WHAT'S NEW

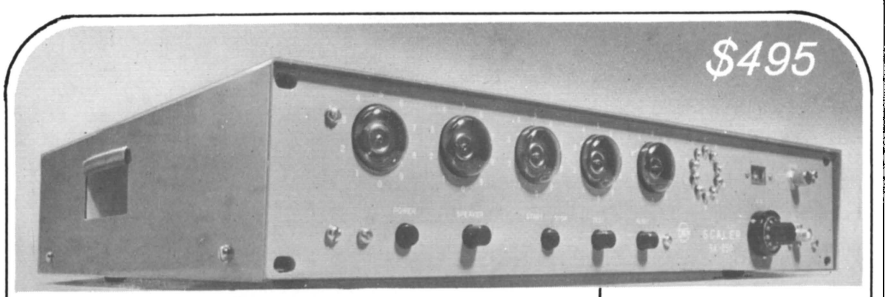
This listing is intended only as a service to the reader by calling his attention to items of possible interest. No endorsement should be inferred. Item numbers correspond to numbers on the READER SERVICE CARD.

33. **Radiation shielding glasses and windows** are the subjects of a loose-leaf compilation of descriptive material from Jenaer Glaswerk Schott & Gen., Mainz, West Germany. The company will provide shielding windows equipped with any of seven different glass types having densities from 2.53 to 6.20 g/cm^3.

34. Keithley Instruments, Cleveland, Ohio, offers a new **potentiometric electrometer** that measures dc voltages from 300 mV to 500 V within 0.01% and from 1 to 300 mV within 30 μV. Source resistances as high as 10^{10} ohms will not affect the instrument's accuracy. Other features claimed: potentiometer, reference voltage supply, and a vibrating-reed null detector in one unit; null ranges from 1 mV full scale to 100 V; limit of error within $\pm \approx 0.01\%$ for one year; of -null input resistance always $>10^{13}$ ohms for 1V and lower ranges; and input resistance $>10^{15}$ ohms at 1% off-null.

35. A 400-channel memory unit forms the basic building block for a series of **scientific analyzer systems** from RIDL Division of Nuclear-Chicago Corp., Melrose Park, Illinois. To this can be added power supplies, analog-to-digital converters, amplifiers, and display controls to complete tailor-made systems. Accessories for the series include provisions for analog readout and display, parallel readout, serial readout and readback, and system control functions. The series is compatible with other equipment from the firm.

36. A new **high-temperature-grade austenitic stainless steel** is featured by Sandvik Steel, Inc., Fair Lawn, New Jersey. The firm, a subsidiary of the Sandvik Steel Works of Sweden, claims the following for the new steel: high creep strength—up to 100% higher than other austenitic grades—at temperatures in the 1200 to 1500°F range; good formability, in many cases, without followup thermal treatment; and good weldability. Chemical composition includes 15% chromium and 15% nickel with 0.12% carbon and "a fractional amount of boron."



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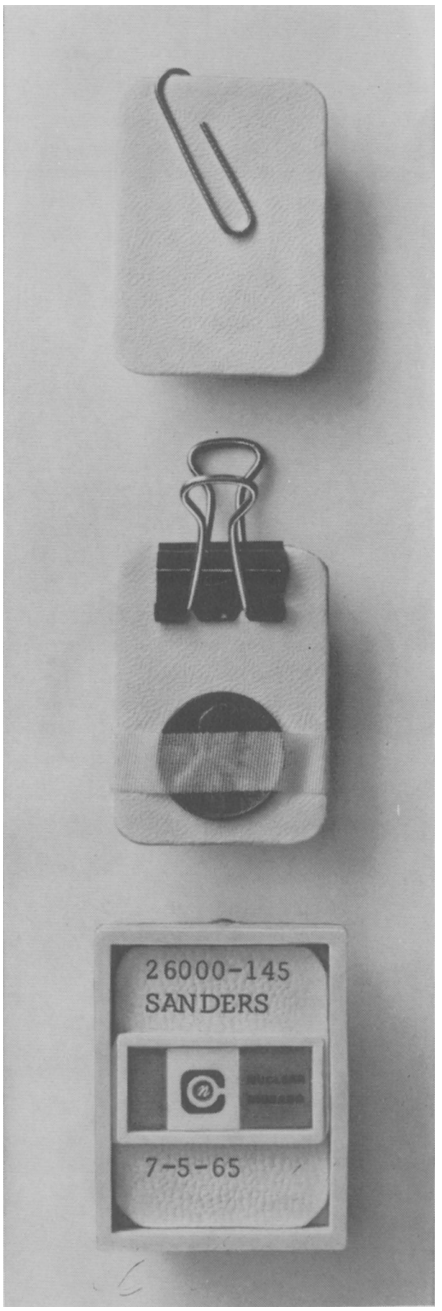
37. **High alumina components** machined to fine tolerances are offered by American Beryllium Company, Inc., Sarasota, Florida. The firm's jig grinding equipment can produce holes in high alumina parts to $\pm$ 2 x 10^{-5} in. with chordal dimensions held to $\pm$ x 10^{-4} in., it is claimed. Alumina balls can be lapped to $\pm$ 1 x 10^{-5} in. sphericity.

38. A new **instrument for measuring oxygen concentration in liquid metals** is now being marketed by United Nuclear Corp., White Plains, New York. Operating on the principle of an electrochemical cell, the meter is said to be capable of detecting changes in oxygen concentration as small as 1 part/10^6 at the 10 part/10^6 level and 0.1 part/10^6 at the 1 part/10^6 level. The sensor is installed directly in the liquid-metal system, eliminating the need for sampling. Response is immediate, and the output can be used for direct process control or for continuous display on an indicator unit.



Three of a kind?

Hardly.

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39. A new-design **automatic roll filter** described as the Series II Auto-Roll has been announced by the Cambridge Filter Corporation, Syracuse, New York. The filter is fabricated to meet all GSA construction and performance requirements. In addition to the 3-, 4-, and 5-ft section widths, which were standard, the unit is now also available in a 6-ft wide section.

40. The Cyclotron Corporation, Berkeley, California, offers an off-the-shelf **30-in. cyclotron**. The machine is an isochronous azimuthally varying-field particle accelerator producing 100 μA of external beam of 15-MeV protons, 7.5-MeV deuterons and 20-MeV ^{3}He ions. Neutron fluxes of $\approx$ 5 x 10^{13} n/(cm^2 s) ranging in energy from a few keV to 25 MeV can be produced. With suitable moderators, thermal neutron fluxes of 5 x 10^{10} n/(cm^2 s) are claimed.

41. Sigma Systems Corporation, Dallas, Texas, has developed a **guarded signal conditioning module** that is said to eliminate common mode voltage problems in strain gage and transducer data acquisition. The new units have individual isolated bridge excitation power supplies with 0.01% line and load regulation. Ripple is held o 30 μV rms. The module supply has all-silicon semiconductors and features automatic current-limiting short-circuit protection.

42. A new line of **metallic bellows expansion joints**, manufactured by the DYNACON Division of Eastern Stainless Steel Corp., Cockeysville, Maryland, employs a unique design concept said to give longer service life, improved performance, and a greater margin of safety. The joints are available in lengths ranging from 3 in. to 10 ft, yet not limited to conventional pipe sizes, in all 18-8 grades of stainless steels.

43. TD Associates, Baltimore, Maryland, claim more accuracy and less cost as features of their new line of **absolute filter testing equipment**. The

system is based on the use of di-octyl-phthalate (DOP) aerosol as a testing agent with filter efficiency measurement being provided by a linear scale meter and a forward light-scattering chamber.

44. Standard-size (2 x 4 x 8 and 4 x 6 x 8 in.) bricks of **shielding materials** are offered by Reactor Experiments, Inc., Belmont, California. Featured are: bricks of polyethylene lead-boron, with a specific gravity of 0.92 and the equivalent of 5 wt% boron; and polyethylene-lead-boron bricks containing 25 vol% (80 wt%) lead and the equivalent of 1 wt% boron, with a specific gravity of 3.6. Other sizes, shapes, and composition are also available.

45. Space Nuclear Division of Albert Zollinger, Inc., Downers Grove, Illinois, can supply **dry-box accessories,** including glove rings and clamping rings molded of impact phenolic with a buffed snag-resistant finish. Gloves can be made air-tight and non-slip by means of two "O" rings and a retainer for a hose clamp.

46. Two new brochures covering the hardware and software aspects of a **medium-scale computer** for scientific and engineering applications are available from Raytheon Computer, Santa Ana, California. The hardware brochure describes the central processor, details performance with competitive computers, and describes the input-output system and various application areas. The software brochure describes the various programming systems developed for use with the computer.

47. Speer Carbon Company, St. Marys, Pennsylvania, has issued an eight-page **brochure on nuclear graphite,** including a table of purity levels, the relationship between purity and neutron cross section, a table of the physical properties of graphites, which are worthy of consideration by the nuclear industry, and a section on the stability of graphites subjected to neutron bombardment, with a graph indicating "Dimensional Stability as a Function of Exposure."

48. Recently published by Zak, Inc., Troy, New York, is a 12-page **catalog of contract manufacturing services,** describing the machining, welding, fabricating, assembling, and testing services available from the company. Plant organization is outlined in the bulletin, and a supplement lists the company's current manufacturing facilities.

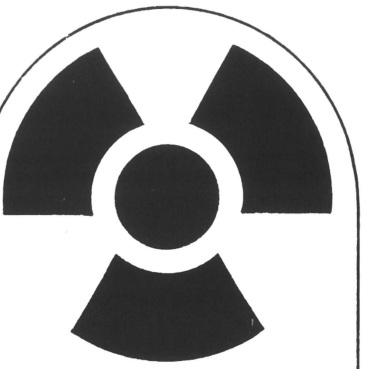
49. Available at no cost from The American Welding and Manufacturing Company, Warren, Ohio, is a new two-color four-page **brochure** describing in brief the advantages of the **flash butt-weldable process**. A general listing of flash butt-weldable materials is also included, together with a chart of current applications.

NOTICE

Nuclear Engineering Bulletin

Nuclear Engineering Bulletin is published periodically by the American Nuclear Society. The *Bulletin* presents such special interest subjects as proposed standards for the nuclear industry; it is expected that between two and six issues will be published during 1966.

Beginning in 1966, *Nuclear Engineering Bulletin* is available on a subscription basis @ $3/year. It continues to be available @ $1.50/copy.



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