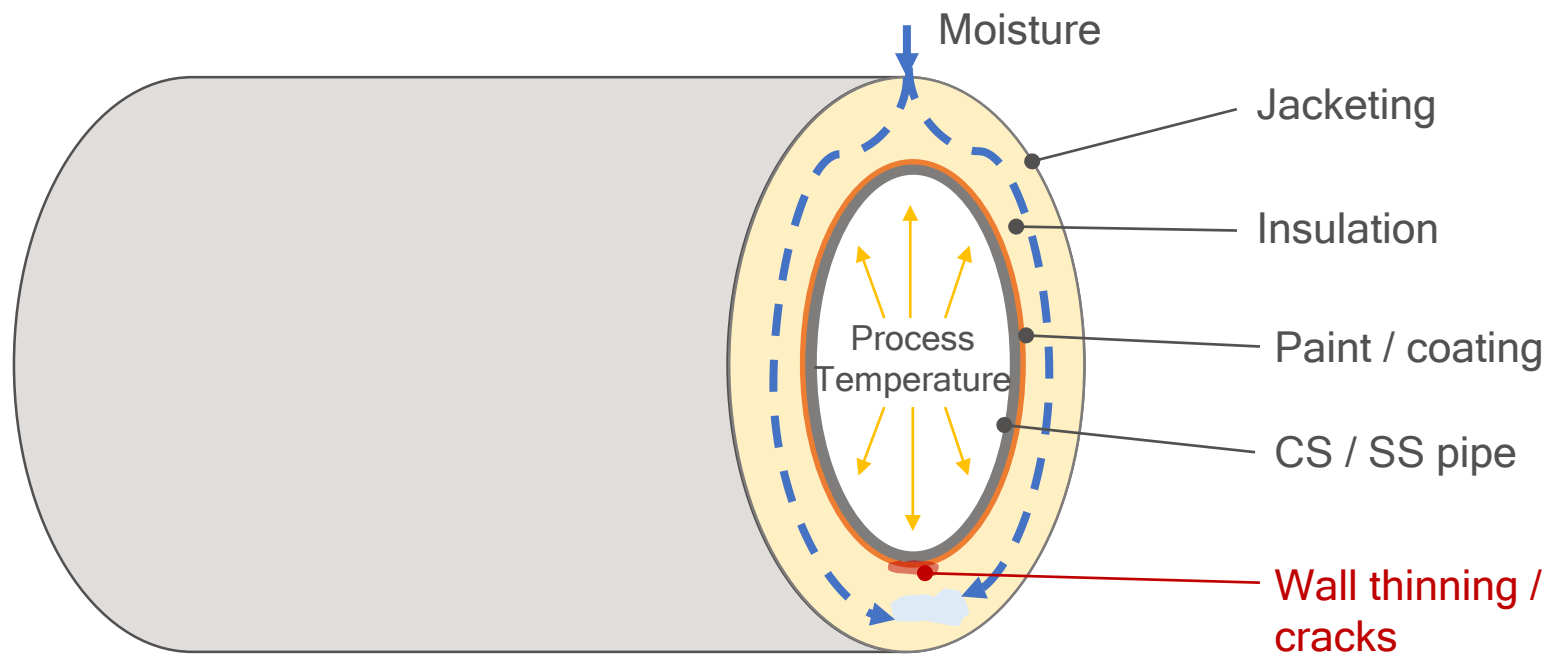


## YOU'RE ALL SET WITH OUR PREDICTIVE MAINTENANCE PLATFORMS



## WHAT IS CUI?

Corrosion Under Insulation can occur on insulated pipes and equipment



## HOW DOES FIBER OPTIC MONITORING WORK? 1) INSTALLATION OF THE FIBER

- A specialty optical fiber is attached along the whole length of the pipeline.
- It can be placed on the outside of the cladding. No need to dismantle anything.



## HOW DOES FIBER OPTIC MONITORING WORK?

### 2) Connect a sensing system (DTS, DAS).

- Can be placed anywhere

### 3) Computation server processes raw data and pushes results to the cloud via network or 4G.





## HOW DOES FIBER OPTIC MONITORING WORK?

### 2) Connect a sensing system (DTS, DAS, DSS).

- Can be placed anywhere

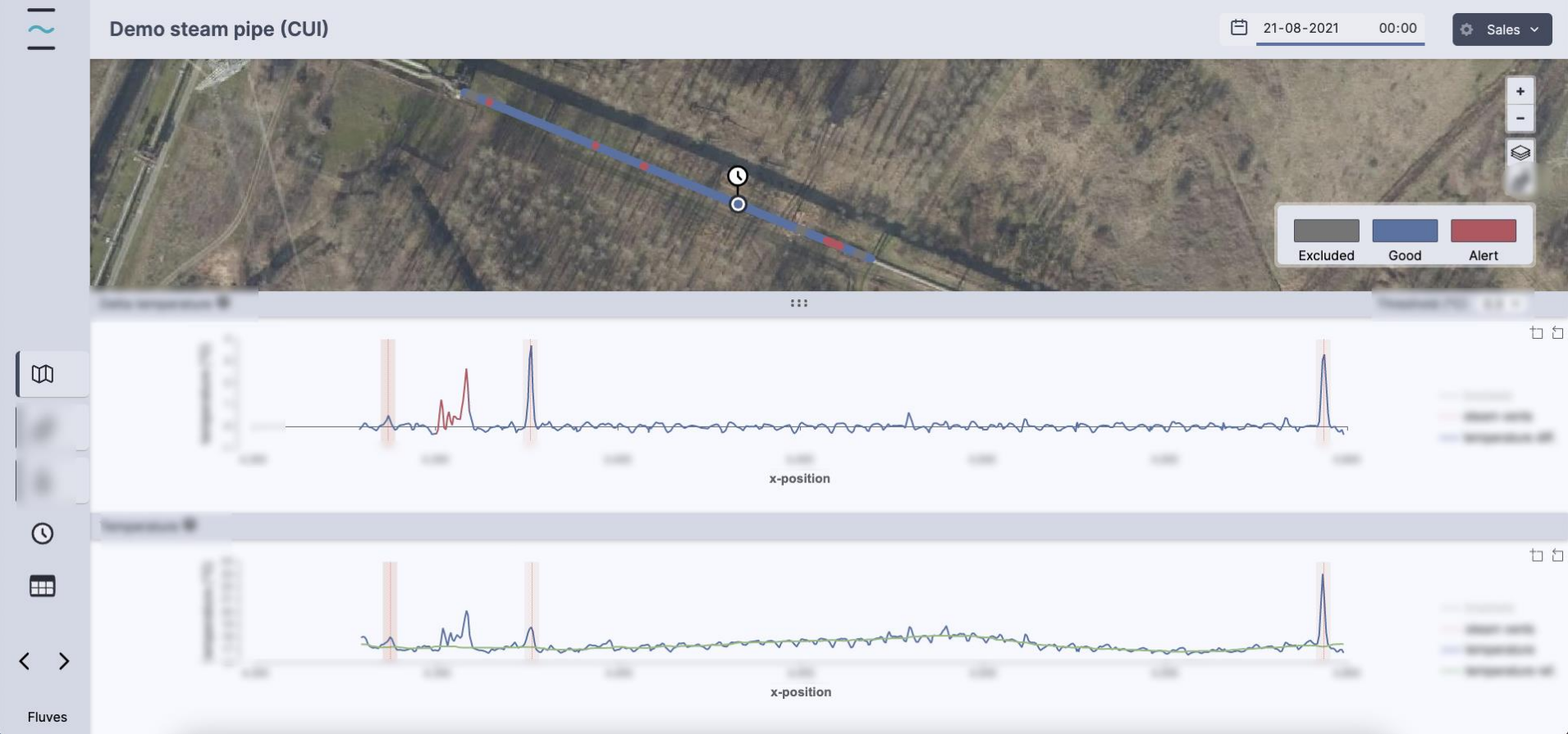
### 3) Computation server processes raw data and pushes results to the cloud via network or 4G.

### 4) Our in-depth analytics software converts the raw data into understandable metrics.

### 5) An online dashboard visualizes the insights and alarms the user when a problem were to arise.



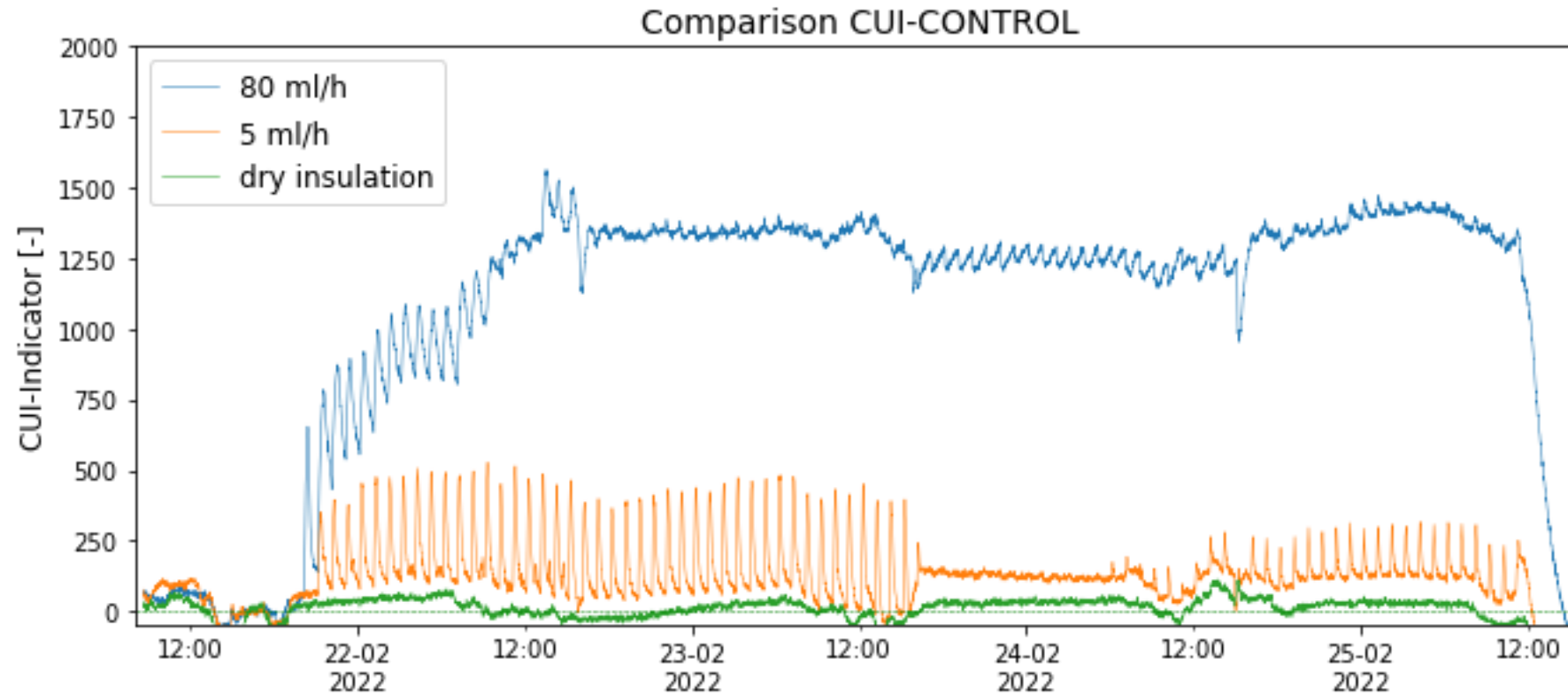
# CUI - DASHBOARD



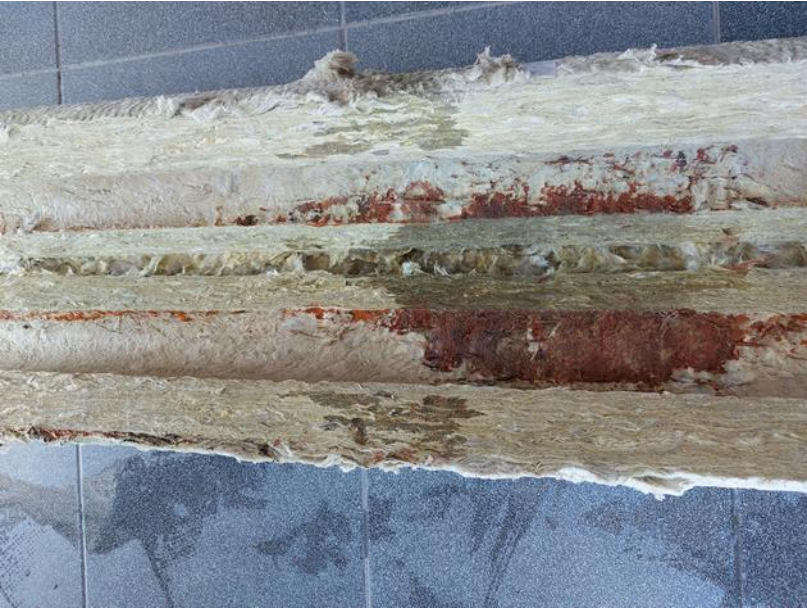
PRAKTIJKLAB CORROOSIE



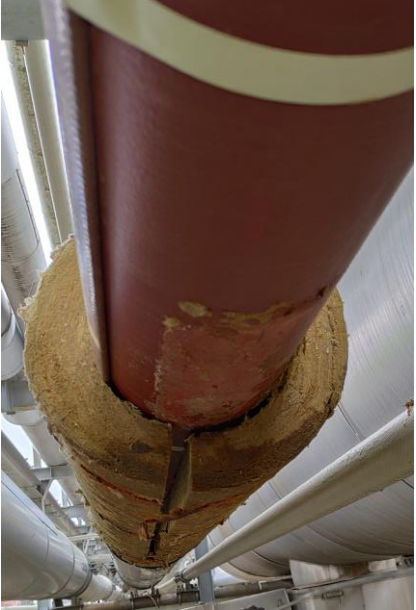




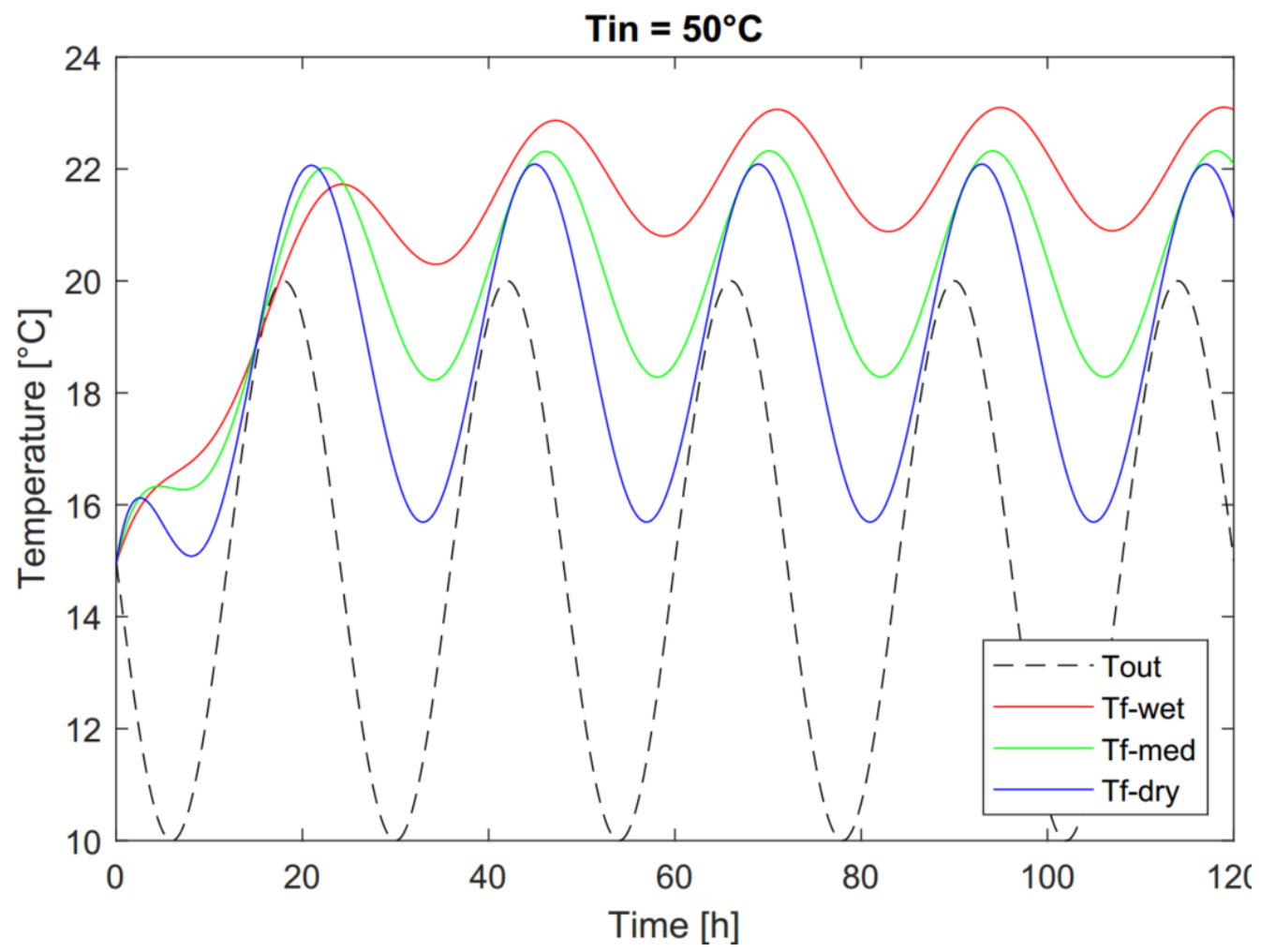
- Differences between the pipes with 5ml and 80ml water injection per hour could clearly be detected
- Difference between dry pipe and pipe with 5ml per hour injection could clearly be detected



CUI - CASE STUDY A

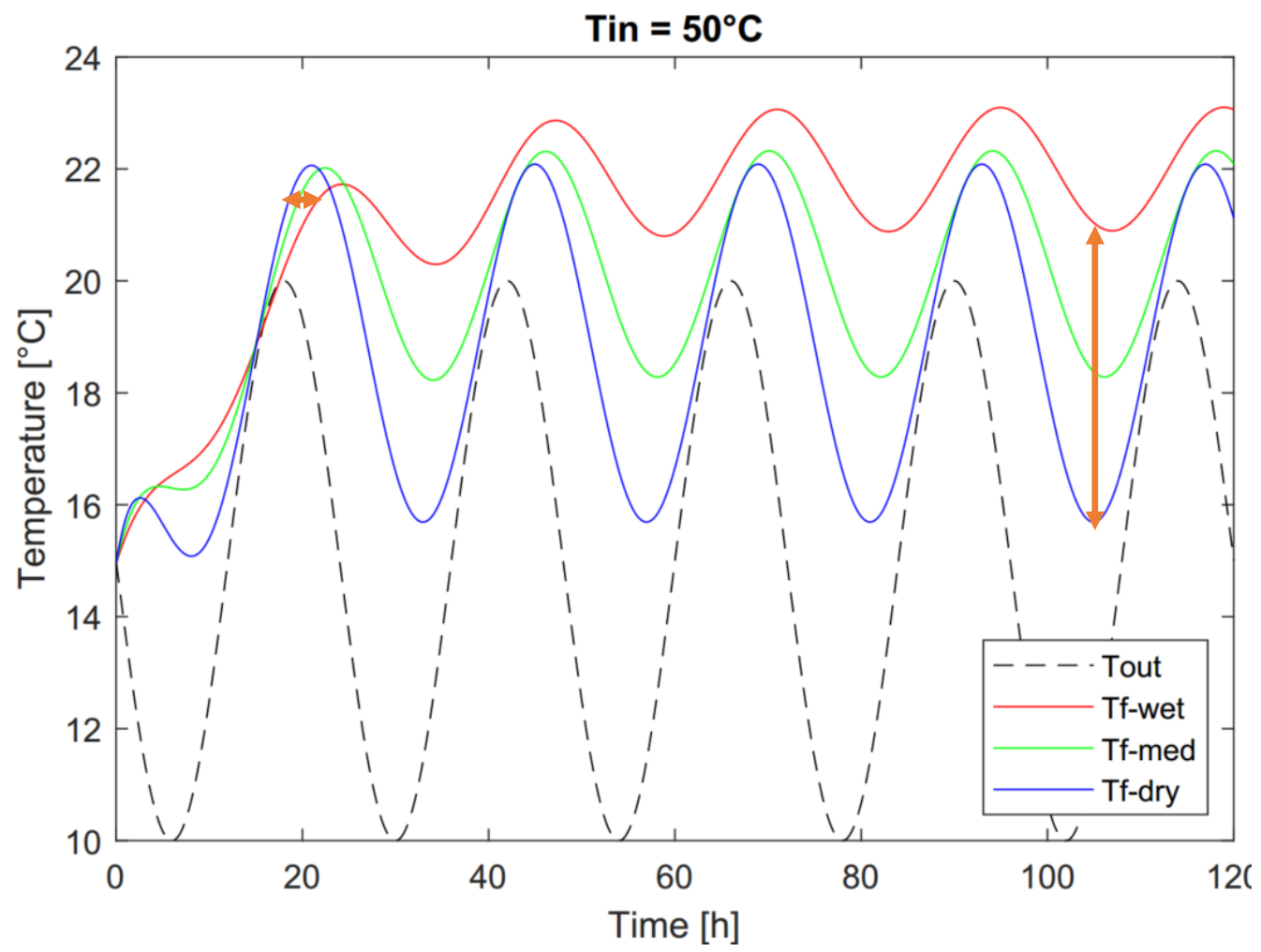


# MODELING INSULATION



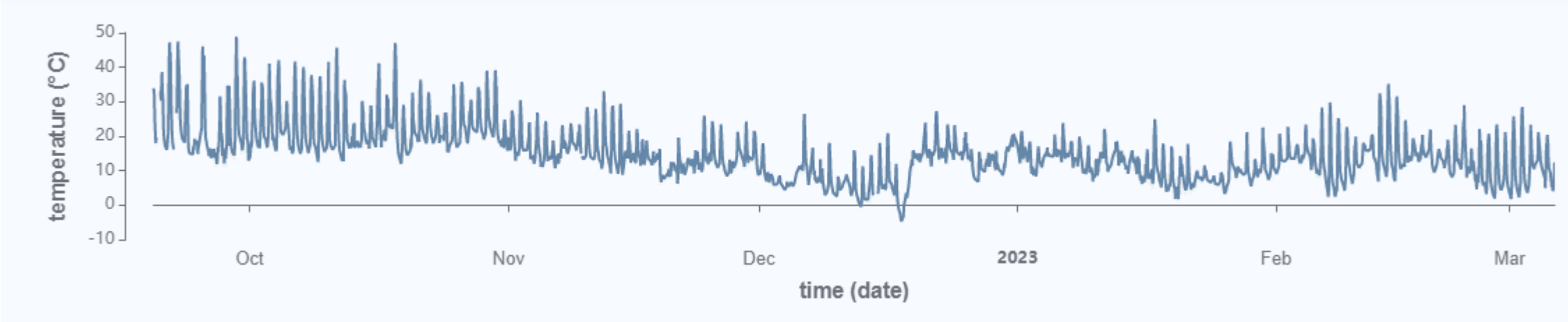


# MODELING INSULATION

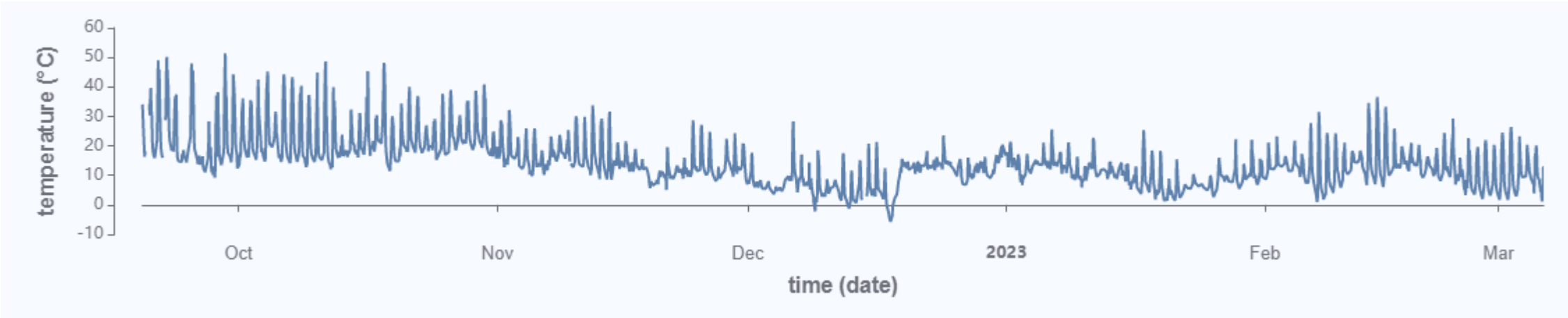


# TEMPERATURE HISTORY OF EVERY POINT

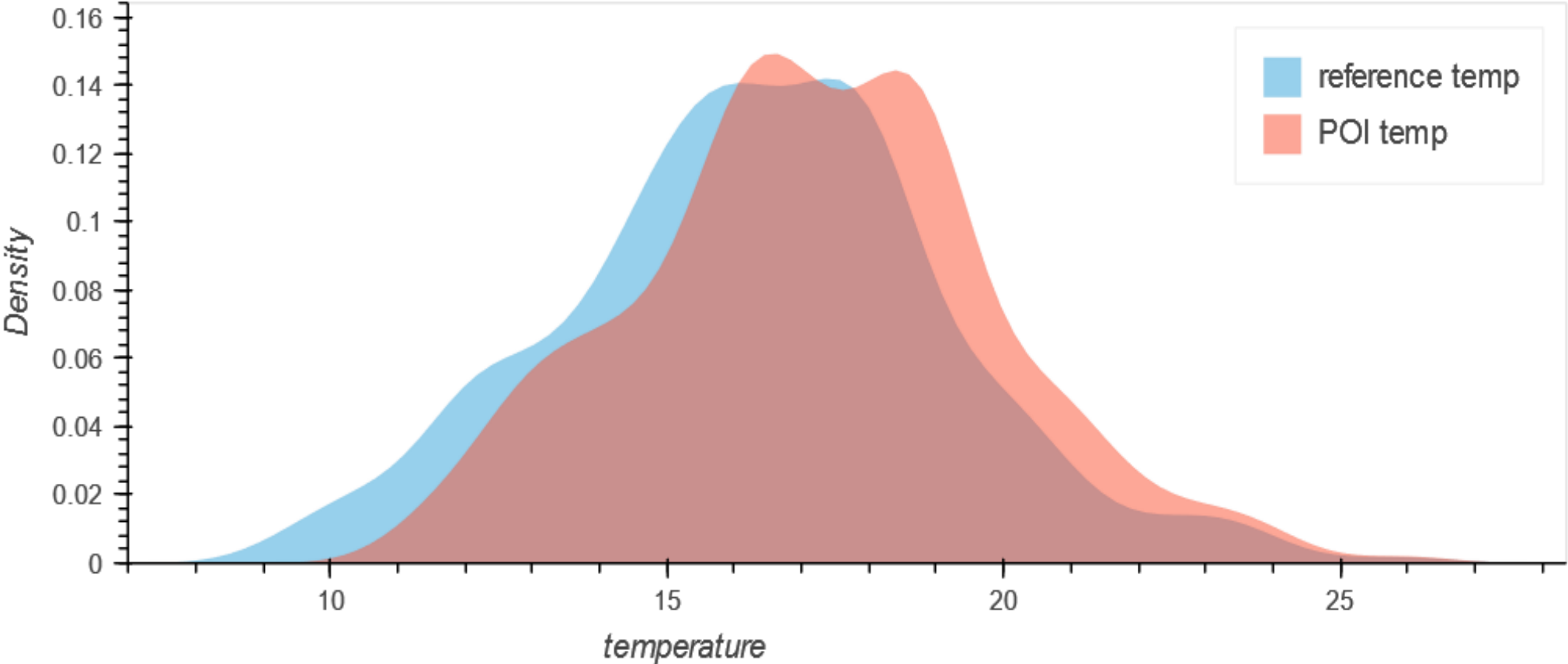
A



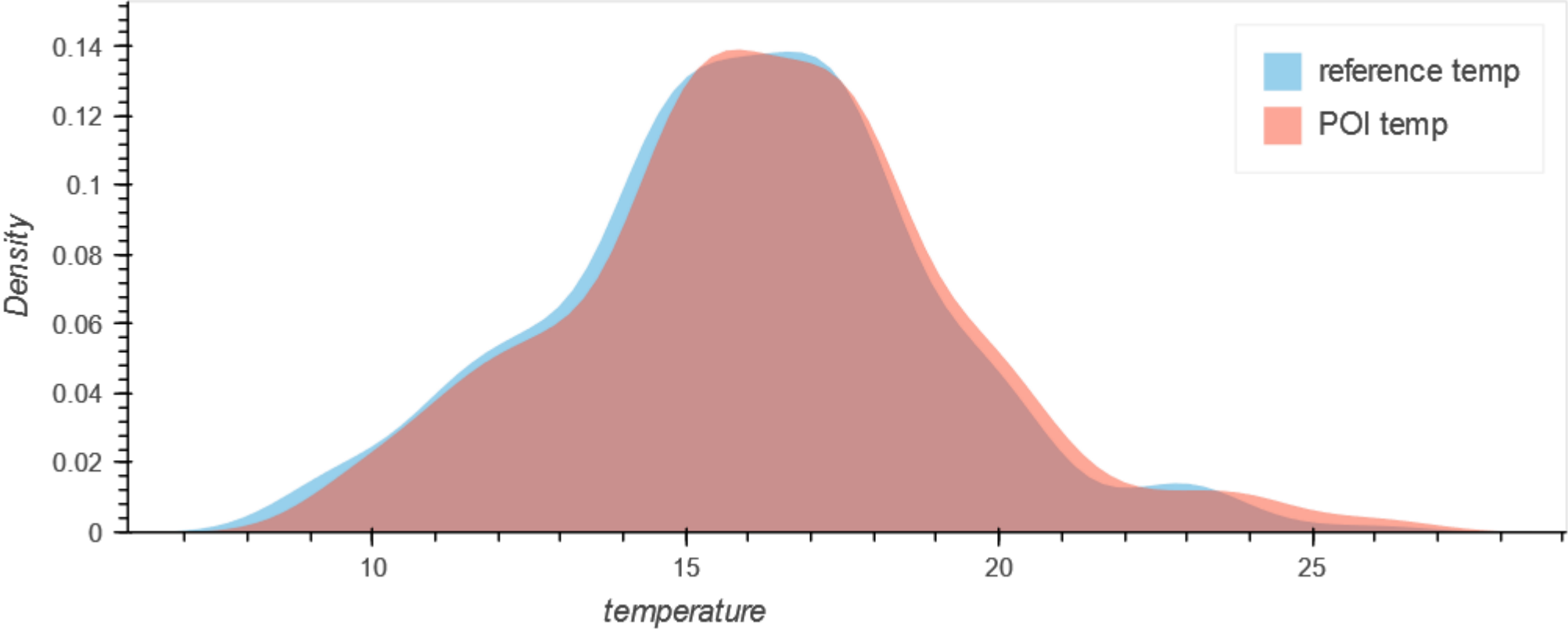
B



# HIGH TEMPERATURE + DELAY: WET INSULATION



# HIGH TEMPERATURE + NO DELAY: REDUCTION IN THE INSULATION



Email us: [sales@fluves.com](mailto:sales@fluves.com)

Call us: +32 9 346 85 30

FLUVES

By talking to our clients, we are still discovering new industrial problems where fiber optic sensing seems to be the best solution.

SO LET'S TALK!



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