

## H-6270 Corrosion Studies Trainer

### Purpose

The Hampden **Model H-6270** Corrosion Studies Trainer provides students with an understanding of the effects of corrosion.

### Description

The **Model H-6270** consists of the following components:

- Power supply for electrode connections
- Receptacles for electrode connections, 8 pairs
- Air pump for air agitation
- Air control valves, 8
- Glass beakers (corrosion cells), 8
- Digital pH microsensor and pH meter
- Set of samples:
  - zinc
  - mild steel
  - copper
  - brass

Testing can be done simultaneously with the eight corrosion cells. Provided for each cell is an air control valve for air agitation and receptacles for electrode connections.

The cells allow for up to three pairs of samples to be tested at one time. Testing more than one sample at a time eliminates erroneous results from untypical metal samples. Samples are mounted so only a specific area of the metal is exposed to the testing liquid.

Corrosion rates can be measured by observation through the glass cells. The corrosion rate can also be measured by weighing the sample after a given period of immersion.

The testing liquid is stirred by air or inert gas agitation.

All connecting glass, plastic tubing and supports are provided. A pH meter and electrode is supplied to ensure the correct strength of test solutions. Also supplied is a power supply and necessary patch cords for the study of electrochemical corrosion effects.

### Experiment Capabilities

- effect of pH level on corrosion rate
- effect of dissolved oxygen concentration
- galvanic action
- electrolytic corrosion
- cathodic protection
- chemical inhibition
- prevention of scaling
- effect of internal stress

### Services Required

- This unit operates on 120V AC, 1 $\phi$ , 60Hz.

All Hampden units are available for operation at any voltage or frequency

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