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DESCRIPTION

The EEC unit allows the corrosion simultaneous study of up to 8 corrosion cells, each containing different test specimens.

The sample is mounting in a manner to minimise secondary effects.

The corrosion coefficient of a certain sample can be obtained by "visual observation", or by "checking the final weight" after the corrosion process.

PROCESS DIAGRAM AND ELEMENTS ALLOCATION



ISO 9001:2000
Certificate of Approval



European Union Certificate



Certificates ISO 14001: 2004 and
ECO-Management and Audit Scheme
(environmental management)



Worlddidac Quality Charter
Certificate
Worlddidac Member

SPECIFICATIONS

Bench top unit.

Anodized aluminium structure and panel in painted steel. Main metallic elements in stainless steel.

Diagram in the front panel with similar distribution to the elements in the real unit.

8 glass cells. Each one consisting of: a 600 ml. vessel (Pyrex) with a cover. Such cover has four orifices: two to adapt the test sheets, one for the reference electrode and another one for the gases diffuser tube.

Number of cells selector.

Simultaneous study of corrosion in several cells.

Ag/AgCl reference electrode.

A group of test sheets (electrodes): It consists of 40 x 20 mm. sheets of variable thickness depending on the material, and on materials such as stainless steel, carbon steel, zinc, brass, copper, aluminum, graphite, and iron (nails).

Connection cables with 4 mm terminals for the reference electrode (Ag/AgCl) and the test sheets.

Laboratory digital pH-meter.

Air pump for agitation.

Air pump switch.

Connection for air pump.

Inert gas inlet. (If the customer wants to work in other kind of atmosphere).

Milliammeter.

Millivoltmeter.

Milliammeter/ Millivoltmeter selector.

Two rotameters (flow meters): One for the air and another one for the gas. Flow rate: 1-7.5 l/min.

Power supply of direct current (D. C.) with 0-30V and 0-3A output, with intensity and voltage indicator.

Control valves for air and gas flow.

Unit main switch.

Safety differential switch.

Cables and Accessories, for normal operation.

Manuals: This unit is **supplied with the following manuals:** Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.

EXERCISES AND PRACTICAL POSSIBILITIES

Some Practical Possibilities of the Unit:

- 1.- Galvanic potentials.
 - 2.- Galvanic pairs study.
 - 3.- Iron passivation.
 - 4.- pH influence.
 - 5.- Aluminium anodization.
 - 6.- Cathodic protection.
 - 7.- Galvanic corrosion + oxidation.
 - 8.- Effect of dissolved oxygen concentration.
 - 9.- Electrolytic corrosion.
 - 10.- Chemical inhibition.
 - 11.- Prevention of scaling.
 - 12.- Effect of internal stress.
 - 13.- Simultaneous study of corrosion in several cells.
- Other possible practices:
- 14.- Water treatment studies:
 - Calcium carbonate stabilization.
 - Oxidation of iron and manganese in ground waters.
 - Water softening by chemical precipitation.
 - Disinfection of waste water with chlorine solutions.

REQUIRED SERVICES

-Electrical supply: 220V/50Hz or 110V/60Hz.

DIMENSIONS & WEIGHTS

-Dimensions: 1200 x 300 x 500 mm. approx.

-Weight : 50 Kg. approx.

RECOMMENDED ACCESSORIES

- Chemical reactives required for the dissolutions preparations.
- Inert gas cylinder (for example: nitrogen).
- Electronic balance.
- Laboratory glassware.
- Burette.

* Specifications subject to change without previous notice, due to the convenience of improvements of the product.



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