

HYDELTA WP1E - H2 FLOW SPEED IMPACT ON INTEGRITY

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- › When the same amount of energy as transported with natural gas is to be delivered in the form of hydrogen, the flow velocity has to increase significantly.
- › It is essential to understand whether the existing hardware will experience a larger integrity risk when flowing with hydrogen than when natural gas is transported

🎯 The objective is to understand the impact of an increased flow velocity of H2 on the different components of the existing gas transport and distribution infrastructure. In particular where it can create integrity threats or malfunctioning of instruments such as flow meters, filters, flow straighteners, dampers, mixers, control valves or other components.

1. Noise generation in piping and pressure reduction stations
2. Flow induced Pulsations and vibrations
3. Intrusive equipment such as a thermowells
4. Metering accuracy, in particular for turbine, rotor and US meters
5. Erosion

