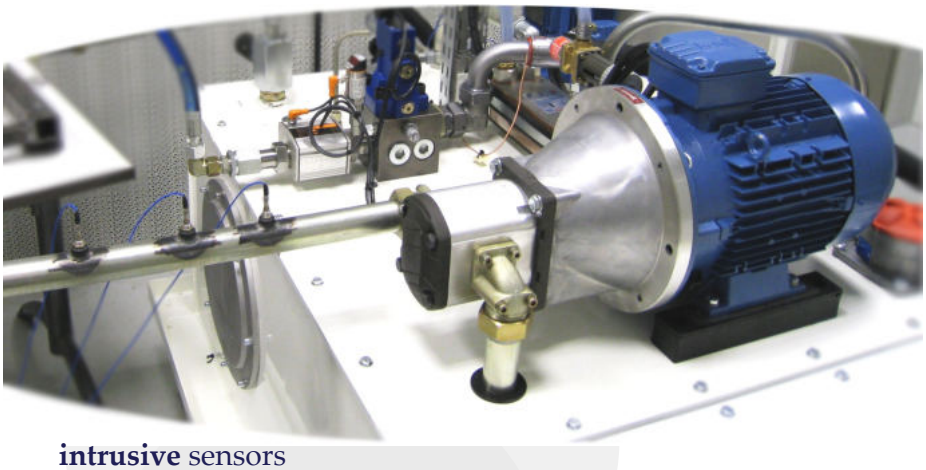
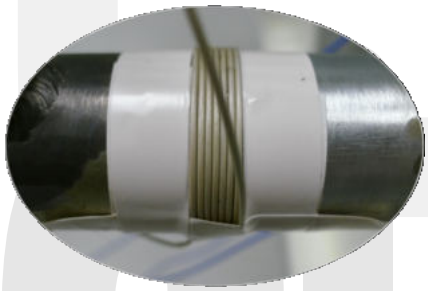
PipingCell

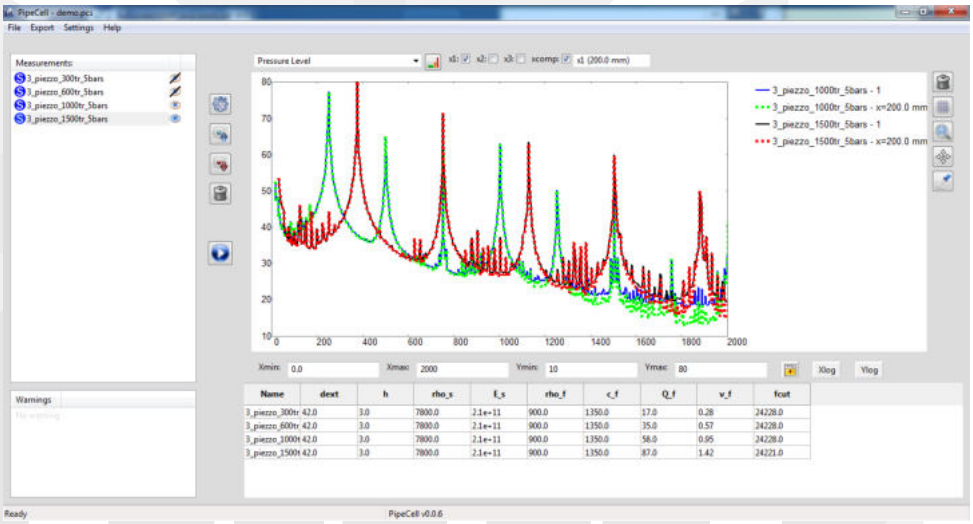
"PipingCell is an advanced measurement and analysis tool for piping applications"



intrusive sensors



non-intrusive sensors



PipingCell enables:

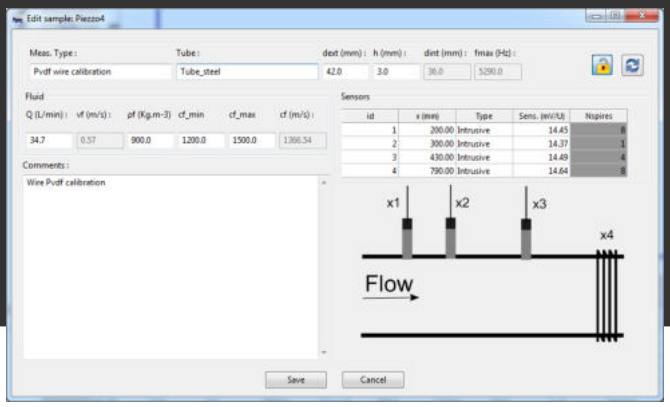
- ↪ either **intrusive** or **non-intrusive** measurement of **pressure pulsations**
- ↪ **mapping** of pressure-induced dynamic stresses along pipe
- ↪ **monitoring of hydraulic state** of internal fluid of connected circuit
- ↪ **intrinsic characterisation of sources** of pressure pulsation (pumps, compressors, ...)

The users **benefit** from a **reactive** and **skilled** hotline service.

Prepare to be **MATELYS** *approved !*

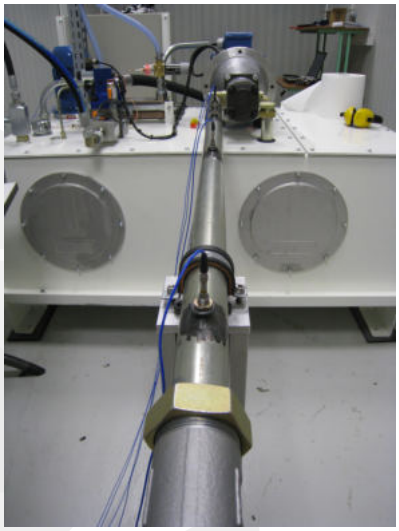
PipingCell is a software product by MATELYS-Research Lab > https://pipingcell.matelys.com

PipingCell



BROAD APPLICABILITY

- Pipe wall **material** (steel, cast iron, copper, PVC, ...)
- Pipe **diameter** from 10 mm to 2 m
- Wide range of **operating conditions** (flow speed and head pressure)



TWO TYPES OF SENSORS

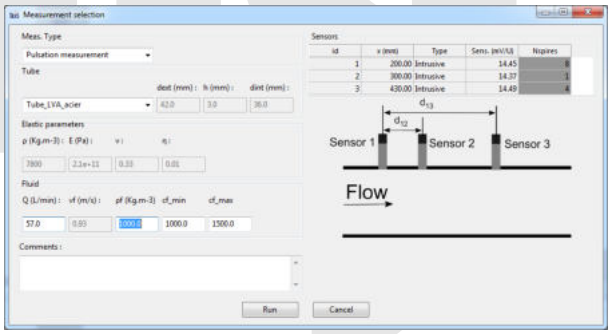
- Classical **intrusive** sensors : Use your existing gear!
- **External strain sensors** : Maintain the piping in operation!

POST-PROCESSING OF MEASURED PRESSURE PULSATION

- Extrapolation of **pressure pulsation along the pipe** from localised measurements
- Measurement of the **impedance** of hydraulic circuit
- Measurement of the **actual speed of sound** in the internal fluid/gaz

CHARACTERISATION OF SOURCES OF PRESSURE PULSATION

- Enables **prediction of pulsations** into a given circuit
- Uses **multi-load** characterisation procedure
- Uses **flow-independent** single-step loading circuit
- **Complete source identification**:
  blocked pressure and **impedance**



KEY FEATURES

- **Measurement** and **post-processing** modes
- Comprehensive **project** organisation
- Compute actual **fluid-structure coupling**

MATELYS Research Lab

PipingCell is a software product designed, developed, distributed and supported by MATELYS-Research Lab
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