Think back to the time when you were completely dependent on manual methods for histologic processing. Tissue preparation that frequently took days to do then is now done in a matter of hours. Everybody's time is saved... technician's, pathologist's, surgeon's, patient's, and hospital's. Tissues come through faster and better — diagnosis is prompter. The working day becomes more productive.

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Am. Ass’n for the Advancement of Science
Cleveland, Ohio
December 26, 1950

B. R. PRENITCE
Nudeonics Department

ATOMIC REACTORS: A recent A.E.C. paper states the average cost of presently planned experimental reactors as something over $10,000 per equivalent electrical kilowatt output. Not exactly cheap! But that does not discourage me. Fifty years ago the theory of the gas turbine was known, just as the theory of the reactor is today. But suppose building a power-producing gas turbine at that time had been a command performance, like the development of the atomic bomb. I imagine the buckets and combustion chambers might have been made of platinum. What do you think the cost per kilowatt of such a unit would have been at that time? And that’s about where we are today in the atomic power field.

Southeastern Electric Exchange
Atlanta, Georgia
October 28, 1950

R. W. WIESEMAN
Apparatus Department

PERIODIC TESTS: The service record of a rotating electrical machine depends to a great extent on the performance of its winding insulation. Proper installation, suitable overvoltage and overload protection, normal operating conditions, and periodic inspection and testing all help the machine windings to function satisfactorily. However, windings in service are continually exposed to such adverse factors as conducting dirt, moisture, chemical action, mechanical damage, abnormal temperature, overloading, and overvoltages. It is, therefore, desirable to occasionally apply a conservative over-potential test, after inspection and cleaning, to determine the suitability of a winding for continued service. By making these tests at the beginning of planned station overhaul periods, time will be available to replace any defective coils with spare coils without loss of service time. In this way, unexpected repairs made under costly emergency conditions may be avoided.

General Electric Review
August, 1950

J. C. FISHER
J. H. HOLLOMON

Research Laboratory

CANCER CELLS: It is suggested that a single cancer cell surrounded by normal tissues cannot initiate malignant growth, and that tumors appear at locations where for one reason or another a critical number of cancer cells are bunched together. The idea behind the critical-size concept is that individual cancer cells in normal tissue are bathed in normal chemistry, whereas a cancer cell surrounded by others of its kind is bathed in abnormal chemistry where malignant growth no longer is inhibited.

National Academy of Sciences
Schenectady, New York
October 10, 1950

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