• *New Products*

A new solenoid pilot valve, allowing high-pressure actuation, for use in conjunction with electrical logic circuits in chemical processing equipment is announced by Fluid Power Division, WESTINGHOUSE AIR BRAKE COMPANY. The direct solenoid-operated, 3-way, normally closed, balanced valve operates with an electrical signal. It energizes the solenoid to pull in the armature and depress the hollow valve stem closing the exhaust port. As the valve stem continues downward it allows air to flow through the output port. When the electric signal is removed the solenoid is de-energized, the supply valve seated, and the exhaust valve is opened by spring action. The valve operates at a supply pressure of 0–150 psi at −20 F to 160 F; has a flow capacity equal to .093 in. diameter exhaust orifice and .062 in. diameter supply orifice, a cyclic response of 15 cps with equal on-off time; and a life expectancy of 3 million operations.

A new laboratory stirrer and power drive system, incorporating the latest advances in solid state circuitry for controlling and maintaining a desired speed setting, has been developed and is now being marketed by the MANOSTAT CORPORATION, New York. Designed both for delicate, small low rpm operation requiring high torque, and for high speed stirring, the unit, known as the Manodyne, has motor and controller matched to give extreme speed stability (from no load to full load), and excellent reproducibility. The system offers such advanced features as an enclosed dual shaft permanent magnet motor, forward and reversing by a switch, and solid state stepless regulation, with no warm up required, to control the motor at any pre-selected speed setting in either forward or reverse rotation.

TECHNE INC., Princeton, New Jersey, has recently introduced their redesigned and improved Gelation Timer for use in laboratories and in quality control. Prior to the advent of this instrument, the determination of the gelling time of the liquid was found only by a tedious test which relied on subjective judgment. With such tests it is impossible to obtain consistent results. The Tecam Gelation Timer measures in minutes the time which elapses before the liquid under test has gelled sufficiently to support a known weight on a known area. Gelation time cannot properly be measured with a viscometer. The onset of gelation means that the material has acquired a measurable elastic modulus. This gel time can be measured in many adhesives, silicate solutions, drying oils and plastics.

TRACOR, INC., Austin, Texas, announces that the flame photometric system devised by Brody and Chaney at Melpar, Inc., for specific detection of sulfur and phosphorus is now operable at temperatures up to 250 C. High temperature operation has been made possible by changes in the burner assembly and associated seals. A conversion kit for the previous low temperature unit is available. The new model may also be backfitted at any time with a second photometric channel to give simultaneous triple response to sulfur, phosphorus, plus FID from the single flame. Vital new information can be obtained from pesticides, flavors, phospholipids, and many other organophosphorus or organo-sulfur compounds.

A convenient bench-model ultrasonic cleaner operating on an efficient 40 kc electrical system now is available from NATIONAL-STANDARD COMPANY'S Auto Arc Division. Designated Multisonic Model 66, the cleaner has a ½ gal capacity to accommodate a wide range of types and sizes of objects. It gives clinical cleanliness to laboratory glassware, wire-drawing dies, printed circuits and small mechanical and electrical assemblies. Other applications include degassing liquid, brightening metal, deburring small metal parts, etching and speeding chemical reactions.

KONTES GLASS COMPANY, Vineland, N.J., has announced the availability of a multi-purpose, new design flask. The design combines a conventional round bottom with a modified Kjeldahl shape to provide easy recovery of collected solids and liquids. With "shoulder" removed, easy insertion of spatulas, brushes, etc., is possible. Solids pour out easily. The lower portion, with round botton style, fits standard heating mantles for distillation and reflux applications.

WATERS ASSOCIATES, INC., Framingham, Mass., has announced three new chromatographic column packings utilizing a concept of permanent, chemically-bonded liquid coatings on a solid substrate. The new packing materials, tradenamed Durapak, are made by a proprietary Waters bonding process based on research by István Halász. With liquid coatings permanently bonded to the solid support, the familiar problem of column bleeding and baseline drift in both gas and liquid chromatography is virtually eliminated. Even with temperature programming, there is no need for compensating dual columns and dual detectors. Peaks are symmetrical for polar as well as nonpolar compounds. The three new coating/substrate combinations are as follows: Oxypropionitrile (OPN) permanently bonded to Porasil Type C porous silica beads (for use at temperatures up to 135 C); Carbowax 400 on Porasil C (to 200 C); and *n*-octane on Porasil C (to 175 C).

A low cost mass spectrometer fast enough to be coupled to a gas chromatograph for continuous analysis of eluted fractions has been developed by EDWARDS HIGH VACUUM INTERNATIONAL, LTD., Sussex, England. The unit also can be adapted to a nude source instrument for 'in system' analysis. The Edwards 60° mass spectrometer has scanning speeds down to 0.1 sec per mass range, permitting spectra to be obtained of the separate fractions which emerge from the chromatograph column. The instrument will cover a mass range up to 350, with complete mass separation to mass 200. Gas chromatogram and mass spectrum can be recorded simultaneously to improve the depth examination of any selected point on the chromatogram scan, and hours of recording time can be saved by the ability to monitor the complete spectrum of each fraction on the oscilloscope.