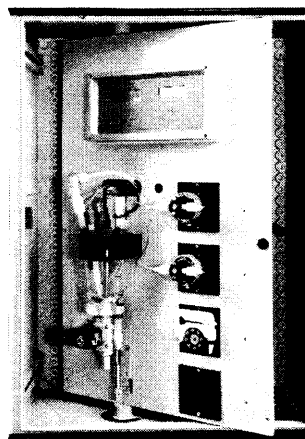


Phosphatizing bath analyzer Model 8810



Applications

Metallic materials occasionally have impurities and surface imperfections which cause corrosion. In the automobile industry for example, to efficiently protect cars with efficiency against this phenomenon and increase their quality, manufacturers try to improve protection techniques. Included are surface treatments and phosphatizing treatments which requires the following actions :

1. Degreasing
2. Phosphatizing
3. Passivation

The 8810 on-line analyzer allows control for adjustment of FREE AND TOTAL ALKALINITY, FREE AND TOTAL ACIDITY, ACCELERATOR, ZINC and CHROMIUM VI.

Methodology

- ✱ **Measuring principle:** pH or ORP potentiometric titration
- ✱ **Electrodes:** pH/reference for alkalinity and acidity. Platinum/reference for accelerator, zinc or chromium VI
- ✱ **Analysis frequency:** programmable - 1 analysis every 5 min. max.

Advantages of on-line analysis

- ✱ Chemical product savings: the bath is used with a minimum quantity of chemical products for an optimum treatment quality

- ✱ Water savings: rinsing is less important, as the bath is filled with less chemical products
- ✱ Time savings: no more manual titrations (only for the analyzer calibration)
- ✱ Analysis results in real-time
- ✱ Constant quality of the product at the end of the process

8810 On-line analyzer advantages

- ✱ Automatic calibration (optional): allows drifts corrections
- ✱ TWO 0/4-20mA analog outputs (FREE AND TOTAL ACIDITY, FREE AND TOTAL ALKALINITY)
- ✱ Monthly maintenance only

	APPLICATION	ANALYZER	CONDITIONING SOLUTION	TITRATION SOLUTION
DEGREASING	FREE AND TOTAL ALKALINITY	8810 pH		H ₂ SO ₄
PHOSPHATIZING	FREE AND TOTAL ACIDITY	8810 pH		NaOH
	ACCELERATOR	8810 ORP	H ₂ SO ₄	POTASSIUM PERMANGANATE OR CERIVM IV
	ZINC	8810 ORP	BUFFER + EDTA	POTASSIUM IRON/FERROUS CYANIDE
PASSIVATION	CHROMIUM VI	8810 ORP	POTASSIUM IODIDE	SODIUM THIOSULFATE

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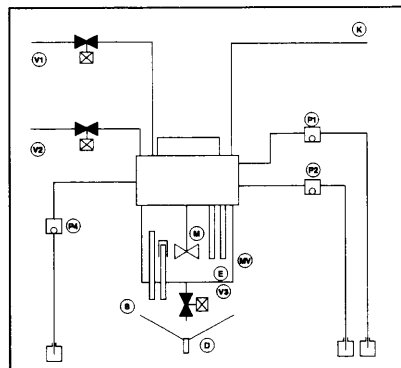
Operating principle

The drain valve and the rinse valve open, allowing rinse water to clean the reactor for a programmed time (see figure).

After the ring valve closes, the sample valve opens while the drain valve stays open a few seconds in order to flush any remaining rinse water droplets with fresh sample solution.

The drain valve closes and the sample volume is accurately adjusted with the siphon. The conditioning pump is activated and operates for a programmed time. The conditioning pump is used for the titration. The action time of

the pump is directly proportional to the concentration at the equivalence point.



V1 : Rinse valve	P4 : Automatic calibration pump	M : Stirrer
V2 : Sample valve	D : Drain valve	K : Electrode cable
V3 : Drain valve	E : Electrodes/Pt100	S : Siphon
P1 : Conditioning pump		MV : Reactor

Specifications

SAMPLE

Number of sample streams:
Up to 6 with optional sequencer model 8811
Sampling mode: cyclic, programmable
Sample temperature: 0-50°C (32-122°F)
Sample pressure: 0.5-6 bar (7.2-87 psi)
Sample flowrate: 50-300 l/h
Flush water pressure: 1-6 bar (14.5-87 psi)
Air instrument: 5-7 bar (72.5-101.5 psi)

INSTALLATION

Mounting: 19" panel-or wall-mount unit or free-standing cabinet
Sample tubing: 12/14 mm
Flush water: tubing 6/8 mm
Air instrument: tubing 4/6 mm

ANALYSIS

Analysis cycle: ~ 5 min.
Cycle time: programmable 999 min. max.

Units: ppm, ppb, mg/l-programmable

Accuracy: ± 2% to ± 4%

Reproducibility: < 3%

Calibration: manual, process or automatic and programmable

OUTPUTS

Analog outputs:

Two 0-4/20 mA signal galvanically isolated

Alarms:

3 relays: system alarm, low limit/high limit

Control:

1 sample level detector
1 reagent level detector
1 calibration solution level detector
RS232 output
Remote start/stop

E.M.C.: This instrument conforms to European Directive 89/336/CEE concerning electromagnetic compatibility.

System configuration

8810 FREE AND TOTAL ALKALINITY / 8810 FREE AND TOTAL ACIDITY BASIC INSTRUMENT (ONE 8810 ANALYZER EACH)

P/N 368810, xxxxx 8810 ANALYZER 19" panel-mount, unit includes:

- Titration /sprinkler
- Measuring pH electrode
- Reference electrode
- Temperature sensor PT100
- One reagent pump for free acid/base titration

P/N 368810, 7xxxx: Additional titration pump for total acid/base

P/N 08810=A=5300: Automatic dilution

8810 ACCELERATOR / CHROMIUM VI BASIC INSTRUMENT (one 8810 analyzer each)

P/N 368810, xxxxx: 8810 ANALYZER 19" panel-mount, unit includes:

- Titration /sprinkler
- Platinum electrode
- Reference electrode
- One reagent pump for titration

P/N 368810, 7xxxx: Additional conditioning pump

8810 ZINC BASIC INSTRUMENT

P/N 368810, xxxxx: 8810 ANALYZER 19" panel-mount, unit includes:

- Titration /sprinkler
- Platinum electrode
- Reference electrode
- One reagent pump for titration

P/N 368810, 7xxxx: Conditioning pump 1

P/N 368810, 7xxxx: Conditioning pump 2

P/N 08810=A=5300: Automatic dilution

OPTIONS

P/N 368810, 56000: Chemical cleaning

P/N 368810, 65000: Manual entry system

P/N 368810, 40000: Fiber glass enclosure, wall-mount

P/N 368810, 45000: Steel cabinet, floor mounting

* Reagent pumps are either peristaltic or micropiston (24/50HZ or 24V/60HZ)

* Product can be configured with different frequency/voltage:

- 220V/50HZ - 240V/50HZ
- 110V/50HZ - 110V/60HZ

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