

GENERAL

Caproco has designed a monitoring spool to sample the biofilm activity present in a process system. The biofilm spool incorporates a sampling stud design, which facilitates the accumulation of bacteria.

Microbiological activity is recognized as a significant contributor to corrosion problems encountered in many industries, but until recently it has been difficult to identify its occurrence and quantify the resulting damage. A testing system was needed that would allow easy sampling and identification of all types of bacteria present, along with an indication of the severity of attack. Caproco's biofilm probes are an important component to the MIC (microbially influenced corrosion) detection system.

APPLICATION

The biofilm spool is designed to be placed either directly in-line or in a by-pass line, and is easily transportable from one site to another as a test spool. The spool has a number of studs exposed in a 360° pattern internally to allow for the accumulation of bacteria. The flush location of the studs ensures the detection of microbial activity present in residues along the pipe wall.

When ready for testing and the system is shut down (or bypassed), the exposed stud samples can be analyzed through the use of the Caproco Hydrogenase Test Kit, and the results can be quantified by the Caproco MIC Analyzer Instrument.

The biofilm spool can be used for the testing of:

- Anaerobe and sulphate reducing bacteria (SRB)
- Aerobes

The biofilm probe samples can also be used in common testing techniques such as epifluorescence.

The MIC system allows operators to evaluate the effectiveness of implemented biocide treatments in controlling bacterial-induced corrosion.

The sampling system is designed to avoid erroneous readings taken due to accumulation of dead bacteria on the stud. This is a common problem that can be found with other biofilm sampling systems on the market.

SPECIFICATIONS

The Caproco biofilm spool is manufactured from steel compatible with existing piping; the sampling studs are made of mild steel. Various line connection options are available, such as flanged, NPT, and butt weld. Spool length, as well as the quantity and orientation of studs, is available to customer specifications.

Caproco biofilm studs are encapsulated and sealed in a plastic insulating body, while the exposed steel surface is sterilized prior to packaging.

