KENNAMETAL* components help valve a 646-mph flow!

Builders of chemical equipment must frequently find components with unusual service properties. When the Manton-Gaulin Mfg. Co., Inc., of Everett, Mass., designed and built this Sub-Micron Disperser Valve, they encountered a problem.

The solid-fluid dispersion materials must move through the valve at almost supersonic speeds. Components in the path of the flow are exposed to severe erosion and abrasion...plus corrosive action in some applications.

The company found that Kennametal tungsten carbides provide the necessary properties to stand up against such destructive forces. Vulnerable parts are being made of Kennametal as they have proven to be the most economical solution to the service-maintenance problem.

If at any time you need materials with unusual resistance to erosion, abrasion, or corrosion...materials that can retain normal properties under prolonged exposures at 2200°F and above; materials with rigidity three times greater than the hardest steel, it will pay you to investigate the contribution Kennametal compositions are making in scores of varied applications. Just write: KENNAMETAL INC., Dept. SA, Latrobe, Pennsylvania.

*Trademark

EQUIPMENT NEWS

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Science does not assume responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to Science, Room 740, 11 W. 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department number(s).

- CRystal lattice models of German manufacture now include feldspar, alpha quartz I, alpha quartz II, beta quartz I, and beta quartz II. Models, consisting of wooden spheres fixed and joined by metal rods, are designed on the basis of x-ray- and electron-diffraction data. Linear magnification is 2.5 x 10^8, so that 1 A is 25 mm. (Arthur S. LaPine & Co., Dept. S907)

- Power-supply regulation analyzer measures applied d-c voltage, the percentage change in applied voltage, and the root-mean-square ripple of regulated and unregulated power sources. Voltage range is 1 to 3000 V; accuracy is ±0.1 percent. Percentage regulation is measured in four ranges of sensitivity from 0.005 percent to 5 percent each side of the null position. Ripple voltage is measured in 11 ranges from 100 v r.m.s.

- Traveling-wave oscilloscope is designed to display transient and repetitive phenomena in the millimicrosecond region. Frequencies as high as 2000 Mcy/sec and voltage levels of 40 to 50 mv can be detected. The total size of the display is 0.4 by 0.6 in., but the extremely small size of the cathode-ray beam spot, 0.002 in., permits resolution equivalent to that of a standard 5-in. cathode-ray tube. In terms of trace widths, sensitivity is 0.06 v per trace width. (Edgerton, Gernshausen & Greer, Inc., Dept. S925)

- Density measuring system consists of a probe and a power supply. The probe is coated to resist the action of liquids being observed. A standard model has a range of 0.60 to 1.45 g/cm³. Time response for a change of density of 0.01 g/cm³ is about 1 sec. Temperature range is 0° to 100° C. Output from the instrument can be used for recording density. (General Communication Co., Dept. S930)

- Oscillograph allows simultaneous and directly visible recording of up to 16 processes. Recording is rectilinear. Frequency response is from d-c to 165 cy/sec. Sensitivity is 3 mv, peak-to-peak, per millimeter, and each record is 20

MEASUREMENT...

- Extreme sensitivity — 5 mr for soft x and gamma rays; 10 mr for hard x and gamma rays
- Wide exposure range — from 3/10 mr to 600K
- Complete coverage — beta-gamma, x-ray, and neutron film packets are held in one badge

DESIGN...

- Tamper-proof — special unlocking device required to open badge
- Combined film and security badge — has space for standard 1½ x 2 identification photo
- Lightweight — sturdy, moulded plastic badge weighs less than 1 oz.

SERVICE...

- Prompt weekly reports, supplemented by quarterly and annual cumulative report

For data on the newest advances in film-badge dosimetry write for Bulletin S-3

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Industry and Kennametal...partners in progress

546

Science, vol. 127