

INDUSTRIAL DATA

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**AN EDITORIAL CLEARINGHOUSE FOR READERS DESIRING MORE
INFORMATION ABOUT NEW PRODUCTS AND SERVICES FOR THE
CHEMICAL PRODUCING AND CHEMICAL CONSUMING INDUSTRIES.**



MANUFACTURERS' LITERATURE

CHEMICALS AND MATERIALS

PARACRIL COMPOUNDS. Arranged according to durometer hardness varying from 40 = 5 to 70 = 5, 7 tables contain physical properties of series of compounds developed with variations in plasticizers and carbon black to meet specifications of A.S.T.M. D 735-48T. Enjay Co., Inc. 1

SILICON IRON. An 11-page bulletin contains tables of chemical composition, mechanical and physical properties, of silicon iron alloys, Duriron, first produced in 1912, and in 1923, Durichlor, a modified alloy with increased resistance to hydrochloric acid. Contains data collected in last 10 to 15 years on these two corrosion-resistant alloys with list of common corrosives. The Duriron Co., Inc. (Bull. 115). 2

CHEMICALS AND GASES. A 19-page folder lists prices of organic chemicals including several hundred new compounds. Folder and price list of 74 rare and common gases with information on cylinders, controls, and regulators are also available. The Matheson Co., Inc. (Price List 7). 3

RUBBER COMPOUNDERS. A 75-page booklet, "Califlux," contains technical data, report of investigation leading to specifications set up for products, description of manufacturing processes, compounding characteristics, and selection of rubber compounds demonstrating compounding behavior. A 31-page booklet, reprint from L&E.C., reports method of correlating chemical characteristics of petroleum products with behavior as compounding ingredients. Based on quantitative analysis, identification of groups of components, compounding chemicals are presented as chemicals rather than proprietary products defined by trade names. Golden Bear Oil Co. (G. B. Report No. 3; G. B. Report No. 4). 4

INDUSTRIAL CHEMICALS. A 75-page catalog describes aliphatic and aromatic chemicals, cellulose products, and inorganic chemicals with description of uses in manufacturing processes only. Information given includes properties,

color, sp. gr., weight/gal., b.p., flash point, acidity, etc., and method of shipping for each. Tennessee Eastman Corp. (3rd Edition Eastman Industrial Chemicals 1949). 5

SURFACE ACTIVE AGENTS. A 39-page booklet describes a group of alkyl aryl sulfonates derived from petroleum, available in liquid, flake, and bead form, low, medium, and high mol. wt., max. per cent sodium sulfate 4.5 to 65; information as to solubility, performance, letargency, applications, with five literature references. Atlantic Refining Co., Chemical Products Division (Ultravets). 6

CHEMICALS. A 48-page catalog lists 234 heavy and fine chemicals and 949 botanicals, gums, oils, and waxes with size and kind of shipping containers and principal uses of products. Available in bulk containers in less than carload lots at 41 distribution points throughout the country. McKesson & Robbins Inc., Chemical Division. 7

POLYALKYLENE GLYCOL LUBRICANTS. A 28-page booklet describes forty synthetic lubricants available in four series, two nonsoluble in water, and

two water soluble. Soluble in organic solvents, compounds range from light to highly viscous liquids with or without additive. Tables of properties, solubilities, flammability, surface tension, etc., are included with description of applications. Carbide & Carbon Chemicals Corp. (Ucon. Form 6500). 8

ADHESIVE. A 16-page booklet describes coating said to be approximately equivalent to casein in adhesive power, index of refraction 1.57 or 0.04 higher than starch and casein; compatible with protein solutions, soya protein, glue, and most starches. Generally, replacement of 25 to 50% of another adhesive with the styrene-butadiene copolymer is said to result in increased flexibility, smoothness, gloss, water resistance, etc., of finished paper. The Dow Chemical Co. (Latex 512K). 9

TALL OILS. A 19-page bulletin contains bibliography and abstracts of literature on tall oils, now finding application in some forty-two industries. Previous publication with abstracts and bibliography on uses in paints, varnish, laquer, core oil, and related industries also available. National Southern Products Corp. (Bull. Nos. 7 and 8). 10

CONSTRUCTION AND PACKING MATERIALS. Corrosion-resistant materials for use with 300 industrial liquids and gases are listed in 4-page folder.

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Inquiry card is valid within one year from publication date.

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(SEPTEMBER 1949)

PLEASE TYPE OR PRINT

Recommendations are based on successful installations in flow-rate measurement instruments. Fischer & Porter Co. (Catalog Section 97). 11

RESIN CEMENT. Pamphlet describes acid-, alkali-, solvent-, heat- (to 375° F.) resistant resin cement; tensile strength 1300 lb./sq. in., compressive strength 12,000 lb./sq. in., modulus of rupture 1450 lb./sq. in., density 104 lb./cu. ft., 0.15 of 1% absorption. Resin lining for metal or wood fume ducts, resistant to temperatures to 275° F., is also described. The Celcote Co. 12

AIR, GAS, AND LIQUID DRYERS. A 32-page catalog gives design and construction diagrams, discusses principles and factors affecting drying of air, gases, and liquids, and contains schematic drawings of operation of desiccant dryers in which adsorbed moisture is removed from the desiccant for use in new drying cycle. Selection charts, list of 26 variable factors, etc., are included. C. M. Kemp Manufacturing Co. (Catalog D-87). 13

INSULATING MATERIALS. A 36-page illustrated manual and catalog describes Fiberglas glass-base insulating materials, in yarns, cords, sleeving and tubing, tapes, cloths, glass-mica combinations, wire and cable insulations. Owens-Corning Fiberglas Corp. 14

EQUIPMENT AND SUPPLIES

SOLIDS PUMPS. An 8-page bulletin describes pumps available in 8 sizes, capacity range 1750 to 10,000 gal./min. with heads to 140 ft.; end suction, top vertical discharge with 6 alternate discharge nozzle positions. Applicable for solids handling in cement and paper industries, and for solutions containing suspended solids, chemical pulps, etc. Allis-Chalmers (Bull. 08B6381C). 15

CENTRIFUGAL COMPRESSORS. An 8-page bulletin describes multi-stage gas and air compressors with max. capacities of 6000 to 60,000 cu. ft./min., minimum capacities 1700 to 6000 cu. ft./min.,

4150 to 9800 r.p.m., with construction diagrams, dimensions, etc. Clark Bros. Co., Inc. 16

FUME WASHERS. A 4-page folder describes corrosion-resistant fume washers without temperature limitations and moving parts for handling gases and fumes. Available in seven sizes, capacities to 25,200 cu. ft./min., applications include absorption of HCl fumes, suppression oil and acid mists, production of dilute muriatic acid, etc. Maurice A. Knight Co. 17

LABORATORY EQUIPMENT. A 4-page folder describes refractometer, photoelectric filter photometer cell holder for various sizes of absorption cells, and other equipment for laboratory use. Will Corp. (Bull. 108). 18

PETROLEUM TESTING. A 104-page book contains information on testing equipment for gas, gasoline, grease, and lubricants, lists petroleum testing baths, combustion apparatus, distillation units, high-pressure equipment, samplers, and thermometers. Precision Scientific Co. (Catalog 705NR). 19

PUMPS, MOTORS, AND COMPRESSORS. An 11-page booklet, "Application Idea Book," contains description of rotary motors, air compressors, and vacuum pumps with suggested applications. Gast Manufacturing Corp. (Bull. 449). 20

LIQUID FEEDERS. A 4-page folder describes precision feeders for liquids constructed without valves or diaphragms, with 8-day spring motor, 6 w. operating power, 110 or 220 v. current, 1 phase, 50-, 100-, 200-gal. capacities. For mounting on tank, flow is controlled by lowering open end hose or pipe connected near bottom of tank. Omega Machine Co. (Bull. 60-ET-A). 21

HIGH-PRESSURE GAGES. A 32-page booklet contains information on pressure gages available in thru-vision, reflex, and tubular types for 100 to 5500 lb. pressures, applicable in oil refining, chemical and synthetic rubber plants, steam boilers, etc. Assembly dimen-

sions and installation suggestions are included. Klinger, Inc. (Strahman High Pressure Gages). 22

LABORATORY MILLS. An 8-page illustrated bulletin contains design and construction information on laboratory mills, crushers, grinders, and shredders. Mills are available in 9 × 9, with 1 to 5 hp., and 15 × 9, 5 to 10 hp. motors. Crushers operate with variety of screen sizes, capacity reducing coil of 9 × 9 size 1000 lb./hr., 15 × 9, 2000 lb./hr., 2 and 5 hp. motors, respectively. A 4-page folder describes knife chopper, capacity 200 to 450 lb./hr., for plastic scrap and fillers. American Pulverizer Co. 23

CHLORINIZER. Designed to meter chlorine gas and deliver chlorine water solution, constructed with automatic safety device, control valves and rate of flow indicator, instrument is described in 4-page bulletin. Builders-Providence (Bull. 840-F2). 24

INSTRUMENTS

MILLIAMMETER. An 8-page illustrated bulletin describes direct writing recording instrument available in two sensitivities, 0 to 1 ma. and 0 to 5 ma., chart speeds from 0.75 to 3 in./sec.; electrical characteristics for both 0 to 1 and 0 to 5 ma.; average coil resistance 1400 and 65 ohms; average voltage drop at full scale 1.4 and 0.325v; average full-scale power 1.4 and 1.6 mw.; average swinging time 0.5 sec. Chart drives include spring and synchronous clocks, external motor drives, and combinations to provide speeds of 0.75, 1.5, 3, 6, 12 in./hr.; 0.75, 1.5, 3 in./sec.; 0.75, 1.5, 3, 6 in./min.; ratio of slowest to fastest speed 14,400:1. Applicable in determining presence of oil and salt in water, tracing isotopes, etc. The Esterline-Angus Co., Inc. (Bull. 549). 25

SERVICES

CONSULTING SERVICES. A 132-page book, the 1949 twelfth edition, supersedes eleventh edition of the "Classified Directory." Complete with foreword, key sheet and index, membership list, geographical location of members, etc. Association of Consulting Chemists and Chemical Engineers, Inc. 26

GERMAN AND RUSSIAN TRANSLATIONS. Two bulletins list recent publication of translated manufacturing instructions, research reports, etc., on products produced by I. G. Farbenindustrie and A. G. Schering. A 13-page catalog, "Supplementary List of Translations of Russian Technical and Scientific Articles Published during the First Quarter of 1949," lists 91 translated Russian papers, supplementing previous lists, "Russian Petroleum Production" and "Russian Chemistry." Research Information Service (Bulls. 28, 35; Catalogs 27, 29, 34). 27

WATER TREATMENT. A 26-page illustrated bulletin contains construction diagrams, describes method of operation, etc., of apparatus applicable in softening, clarification, or stabilization,

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Industrial and Engineering Chemistry

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of surface or ground water supplies, as well as waste treatment; 27 literature references. Inflico, Inc. 28

PRESSURE TANK CALCULATOR. Slide rule type calculator for determining optimum pressure feed tank operating conditions. Accounts for desired maximum and minimum tank pressure, pumping cycles per hour, outlet above bottom of tank, etc.; conversion nomograph for height-volume relationships of horizontal cylindrical tanks. Price, \$1.00. Automatic Control Co. 29

MISCELLANEOUS

VACUUM DEHYDRATION. A 13-page article, "Continuous High Vacuum Dehydration" contains information on continuous belt apparatus developed to exploit the inherent properties of highly concentrated viscous materials in the production of pseudopolyphosphoric-crystalline products which have instant solubility; nine literature references. National Research Corp. 30

RADIOACTIVITY. The May 1949 12-page issue of *Tracerlog* describes Geiger, beta-gamma, and x-ray tubes and counters, and announces the availability of Carbon-14 when order is submitted with AEC Approval Form 374 as well as carboxyl-labeled benzoic acid tagged with Carbon-14. Price list of products, list of new books, etc., are included. Tracerlab, Inc. 31

ALUMINUM. A 124-page technical handbook, "Aluminum Structural Design," contains information on figuring tensile, compressive, bending and shear stresses, stresses in cylinders subjected to fluid pressure, fabricating and joining methods, deflection and vibration problems, etc., with 66 tables of physical, mechanical, and chemical properties, etc.; also data tables on other structural materials and related general information. Available upon request on company letterhead. Reynolds Metals Co. 32

RADIOACTIVE TRACERS. A 13-page selected bibliography on industrial uses of radioactive materials contains general background references, surveys of industrial application, and references dealing with petroleum, mining and metallurgy, textiles, instruments, radiography, analysis, pharmaceuticals, glass, radioisotope preparation, etc. Arthur D. Little, Inc. 33

WELDING TERMS. A 50-page booklet contains definitions of standard welding terms with master chart of welding processes and process charts. Booklet, \$1.00; charts, 35 cents. American Welding Society (A3.0-49 and A3.1-49). 34

SOAP CHEMICALS. Reprint of Market Research articles, *Soap and Sanitary Chemicals*, 1948-49, show production, consumption in detergents, etc., average annual price/lb. of tallow, tallow acids, olive, coconut, palm, fish, whale oils, rosin, caustic soda, soda ash, trisodium phosphate, and sodium pyrophosphate. Foster D. Snell, Inc. 35

NEW PRODUCTS

CHEMICALS AND MATERIALS

SODIUM AMIDE. Available for first time as a free flowing powder, chemical is applicable as condensing agent in manufacture of pharmaceuticals, perfume intermediates, fine chemicals, and general organic synthesis; in Claisen condensation reaction, alkylations and acylations of ketones, etc., aminations, ring closures, etc. Farchem Research Laboratories. 36

HEAT-TRANSFER FLUIDS. Derived from polyalkylene glycols, with low pour points and little change in viscosity with temperature, fluids are applicable as heat transfer liquids in temperature range 60° to 500° F. Water-soluble fluid, viscosity of 280 Saybolt seconds and 60.6 centistokes at 100° F., viscosity index 150, pour point -35° F., density 1.024 at 100° F., sp. gr. 1.040, flash point 500° F. Water insoluble, viscosity 300 Saybolt seconds, 65.0 centistokes at 100° F., viscosity index 142, pour point -40° F., density 0.979, sp. gr. 0.997, flash point 490° F. Carbide & Carbon Chemicals Corp. (Ucon 50-HB-280-X and LB-300-X). 37

ADHESIVE FINISH. For use only with corkboard or uncoated cork covering, self-curing compound sets to rubberlike film at room temperature, resistant to temperatures from -35° F. to +125° F., to toluol, methyl ethyl ketone, gasoline, kerosene, and water. Armstrong Cork Co. (Solepruf). 38

RHODIZONIC ACID. Manufacture of dipotassium salt useful in sulfate determinations and as analytical reagent is announced. Jaxons Drug Co. 39

VINYL RESIN. Similar to grades in use in preparation of organosols and plastisol dispersions and solution coatings; dry resin affords water-stable dispersions. Best results are said to be obtained with fusion temperatures 300° to 325° F. Bakelite Corp. (NV. 4). 40

LUBRICANT ADDITIVE. Available to refiners and blenders of motor oils, alkyl chemical additive has inhibiting properties against corrosion and oxidation in laboratory tests. American Cyanamid Co. (Aerolube 70). 41

ANIONIC FOAMING DETERGENTS. Alkyl amide sulfonates described by number: L-135, light yellow powder, contains NaCl, soluble in water and electrolytic solutions, density 0.54, stable to acids, alkalis, and temperature changes; L-177, density 0.76; L-135 combined with soap; N-185 buff-white powder; L-144 light yellow gel; R-275 gray white powder, density 5.7, applicable as antispitting agent in film emulsions and in emulsion copolymerization of Buna S type synthetic rubber. General Aniline & Film Corp. (Anadrons). 42

DETERGENT EVALUATOR. Method uses C-14 (with N,N-di-n-butyl stearamide) which emits beta rays in minute quantities with lubricating oil to soil steel pans. Prior to cleaning with detergent (Santomere) plus 95% anhydrous sodium metasilicate, electric charges are recorded with Geiger counter. After cleaning charges dropped from 100,000/min. to 2/min. Monsanto Chemical Co. 43

PARAFORMALDEHYDE. A polymerized form of formaldehyde containing less than 10% water as compared with 63% in commercial formaldehyde solutions, available in flake form and said to be more water soluble and show less variation in reactivity. Now in full scale production, compound is expected to replace formaldehyde in thermosetting processes and to be available soon in other than flake form for special applications in the plastics, leather, rubber, etc., industries. Celanese Corp. of America. 44

EQUIPMENT AND SUPPLIES

WORK GLOVES. Plastic coated cotton glove is said to have increased durability; water-, acid-, caustic-, and petroleum-solvents-proof. The Milburn Co. (Plyglow). 45

MINIATURE ADJUSTABLE-SPEED DRIVE. Constructed with rollers, conducting disks on input and output shafts, ball bearings on rotating parts, permanent lubrication, overload protection and sealed construction, weight less than 6 oz., max. 70 oz.-in. torque, 0.025 hp., speed is adjusted by changing ratio at which rollers make contact. Ratio input to output speeds adjustable between 1:5 increase and 0:1 decrease, total speed range of 36 to 1, max. operating speed 20,000 r.p.m. Applicable in business machines, recorders, controllers, computers, indicating mechanisms. Metron Instrument Co. 46

NOZZLE TYPE SAFETY VALVE. For lower pressures and high temperatures, 8 in. inlet and 10 in. outlet, orifice diameter 5 in., height 46 in., plain cap; 50 in., packed cap, valve is A.P.I.-A.S.M.E. coded. Lift of 0.25 of diameter of nozzle; at 100 lb./sq. in. receives 116,000 lb./min. of saturated steam; water at 100 lb./sq. in., 5350 gal./min. at 25% overpressure. Farris Engineering Corp. 47

CENTRIFUGE. Vacuum-chamber type unit is housed in 25 x 30 x 36 in. enclosure. Electronic control limits motor current during starts, speed control holds running speed to preset value, time switch for setting run length, etc. Available in 6.75 in. diameter, capacities 150 cc., terminal speed 40,000 r.p.m. in less than 4 minutes, to 11 in. diameter, capacity over a liter, max. speed 20,000 r.p.m. in less than 20 min.

Price, \$3000; with refrigeration, \$3300. Specialized Instruments Corp. (Model L Spinco). 48

CORROSION-RESISTANT FILTER CLOTH. Available in nickel-molybdenum-iron alloy, resistant to common acids as HCl and in nickel-molybdenum-chromium-iron alloy for applications where oxidation is present. John A. Roebing's Sons Co. (Hastelloy). 49

LABORATORY OVEN. Designed for high temperature operation, 40 to 420° C., insulated with 4.5-in. Fiberglas, automatic temperature control, response sensitivity $\pm 0.5^\circ$ C., equipped with nickel-chromium heating element, two adjustable shelves. Standard models 19 in. wide, 18 in. deep, 15 in. high, and 12 in. \times 12 in. \times 12 in. Schaar and Co. 50

LEAD SHIELD. Steel-cased aluminum-lined lead shield provides 1.5 in. equivalent of lead shielding in all directions; Inside diameter 5 \times 8.5 in., outside 9 \times 14.5 in.; door opening 3.625 \times 4 in., weight 250 lb. Atomic Instrument Co. (Model 800). 51

WATER-JACKETED PUMPS. Water-jacketed and deep-stuffing boxes compensate for expansion and contraction in handling high-temperature liquids; no metal-to-metal contact within single- and two-stage pumps. Cooling of liquid leakage prevents flashing or vaporizing upon contact with atmosphere. Turbine-type, hydraulic balance maintains practically constant capacity over wide head variation. Aurora Pump Co. 52

HYDRAULIC CLAMP TRUCK. Of welded steel construction with dual double-acting hydraulic cylinders, clamp is mounted on truck lift carriage. Available in steel ribbed straight clamp arms, or arms which toe-in 1 in. at outer ends, as well as 3-arm clamp for carrying 2 barrels side-by-side in vertical position, for handling loads 30, 36, 48, 60, 72-in. in length, max. weight of 2700 lb. Dimensions of arms, length 36 in., length of clamp arms, 31 in., width of arms, 12 in., min. height of arm bottom 1 in., opening between arms, 18 to 66 in., over-all width of clamp, closed, 46 in., open 72 in., net weight 550 lb. The Baker-Rauland Co., Baker Industrial Truck Div. 53

MIXER. Side entering mixer, sizes 10 to 30 hp. induction type motor, available in wide range of enclosures and voltages for agitation of liquids in large quantities and constructed so that stuffing box can be repacked without emptying tank. For petroleum industries mixer is furnished with propeller speeds of 1150 or 400 r.p.m.; suitable speeds provided for other applications with liquids varying in viscosity from 1 c.p. to 3500 c.p. Eastern Industries, Inc. 54

MAGNETIC SEPARATOR. Designed for removal of extraneous ferrous material from liquids in pipe line, non-electric trap release is available in 2-, 3-, and 4-in. pipe line sizes with flanged or threaded ends. Constructed with U-

shaped magnetic elements attached to fused steel plate, handles pressures to 75 lb. Available in bronze and copper-nickel base alloy resistant to corrosive action; delivery in 2 to 3 weeks. Eriez Manufacturing Co. 55

TWIN STRAINERS. Available in sizes to 24 in., for removing foreign matter from water, oil, and other liquids at pressures to 125-250 lb./sq. in., no moving parts except valve mechanisms, strainers are constructed with cast Meehanite bodies, steel plate doors, baskets of hard copper mesh on rigid frames. Elliott Co. 56

LIQUID LEVEL CONTROL. Principle of photoswitch design allows contact with liquid through steel probe rods with no floating or moving parts in tank. Electrical relay operates from probe circuit through transformer and rectifier. Unit is recommended for electrically conductive liquids as acids, salts, milk, beer, nitrates, and sulfates. With pump-up or pump-down control, operates on power supply of 115 to 230 v., 50/60 cycles a.c. total consumption 0.5 w.; single-pole, double-throw relay output; contacts 2 amp./115 v. a.c., 1 amp./230 v. a.c.; designed for motor starter, motorized, or solenoid valve operation; resistance as high as 3500 ohms. Photoswitch, Inc. 57

VALVE TYPE SIGHT GLASS. For use in transparent liquid systems, differential pressure across deflector allows liquid to circulate through glass observation bowl. Worthington Pump and Machinery Corp. 58

INSTRUMENTS

MULTIPLE ANALYZER. Each 6 tubes are heated to temperatures to 1525° F. with heat control from 0 to 320 w., designed for rapid sulfur determination, apparatus also affords multiple analysis of oils, paints, intermediates, etc., simultaneously. Dimensions 22 in. long, 24 in. high, 36 in. wide. Precision Scientific Co. 59

REFRIGERATION THERMOMETER. Available in ranges from -50° to +300° F., designed with flexible copper connecting tube to temperature responsive bulb, thermometer is furnished without scale or ranges, may be calibrated to match predetermined scale lengths. United States Gauge. 60

FLOWMETER. Designed with two or more tubes for related flows, multi-tube instrument is applicable in continuous still processes, gas and air flows to atmosphere furnaces, water to battery of coolers, continuous dilution, etc. Brooks Rotameter Co. 61

FLOW INDICATOR. For clear or opaque liquids, instrument is constructed with fixed diameter opening at vertical inlet, tapered plug with permanent magnet suspended in the fluid stream, with external steel ball which moves against calibrated scale. Glass window permits observation of liquid,

and instrument measures flow rates of 3.5 to 250 gal./min., minimum 0.1 of maximum, for any instrument, pipe sizes from 0.75 to 4 in. Fischer & Porter Co. 62

VOLTAGE REGULATOR. Designed as source of high voltage, low amperage d.c., regulation accuracy is obtained to within 1%. Input voltage range 105 to 125 v. a.c., 50 to 60 cycles; d.c. portion "A," output 0 to 325 v., current 125 ma.; "B," output 0 to 150 v., current 5 ma. max.; a.c. portion 6.3 v. at 10 amp., center tapped, unregulated. Sorensen and Co., Inc. 63

NUCLEAR INSTRUMENTATION. Two types of complete nuclear laboratory setups are available, one containing complete sealing unit, thin mica end window Geiger tube, tube mount, connecting cables, and sample dishes; the other designed for analysis of radioactivity includes automatic scaler, Q-gas counter, for work with low activity-energy samples. Automatic timers are available. Nuclear Instrument and Chemical Corp. (Model L-165 and Model L-163). 64

GEIGER COUNTER. Equipped with 900-v. plug-in type Geiger tube with 30 mg./cm.² window section, instrument can detect beta particles as low as 160 k.e.v., as well as gamma rays. Weight approximately 2 lb., size 2.75 \times 3.25 \times 6 in., one replaceable battery. Price, \$75. Precision Radiation Instruments, Inc. 65

VOLTAGE REGULATOR. Rated at 2 kv.-amp. output, consists of variable transformer controlled by electronic detector. Rack model fits 19 in. rack panels, input voltage range 95 to 135 v., output adjustable between 110 and 120 v., output current 20.0 amp., output kv.-amp. 0 to 2; input frequency range 50 to 60 cycles; wave form distortion 0.0%; recovery time 3 seconds for line voltage excursions of 95 to 135 v., 0.075 sec./v. Cabinet model 20.9 \times 10.75 \times 9.75 in. The Superior Electric Co. (Stabiline Type EM 4102). 66

COMPRESSED AIR SEPARATOR. Available in two sizes, one 5.25 \times 8.5 in. over-all, inlet-outlet pipe, sizes 0.125 to 0.375 in., delivers to 0.125-in. pipe nozzle, price \$28; 6.5 \times 8.5 in. over-all, inlet-outlet pipe sizes 0.125 \times 0.75 in., delivers by manifold to 0.125-in. or to two 0.25-in. pipe nozzles. Price, \$39. James A. Murphy & Co. 67

EVAPOROMETER. Instrument determines evaporation rate of all solvents with viscosity of less than 100 cp., and solvent release characteristics of resin solutions. Fitted with timing mechanism, automatic filling microburet releases sample on filter paper cone suspended from helical quartz spring and rotated by motorized electromagnet providing even distribution of sample. Sensitive spring rises on evaporation, and when sighting disk above cone and its reflection align with scale calibration, height reading is obtained. Size 1.5 in. wide, 12 in. deep, 41 in. high. Precision Scientific Co. 68