

GENERAL

Caproco offers a high integrity hydrogen probe which utilizes a non-intrusive design to measure the level of hydrogen present in a system.

The probe is available in two configurations. The first is a patch unit which is a probe body welded directly onto the pipe. The second option is a saddle assembly, which consists of a saddle probe which is welded onto the pipe.

Both styles are designed to capture hydrogen permeating through the pipe wall and channel this gas into the electronic or mechanical measuring head. The probe is designed to simulate a material delamination or inclusion which may be present in the pipe or vessel under study, as well as monitor the production of hydrogen produced from corrosion activity.

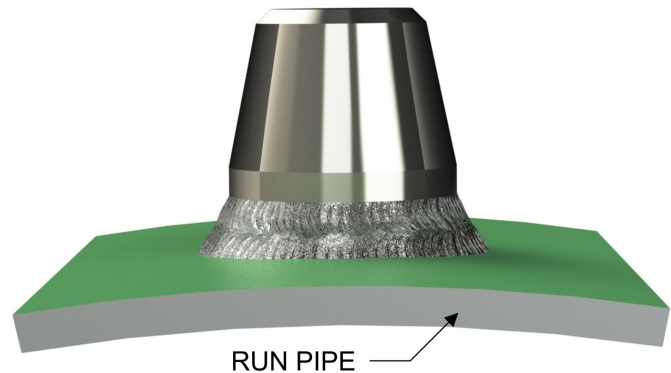
APPLICATION

When the patch / saddle probe is affixed to the pipe, any hydrogen generated by an internal corrosion reaction will permeate through the pipe wall, be trapped by the patch body and be detected by the sensing element. The saddle mount design consists of a probe body of similar radius to the pipe being monitored, which creates a tight seal once it is welded onto the pipe. The saddle design offers a larger surface area in which gas may be captured. Measured output is related to the ambient hydrogen concentration, which can then be used to calculate an approximate rate of corrosion.

The Caproco patch / saddle hydrogen probe provides an instantaneous and non-destructive measurement of the hydrogen levels present in a system. The probe is maintenance-free due to the fact it has no moving parts, and its non-intrusive design makes it ideal for systems that undergo pigging.

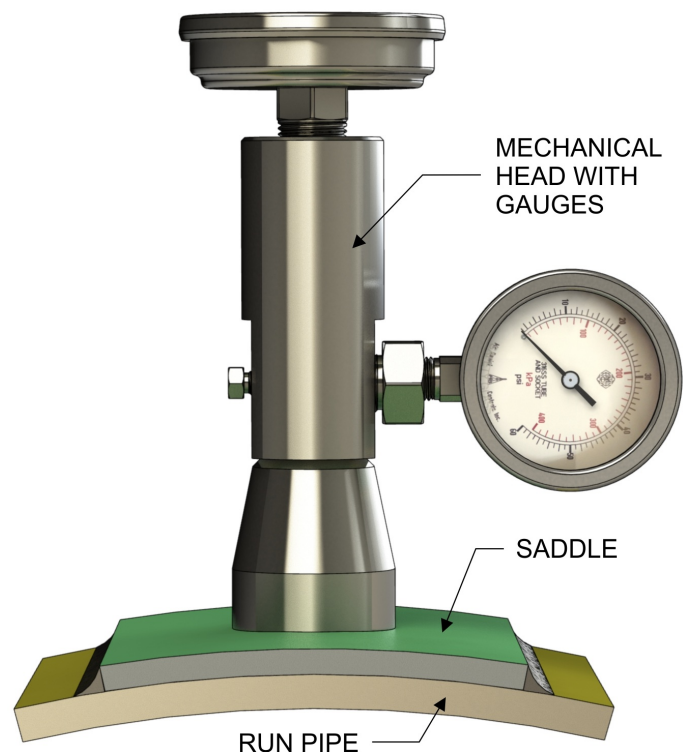
SPECIFICATIONS

Caproco patch / saddle probes are typically manufactured from material similar to the piping being monitored. Assemblies are available in alternative materials upon request. The patch / saddle assemblies are designed to be welded onto the pipe.



RUN PIPE

PATCH PROBE



MECHANICAL HEAD WITH GAUGES

SADDLE

RUN PIPE

SADDLE PROBE WITH MECHANICAL HEAD

CAPROCO HYDROGEN PATCH / SADDLE PROBE SPECIFICATIONS

| | |
|-----------------------|--|
| PRESSURE | 3,600 / 6,000 psi 24.8 / 41.4 Mpa |
| TEMPERATURE | -40°F to +167°F -40°C to +75°C |
| ELECTRICAL CONNECTION | Interfaces with the Caproco HP/T Analyzer via a MIL standard 6 pin receptacle. |
| MECHANICAL FIXING | Weld-on design |

| ITEM | PART NUMBER |
|--------------------------------------|--|
| Patch / Saddle Probe Assembly | Contact Caproco For Appropriate Sizing |
| Mechanical Measuring Head Assembly | 11667 |
| Electronic Measuring Head Assembly | 13934 |
| Portable HP/T Analyzer / Data Logger | 13434 |

**See *Hydrogen Monitoring Probes* Catalog Sheet For More Information
On Measuring Head Options**