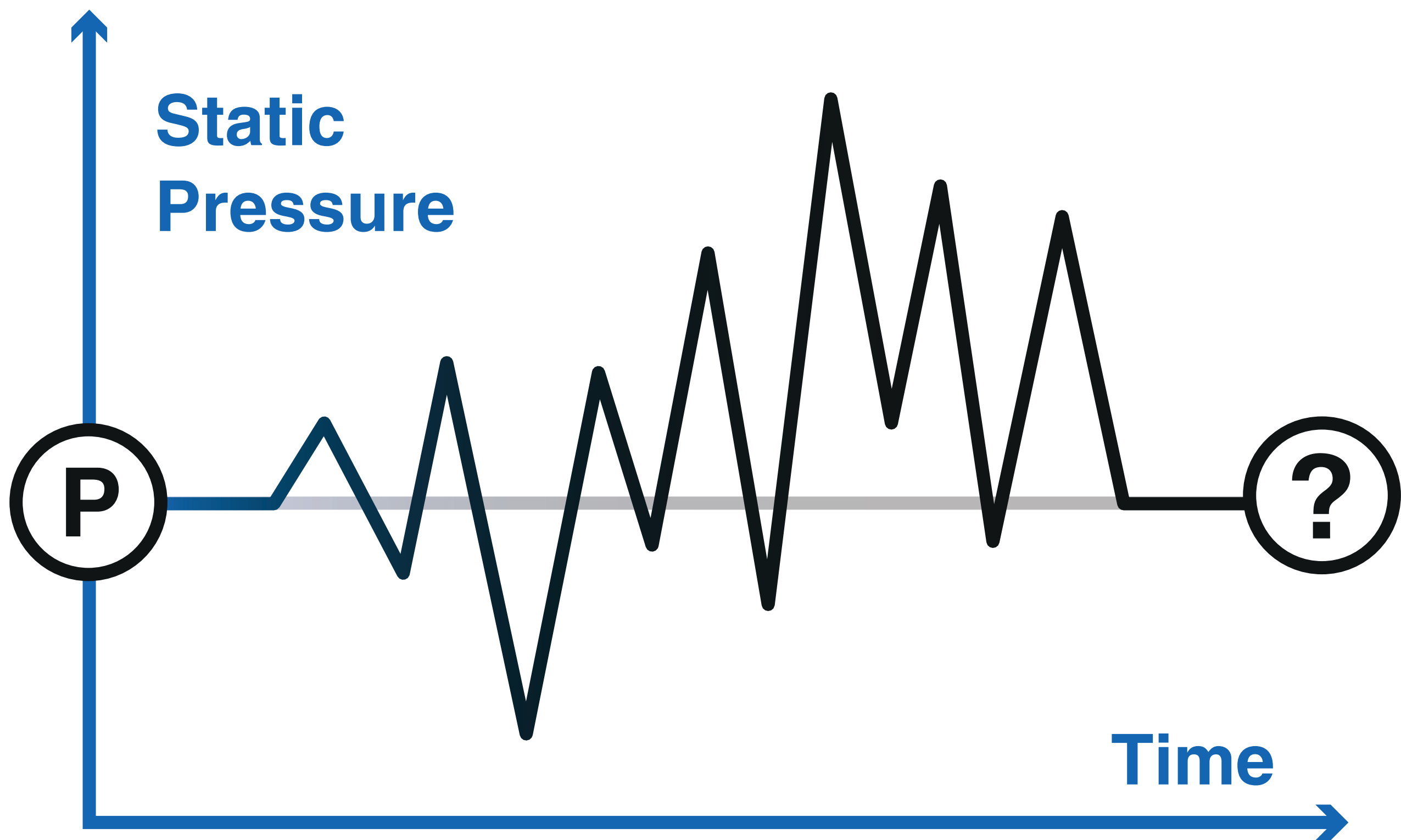


**Which pressure
transmitter to
choose for your
hydrogen
measurement?**

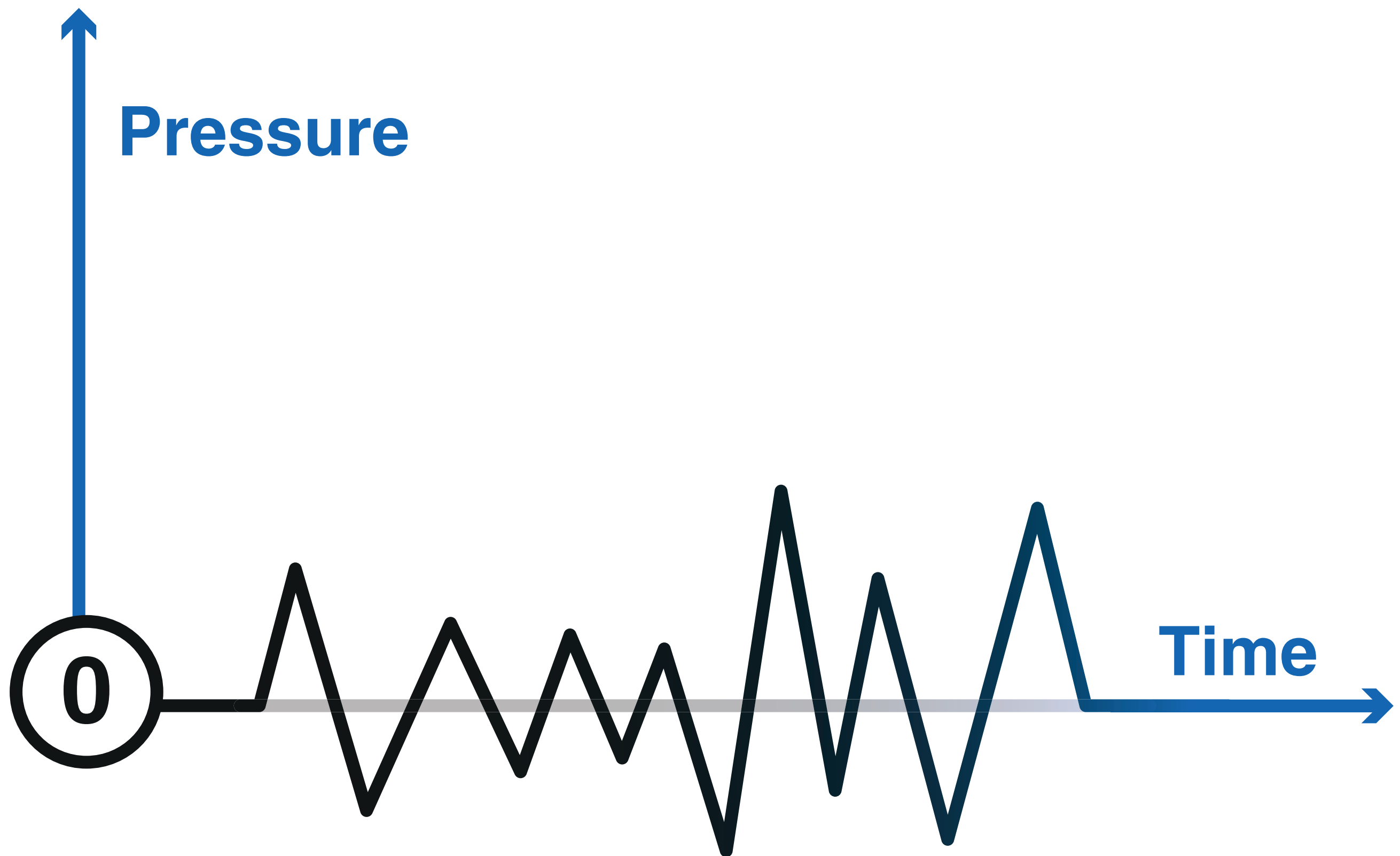
Hydrogen can cause serious problems for pressure transmitters



Strange static pressure behaviour

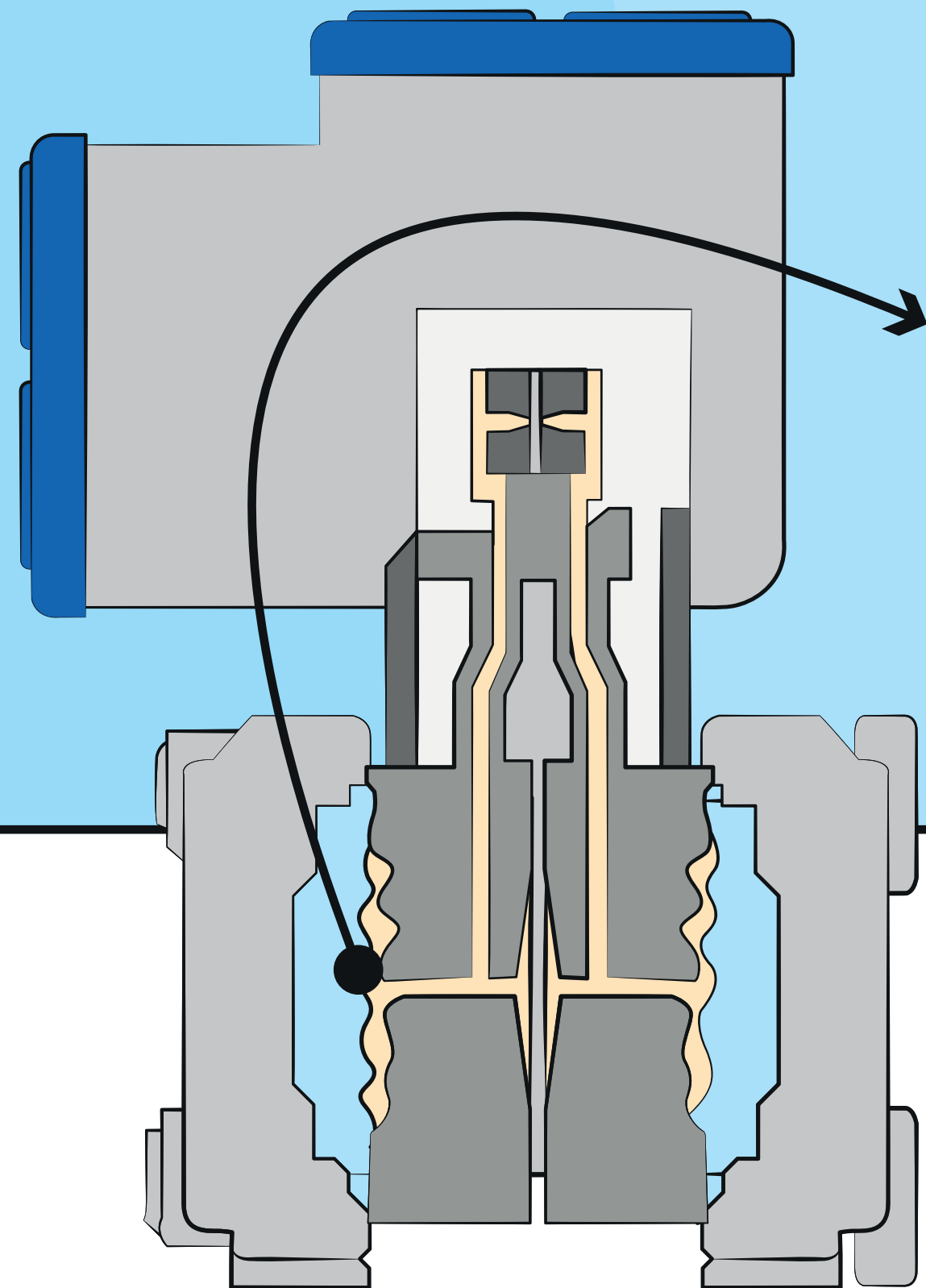


Very high and unpredictable zero drift



Did you know that **hydrogen penetrates** transmitter diaphragms?

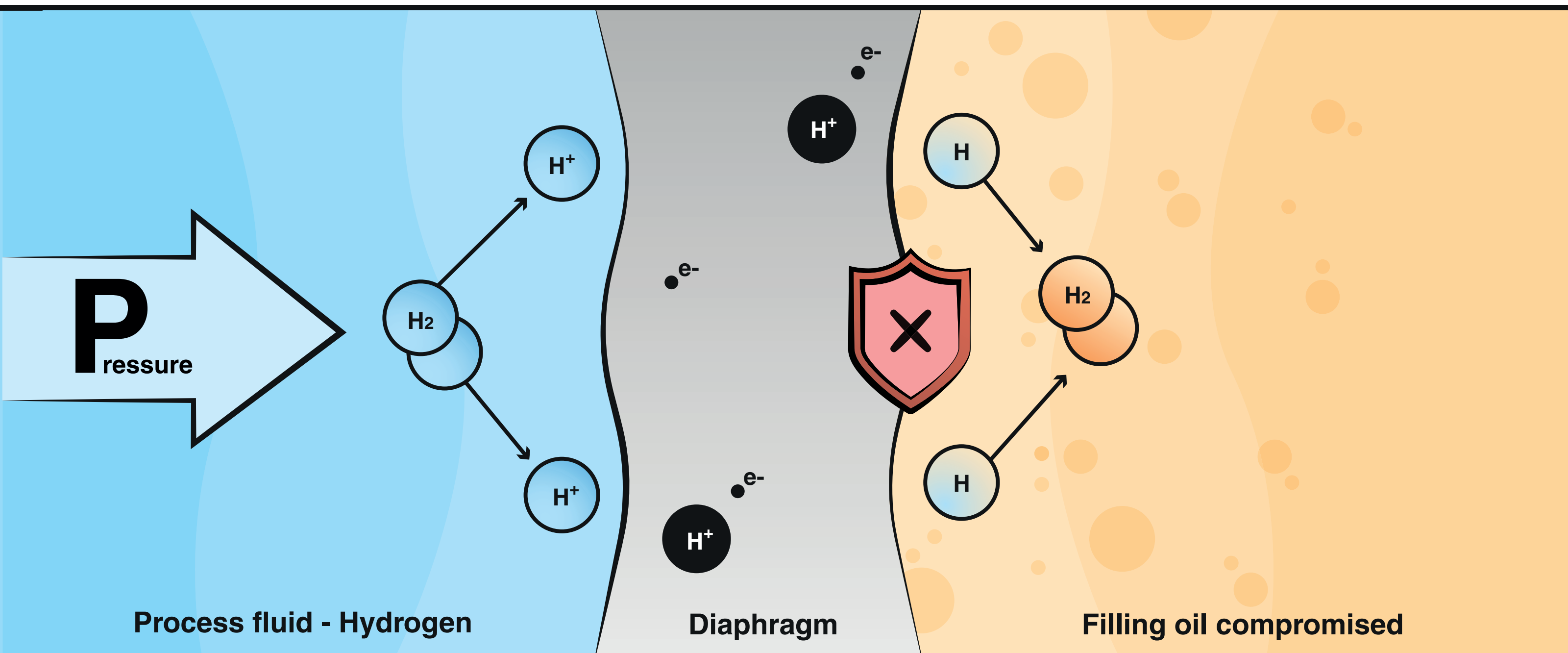
Process fluid
Hydrogen



Pressure
transmitter

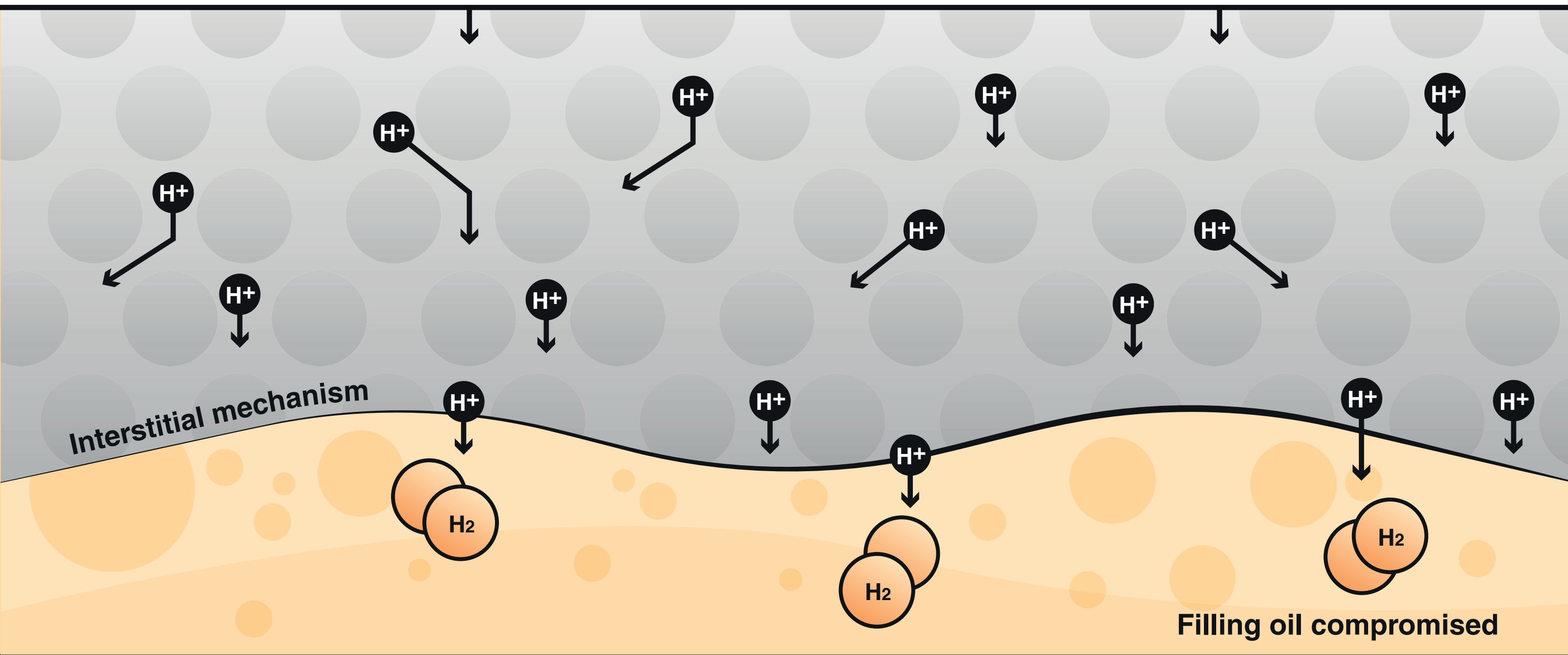
Measuring cell

Hydrogen is the smallest atomic element



It penetrates the thin process diaphragms
of pressure transmitters

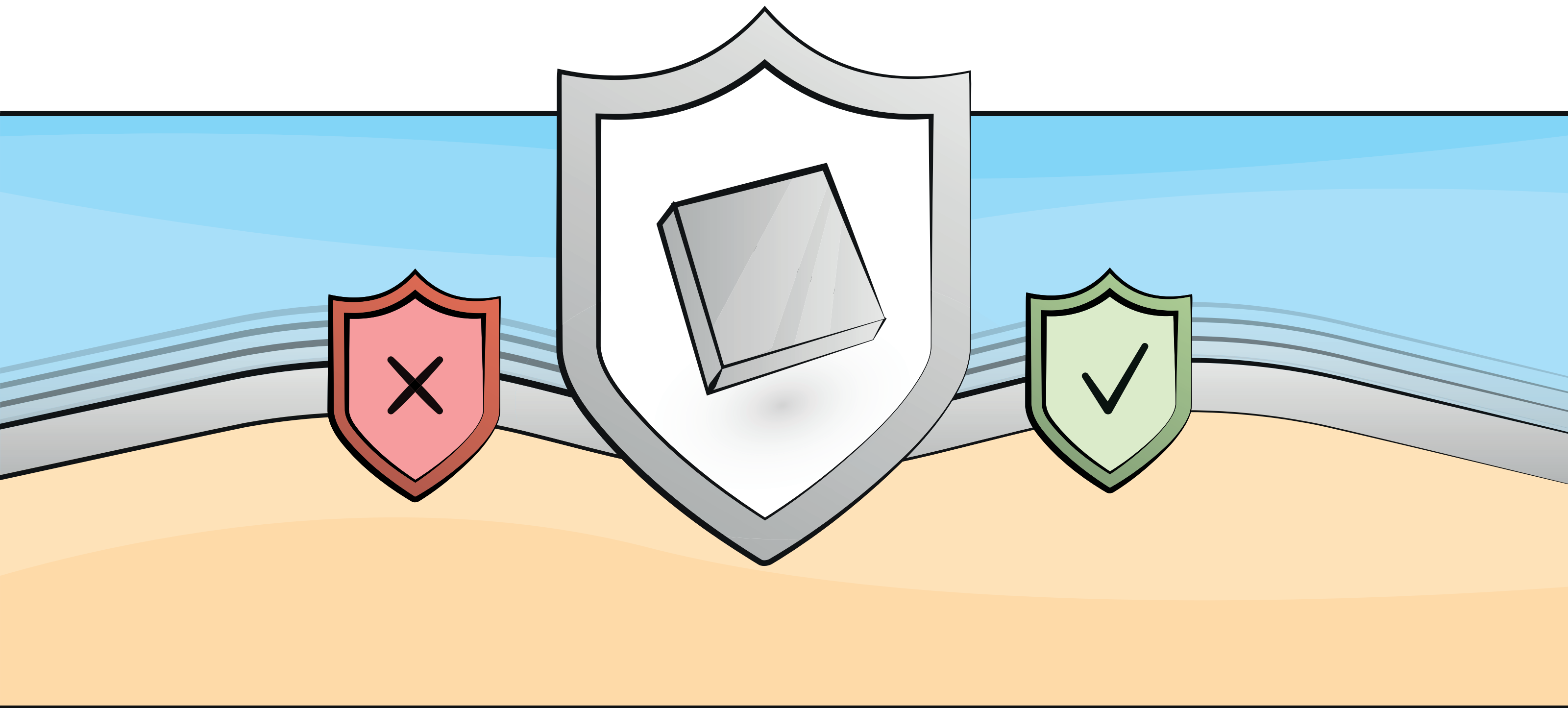
After passing through the membranes, the H^+ ions combine into H_2 gas molecules



The filling oil is compromised

How to avoid
the risk of bad
pressure
measurements?

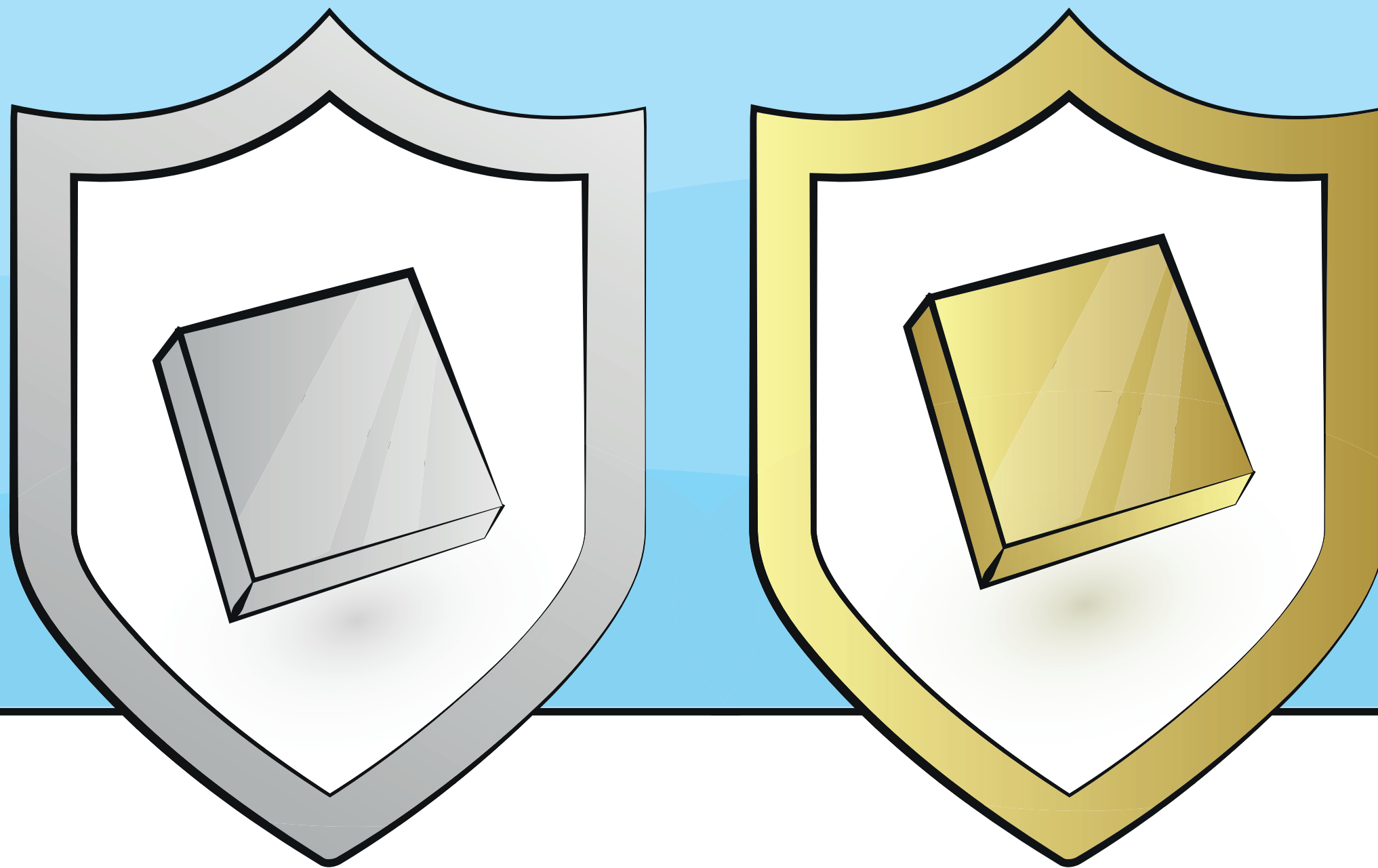
**Select diaphragms
materials that are
insensitive to permeation**



Avoid metals with a
high **nickel** content

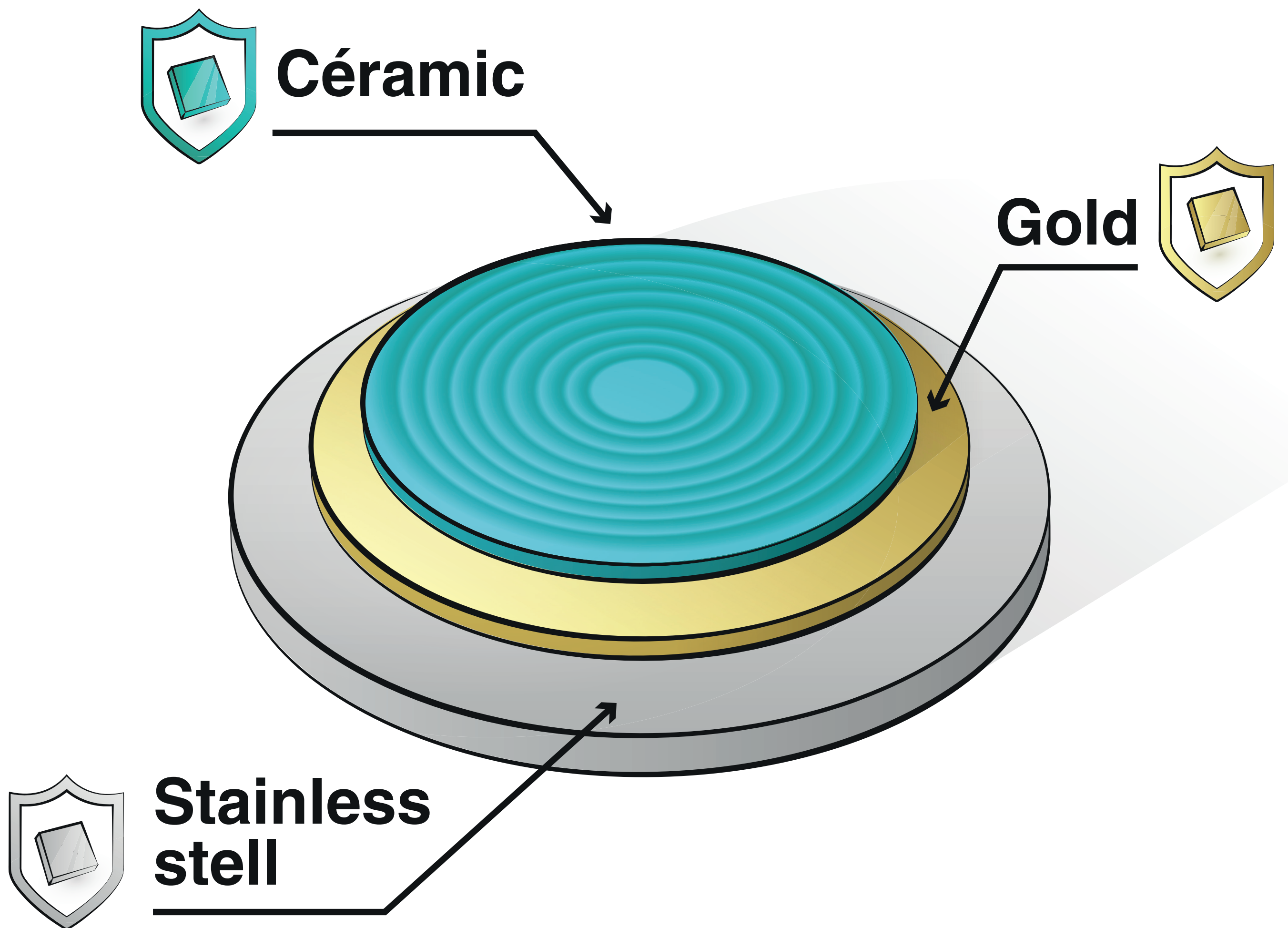


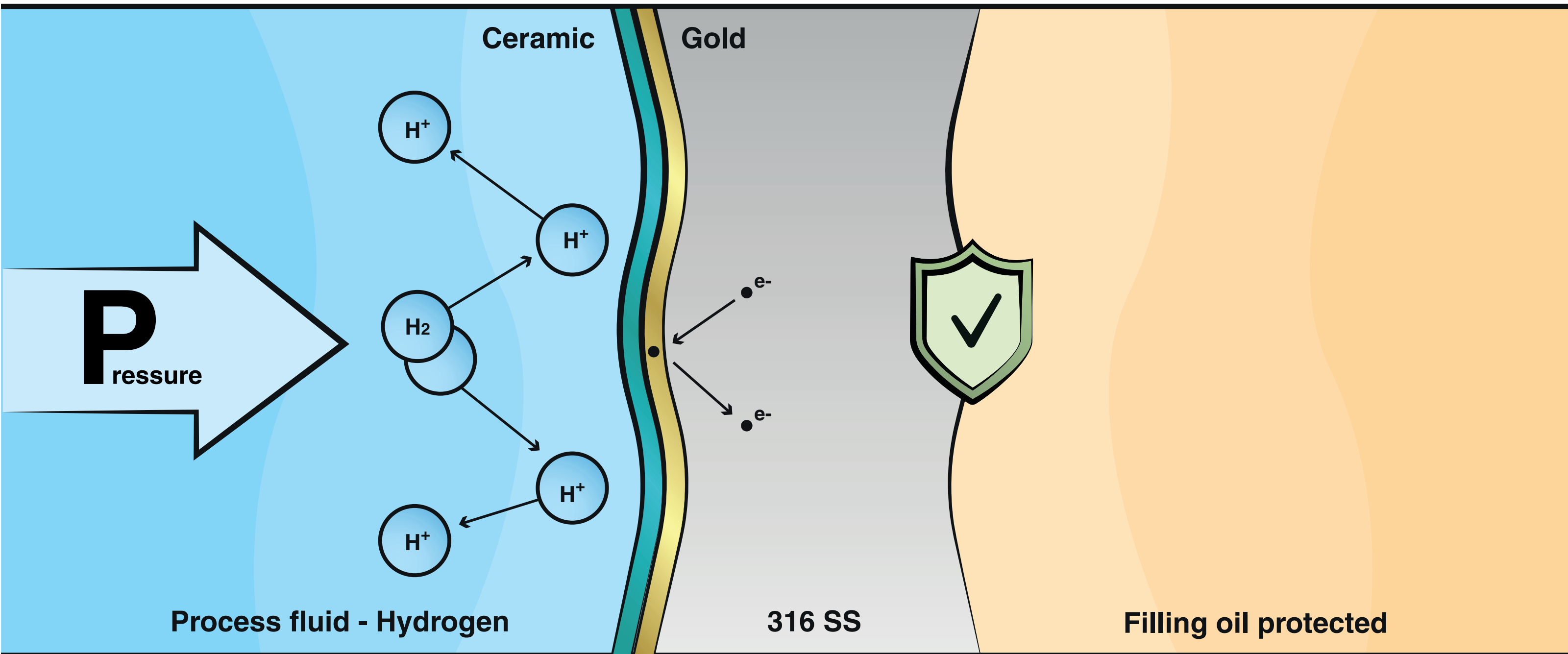
Gold-plated stainless steel diaphragms offer good protection



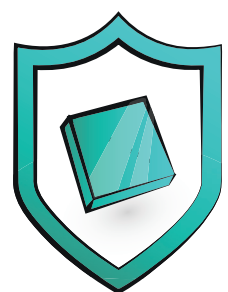
But this is not enough

Unique **Hydro Seal** design developed by **Fuji Electric**





Hydro Seal design



Minimize the galvanic reaction



Reduce the atomic diffusion

Recommended
where hydrogen
permeation is
most serious



**Don't stay alone with your
hydrogen challenges**



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