

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. Seven new or renewed **radioactivity standards** have recently been announced by the National Bureau of Standards: ^{22}Na , ^{55}Fe , ^{65}Zn , ^{88}Y , $^{137\text{m}}\text{Ba}$, ^{141}Ce , and ^{241}Am . These standard reference materials, as well as the others issued by the NBS, may be ordered from the Office of Standard Reference Materials, National Bureau of Standards, Washington, D. C., 20234.

34. A slightly smaller version of the **neutron howitzer**, manufactured by Reactor Experiments, Inc., Belmont, Calif., is the Visiflux II. Designed specifically for schools with limited budgets, the device will accommodate Pu-Be sources up to 5 curies in strength at the center of an 18-in.-diam Plexiglas tank. An accompanying experiment manual describes 20 experiments which can be performed with the unit.

35. A new 3-MeV **pulsed x-ray system** capable of a maximum radiation output of 10^4 R at 2 cm has been announced by the Physics International Company, San Leandro, Calif. Peak dose rate is $>5 \times 10^{11}$ R/s; pulse width is 30 ns at 50% of peak intensity. Up to 53 pulses in a 6-h shift have been repeatedly achieved with the system.

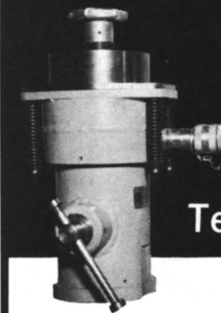
36. Baird-Atomic, Inc., Cambridge, Mass., recently released its latest **catalog** (A-6) and accompanying price list on its line of atomic and laboratory instruments, systems, and accessories.

37. The Princeton Division of Electro-Mechanical Research, Inc., Princeton, N. J., employs a new device, which the company calls a photon scintillator, in a **detector assembly** designed for accurate photon counting in the ultraviolet range. The basic detector principle consists of preamplifying the photons by a nonsecondary emission process. The preamplifier is a sealed-off vacuum tube consisting of a photocathode, a suitable electron optic system, and an anode phosphor. The tube is optically coupled to a photomultiplier for scintillation counting.

40. A **system for decontaminating milk**, removing ^{90}Sr and other isotopes in a continuous process using ion-exchange columns, has been outlined by the Milton Roy Company, Philadelphia, Penn. An operating pilot plant is said to remove an average of 95% of the strontium with a through-put of about 100 gallons of milk per hour.

41. The Marman Division of Aeroquip Corporation, Los Angeles, Calif., offers a new 72-page **catalog** (No. 821) describing all types of metallic flanges, clamps, couplings, straps, and joints for industrial use. Complete dimensional data, performance ratings, and applications information are included.

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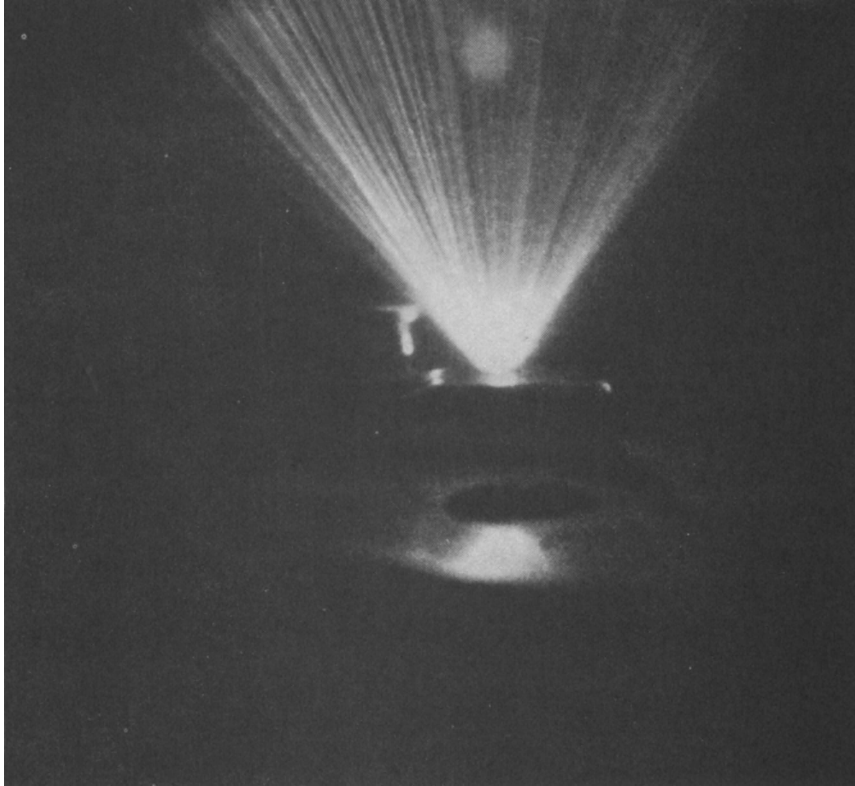
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Researchers find HVEC Particle Accelerators particularly useful for both destructive and non-destructive analysis of materials.

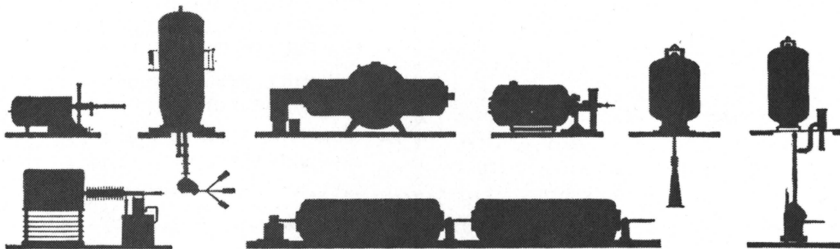
Typical examples:

- neutron and ion activation analysis
- wear and corrosion studies
- radiography of rocket propellants

All radiations from HVEC accelerators can be used to alter or improve the characteristics of materials for today's exotic technologies.

HVEC Particle Accelerators — with their precisely controllable energy, intensity, and low energy spread with freedom of particle choice — are ideally suited for applied nuclear research.

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High Voltage Engineering produces a complete line of particle accelerators ranging from 300-keV to 30-MeV.

 **HIGH VOLTAGE
ENGINEERING**

38. **Diffused-junction silicon diodes** of spectroscopy grade, from Edgerton, Germeshausen, and Grier, Inc., Boston, Mass., are described in the company's Data Sheet DSG 100. These detectors feature thin window, high resolution, low noise, and operation at ambient or cryogenic temperatures.

39. Available from Allis-Chalmers Atomic Energy Division, Milwaukee, Wis., is a **small-leak detector** for heavy- or light-water circulating systems. The detector is in tape form, with two copper conductors bonded in a polyester plastic backing. Centered between the conductors is a continuous pad of chemically treated fibers and electrical conductors. An adhesive backing permits attaching the tape to any dry metal, wood, or ceramic surface. For use with electrical indicators, insulated wires can be soldered to the copper conductors. A bright blue spot on the pad provides visual indication of a leak. The tape is reusable after becoming wet.

REMINDER



American Nuclear Society Members

A certificate of membership is available on request to all members of record prior to January 1, 1965.

All new members since January 1 have received their certificates.

42. A full line of compatible, **ultra-high vacuum bakeable flanges** that feature copper-seal gaskets is available from General Electric's Vacuum Products Operation, Schenectady, N. Y. The vacuum seal is capable of withstanding repeated temperature cyclings from -196 to $>500^{\circ}\text{C}$, while offering reliable sealing at 10^{-12} torr. The sealing surface is recessed to minimize possible damage. Reusable flat gaskets that come with the flanges are made of oxide-free copper. Construction of mating flanges is identical. Fixed and rotatable flanges are available in standard sizes from 2.75- to 10-in. OD.

43. Helically wound **fin tubing** available with up to 40 fins/in. and with a continuous brazed metallurgical bond between fin and tubing is said by the Ferrotherm Company, Cleveland, Ohio, to double heat transfer area and efficiency. Available in small-diameter tubing from $5/32$ to $5/8$ in., the tubing is capable of continuous cycling at temperatures up to 1420°F .

44. An **acoustical blast door** with concealed hardware, has been developed by the Overly Manufacturing Company, Greensburg, Penn. The door will resist direct or rebound blast pressures up to 150 lb/in.^2 on either side and will reduce sound levels by 43 db. It also can be equipped with shielding. Hinges are adjustable in six directions and have been designed to bear no blast loads. Concealed stainless-steel hardware can be reached by removal of access plates.

45. **Miniature teflon bellows** down to $1/4$ -in. OD are available from Eclipse Air Brush Company, Newark, N. J. A new pressure form process is said to provide all the inherent advantages of Teflon plus long flex life, high stroke per convolution, and bend and twist strength. Ends can be threaded, flanged, swage-retained, or glued. The new seal can withstand up to 125 lb/in.^2 and 300°F and possesses 850 V/mil dielectric strength.

46. Chemtree Corporation, Central Valley, N. Y., has issued its first **catalog** covering a variety of patented formable metallic mortar materials formulated especially for

use as nuclear shielding. The publication contains information on element content, physical characteristics, and shielding capabilities of each material. All these materials are combinations of water-mixed powders, which can be sprayed, poured, cast, or trowelled and, when set, can be drilled, tapped, and painted.

47. A **bulletin** from Gulton Industries, Metuchen, N. J., describes and illustrates the company's electronic equipment for nuclear applications. Included is a line of data-processing, recording, power-supply, environment, and orientation-sensing equipment for measurement and control purposes.



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