Retrievable Galvanic Probe 2 Element

GENERAL

Caproco offers a range of high quality, high integrity galvanic probes which utilize a 2 projecting element configuration to measure the galvanic current.

Water injection is a popular secondary recovery method for increasing oilfield production. When used as a displacing fluid, water is often treated to remove corrosive contaminants such as dissolved oxygen. Oxygen is a reactive gas which, when available, vigorously takes part in the corrosion process. Leakage of oxygen into a normally de-aerated process stream can increase corrosion in a galvanic cell. If brass valves and steel piping are exposed to de-aerated water, little galvanic interaction occurs and galvanic corrosion currents are low. However, if oxygen leaks into the system, then the corrosion reactions and galvanic currents both increase with the resultant corrosion of the steel piping. The appropriate instrument, connected to a probe installed with steel and brass electrodes, can quickly detect oxygen contamination in the process stream.

APPLICATION

The two electrode galvanic probe is designed to measure the magnitude of the galvanic corrosion current generated by a galvanic couple. The natural difference in potential existing between the metals in a galvanic couple serves as a driving force *(voltage)* to pass current through the electrolyte surrounding the two metals.

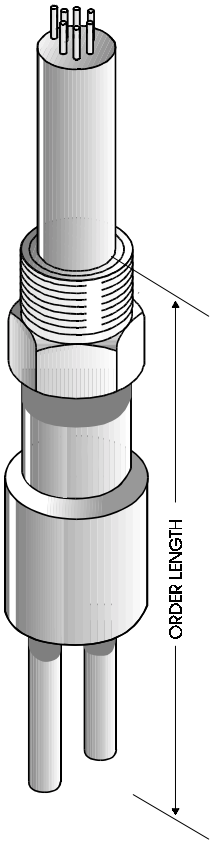
Galvanic probe elements are replaceable once they have corroded past their useful life.

SPECIFICATIONS

Caproco galvanic probes are manufactured from 316 stainless steel with AISI 1018 mild steel and brass elements. Probe bodies and elements are available in alternative materials upon request. Standard probes are designed for mounting through a Caproco Hollow Plug assembly.

Element Length	3.00" x 0.25" (76mm x 6mm)
Maximum Operating Pressure	3,600 / 6,000 psi (24.8 / 41.4 MPa)
Maximum Operating Temperature	500○F (260○C)

PROBE SEALING	Element and connector pins hermetically sealed using high integrity glass ceramic seals.
ENCAPSULATION	Two part loaded resin with excellent thermal, electrical and mechanical properties.
CONNECTION	Interfaces with most commercial monitoring instrumentation, via a MIL standard 6 pin receptacle.



PROBE LENGTH IS MEASURED FROM SEALING FACE OF PROBE BODY THREADS TO ELEMENT END

PROJECTING 2 ELEMENT RETRIEVABLE GALVANIC PROBES					
LENGTH (INCHES)	(MM)	PART NUMBER	LENGTH (INCHES)	(MM)	PART NUMBER
5.75	146	68168	13.25	337	68198
6.00	152	68169	13.50	343	68199
6.25	159	68170	13.75	349	68200
6.50	165	68171	14.00	356	68201
6.75	171	68172	14.25	362	68202
7.00	178	68173	14.50	368	68203
7.25	184	68174	14.75	375	68204
7.50	191	68175	15.00	381	68205
7.75	197	68176	15.25	387	68206
8.00	203	68177	15.50	394	68207
8.25	210	68178	15.75	400	68208
8.50	216	68179	16.00	406	68209
8.75	222	68180	16.25	413	68210
9.00	229	68181	16.50	419	68211
9.25	235	68182	16.75	425	68212
9.50	241	68183	17.00	432	68213
9.75	248	68184	17.25	438	68214
10.00	254	68185	17.50	445	68215
10.25	260	68186	17.75	451	68216
10.50	267	68187	18.00	457	68217
10.75	273	68188	18.25	464	68218
11.00	279	68189	18.50	470	68219
11.25	286	68190	18.75	476	68220
11.50	292	68191	19.00	483	68221
11.75	298	68192	19.25	489	68222
12.00	305	68193	19.50	495	68223
12.25	311	68194	19.75	502	68224
12.50	318	68195	20.00	508	68225
12.75	324	68196	20.25	514	68226
13.00	330	68197	20.50	521	68227

STANDARD CARBON STEEL/BRASS REPLACEMENT ELEMENTS (SET OF 2) PART NUMBER 63074