Edward S. Seaman
11519 Arroyo Oaks
Los Altos Hills, CA 94024

To Our Friends: June 1, 1962

Memorex has great ambitions.

Memorex is ambitious to demonstrate the highest order of technical and manufacturing competence in the magnetic tape industry. It is ambitious to sell the best precision tape. It is ambitious to be responsive to the needs of its customers as only a small enterprise with singleness of purpose is able.

Laurence L. Spitters, President; Carl A. Anderson, Controller.

Memorex's capabilities warrant these ambitions. We have prepared this brochure to introduce them to you.

In this brochure, we wish you to see the inside of our manufacturing facility, to appraise the philosophy we bring to our industry, to appraise the skills of our scientific and production personnel, to know the depth and scope of our research, the thoroughness of our quality control.

We cannot picture or describe Memorex's zeal to serve its customers, but you will know this the first time you meet a Memorex man. The distinguishing mark of Memorex people — research scientists, chemical engineers, sales engineers and accountants — is that we are user-oriented. We mean to prove it to you.

Although intensely proud of our capabilities, we work by the rule that "a man's reach should exceed his grasp." In this sense, we shall never realize our ambitions. We shall always reach to do better. You can help us do better by telling us what we should be doing for you. You will find us surprisingly responsive.

Cordially

Laurence L. Spitters

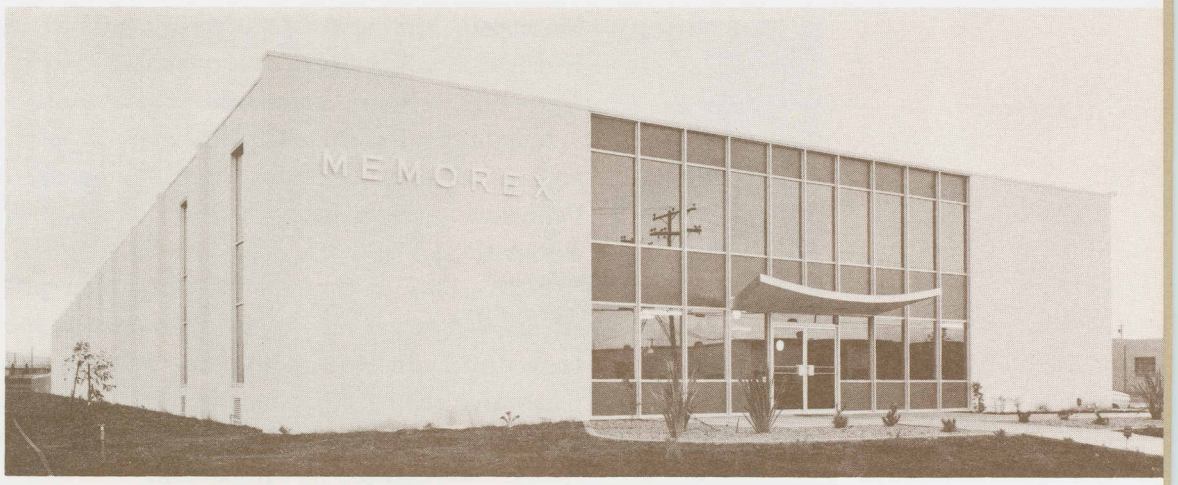
LAURENCE L. SPITTERS
President

Memorex's single purpose is the development, production, and marketing of precision magnetic tapes for computers, data acquisition and analysis systems, telemetry and instrumentation recording systems, video frequency recording systems, and exacting audio frequency applications.

Our product line consists of precision tapes of widths and lengths capable of performing on all commercially available tape drives. We also offer for sale a complete line of reels for all uses and applications.

Memorex has never undertaken the manufacture of consumer products. Its personnel, plant and equipment are exclusively dedicated to the manufacture of precision tapes for the demanding applications set forth above.

Carefully milled reel flanges and specially selected reel containers typify the quality of Memorex magnetic tapes.



White exterior bespeaks emphasis upon cleanliness of the most modern tape manufacturing facility in the United States.

Memorex Corporation is organized to meet a technical challenge and to exploit an economic opportunity.

The demands of tape users for improved and consistently reliable precision products are taxing the capabilities of tape manufacturers. A large capital investment is, of course, necessary to assemble the technical talent, design and construct facilities, and carry on the involved product development prerequisite to production. Yet, the market potential for a dynamic and capable enterprise promises an adequate return on that investment. This is the economic justification of Memorex.

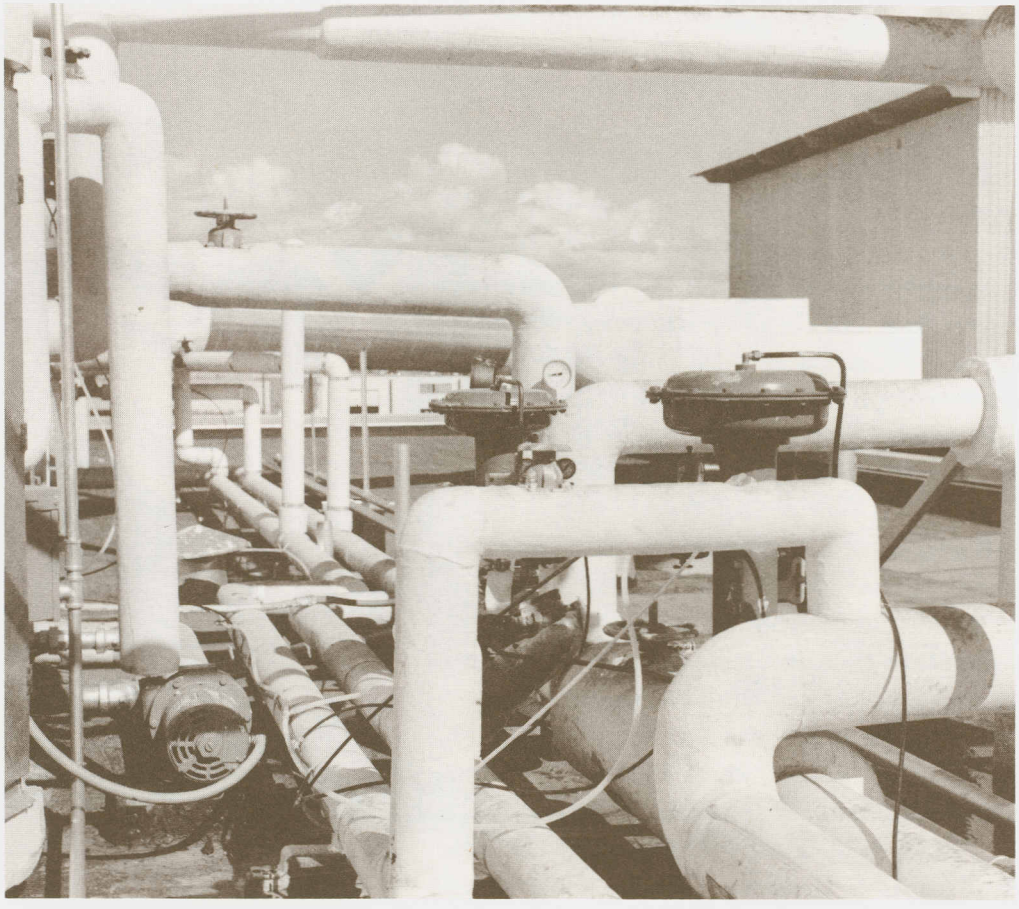
In early 1961, a small number of institutional and private capital sources provided financial sponsorship for the Company. Substantial capitalization enabled Memorex to obtain the best resources of people and facilities in the tape manufacturing industry. As always in a precision industry, the best has proven most economical.

Memorex people, whose biographies are set forth at page 19, bring to Memorex a diversity of experience in chemistry, process engineering, magnetic recording, and data processing. In their backgrounds are experience with Dow Chemical, Monsanto, Shell Chemical, Eastman Kodak, Procter & Gamble, Cutter Laboratories,

Minnesota Mining & Manufacturing, IBM, Ampex, Minneapolis-Honeywell, Midwestern Instruments, Boeing, Lockheed, and the National Bureau of Standards.

Memorex's facilities are located in a specially designed 24,000 square foot plant at Santa Clara, California, on the San Francisco Peninsula. A conspicuous feature of the plant is its control and elimination of dust and other possible contaminants of production.

Innovations in a series of production processes, custom-engineered equipment, and unusual production monitoring and quality control instrumentation are other features which make the plant a persuasive selling point for Memorex tape. Accordingly, Memorex has adopted the uncommon practice of inviting tape users to inspect its facilities and see its production.



Complex system of air filtration, humidification, dehumidification, heating and cooling provides special environment for tape manufacture.

Donald Eldridge, Vice President and Technical Director; Louis Higashi, Senior Research Chemist; Albert Baaba, Research Scientist; Eric Daniel, Associate Technical Director.

Acute awareness of tape users' problems is one key to product development at Memorex. Deeper understanding of many parameters of tape is another.

Memorex research people are distinctly tape user-oriented. Donald F. Eldridge, Technical Director, and Eric D. Daniel, Associate Technical Director, and a majority of the research staff were formerly affiliated with manufacturers of recording equipment and sophisticated users of tape. Hence, they have first-hand experience and understanding of the problems of tape wear, oxide shed, head contamination, head wear, and obtaining better short wavelength performance and pulse response. We look confidently to researchers with these insights for meaningful solutions to tape problems.

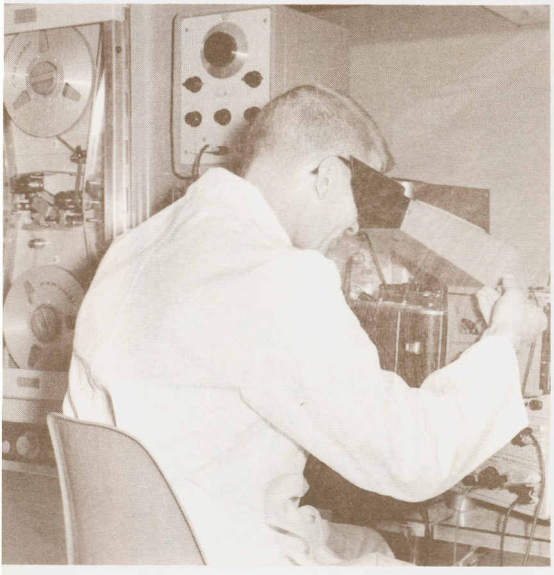
Precision tape users and magnetic recording equipment manufacturers are cognizant of the significant lag of improvement in the tape medium. The best available tape is simply unsatisfactory for many demanding applications. One of the reasons for this technical lag is the considerable lack of fundamental knowledge in our field. The aim of much research at Memorex is to develop such knowledge.

In this activity, our research staff has extensively investigated the problem of tape wear and the exact way in which wear influences tape reliability. Basic causes of different types of drop-outs have also been determined. Factors affecting the response at very short wavelengths and high packing densities are under study. Other study areas include the significance of the condition of tape edges and the electrostatic behavior of tape.

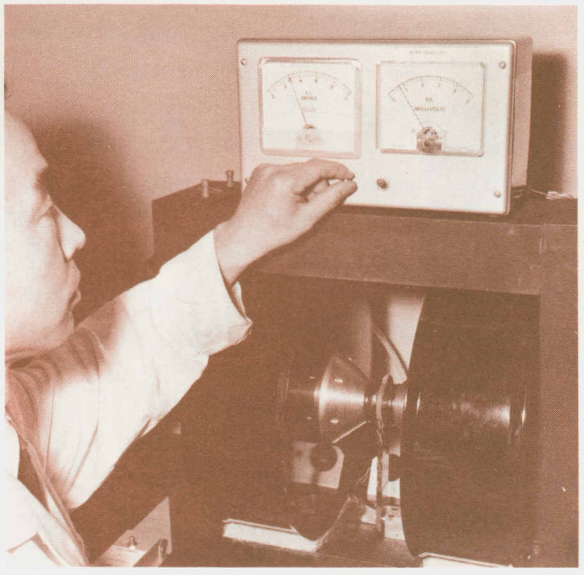
A significant fund of this basic knowledge has been and continues to be developed at Memorex. We have shared much of it with our industry in published technical papers and in liaison with technical leaders in the United States and in foreign countries. We have also learned much from others. Without question, the enhanced technical sophistication of the Memorex research staff has contributed to the improvement of quality available in Memorex products.

The difficulty of our effort to establish a true technological basis for magnetic tape development and improvement would be compounded if Memorex's researchers were unable to obtain critical measurements of the electrical, chemical, and physical properties of tape. We have, therefore, established one of the most thorough and accurate testing facilities in the world for tape analysis. It encompasses a number of new tests and techniques, which go well beyond the specifications of the most critical users, and it utilizes advanced Memorex-developed test instruments, which achieve a degree of sensitivity and precision unobtainable with commercially available instruments.

Parenthetically, Memorex's testing facilities provide us with advantageous demonstrating and selling opportunities. Visitors to our plant are invited to witness and evaluate the comparative test results of our product and those of our competitors.

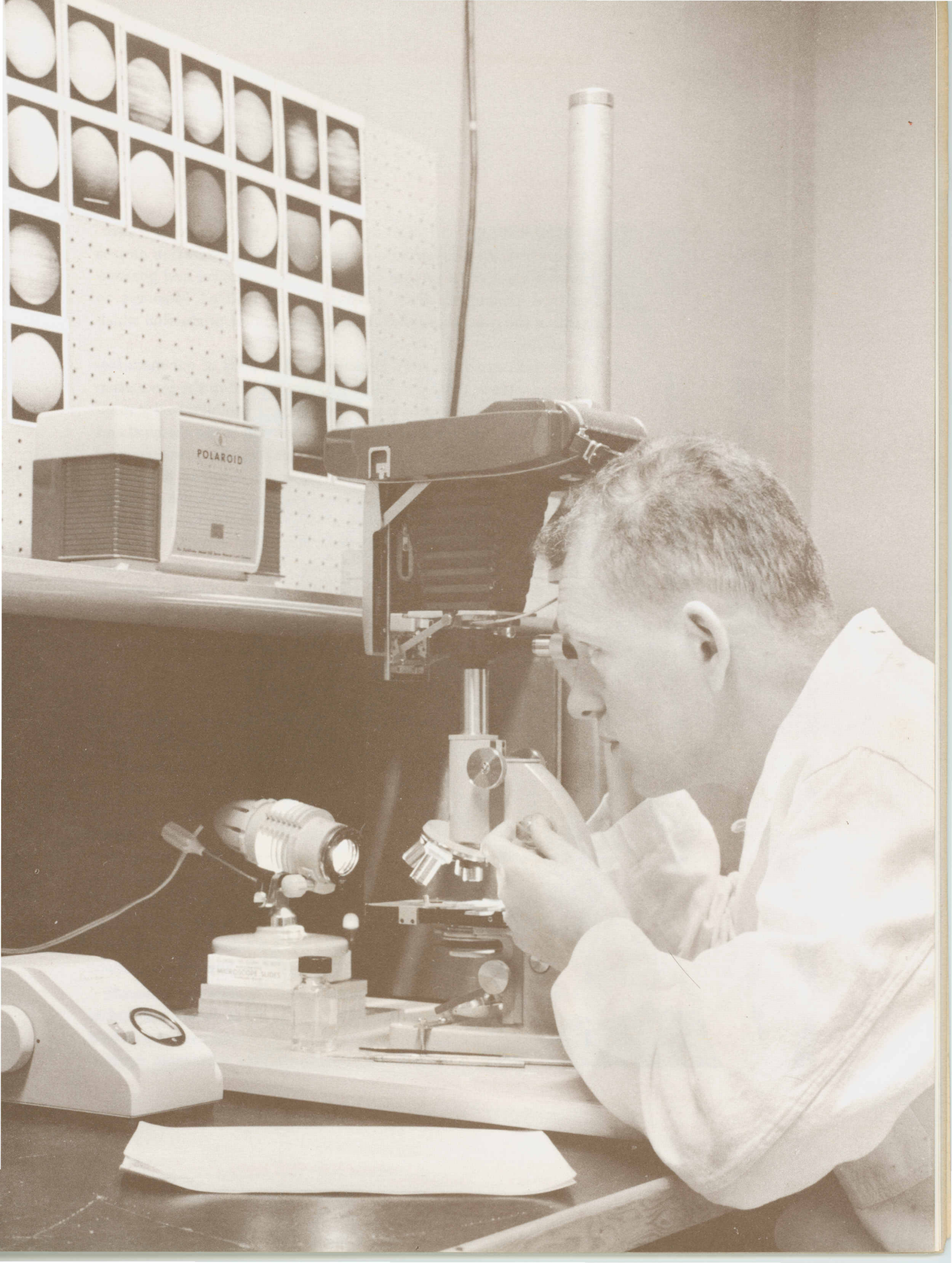


Memorex makes a durability test of every production run. Performance check on digital tape handler allows the permanent photographic record of a computer tape's pulse output.



Memorex-designed vibrating sample magnetometer provides an unusual degree of accuracy in measurements on magnetic materials.

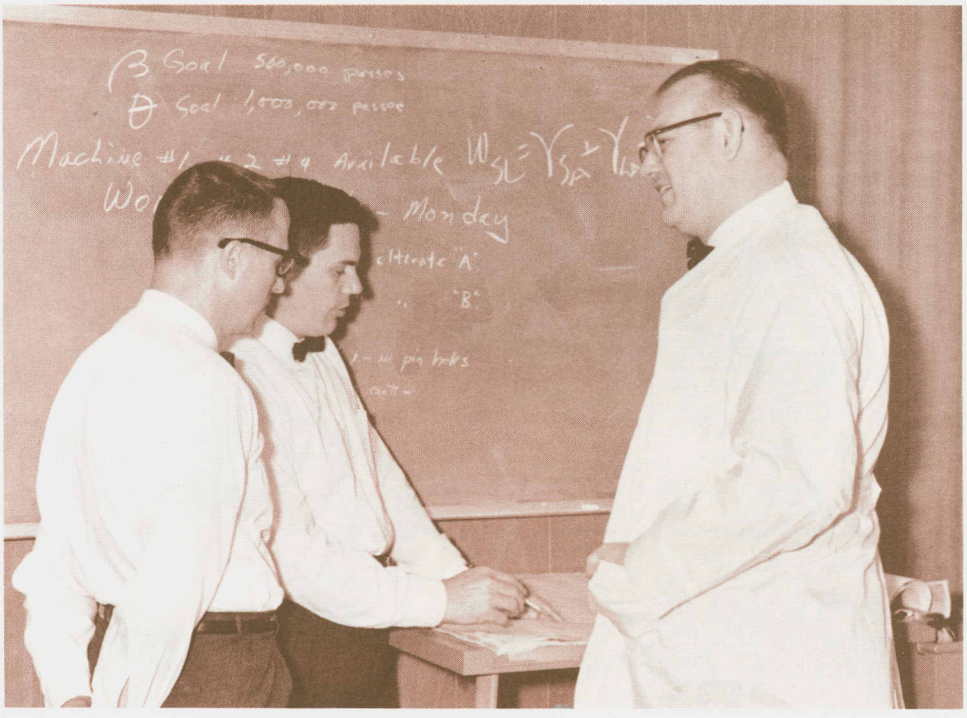
Research engineer employs a microscope and camera to study the surface characteristics of tape coatings.


POLAROID

As the strength of Memorex's research staff lies in tape user-orientation, the strength of our manufacturing organization derives from orientation in process engineering and chemical and pharmaceutical production. Such orientation has enabled Memorex to achieve the consistency and reliability of quality production which is its objective.

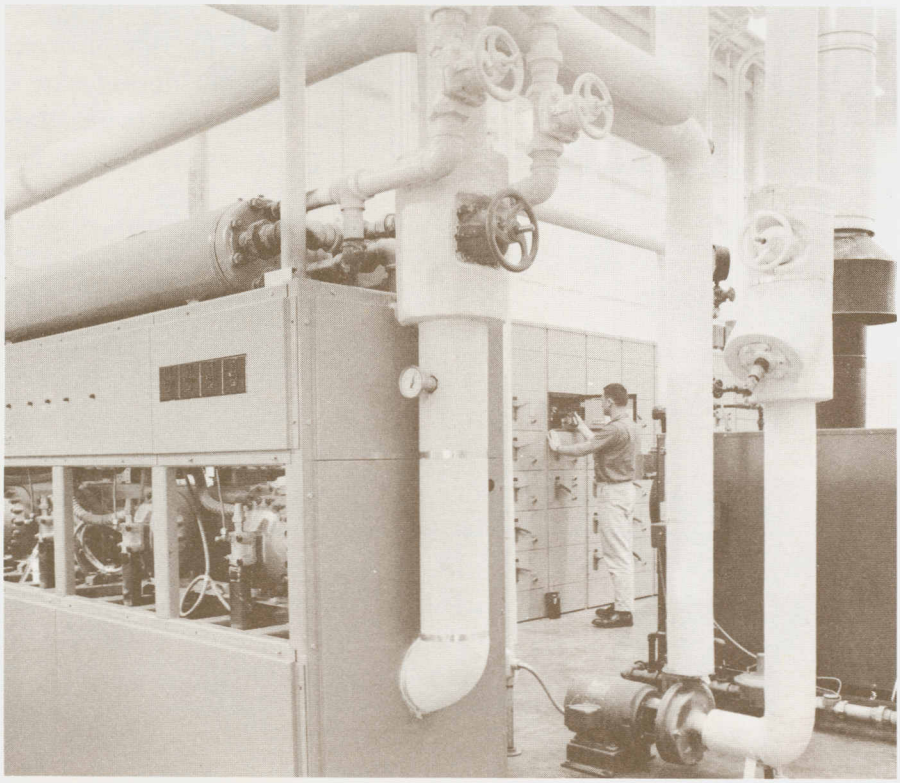
We have exploited the experience backgrounds of our manufacturing people in two ways. First, we have utilized in the production of Memorex tape the principles of automation, production-line monitoring, and process control which are employed in the chemical and pharmaceutical industries. As a consequence, the consistency of quality of Memorex tape within-a-reel and reel-to-reel is assured.

Second, the standards of cleanliness and the techniques of sterile-room manufacturing of the pharmaceutical industry have been borrowed for Memorex tape manufacturing. Our extreme emphasis upon elimination of airborne dust particles from manufacturing areas gives to Memorex tape a freedom from incipient drop-outs which otherwise could result from encaptured dust. It is interesting



Gordon Mac Beth, Manager of Production Technical Services; Rex Lindsay, Plant Manager; W. L. Noon. Vice President Manufacturing.

Pumps, motors, boilers, and compressors provide utility services for diverse manufacturing processes. An operator checks circuit load at electrical distribution panel in background.

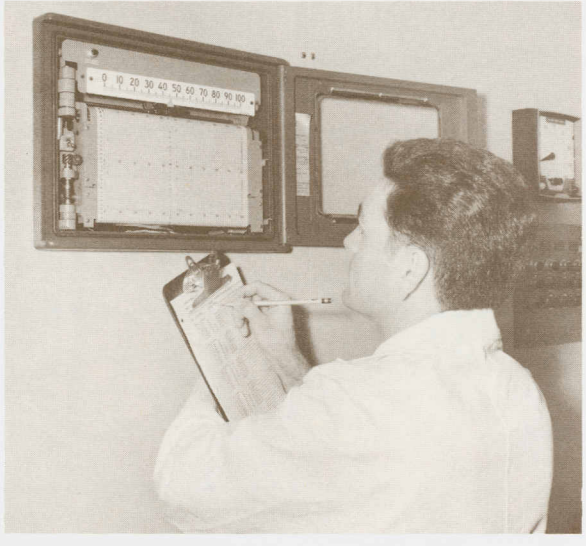


that Memorex uses dust filters similar to those employed in atomic energy facilities to prevent the escape of radioactive particles.

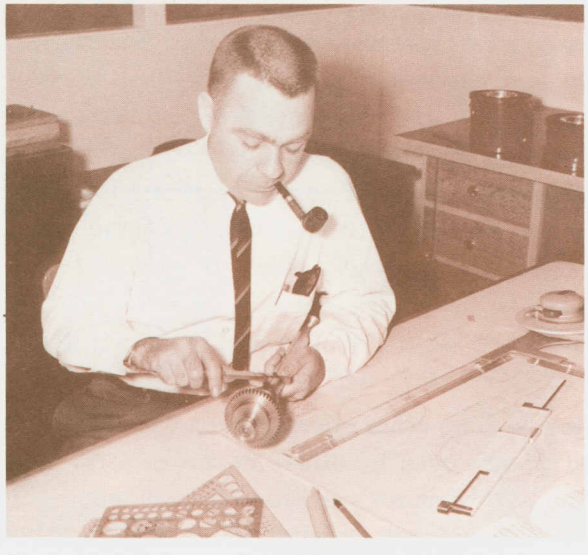
Some of the innovations incorporated in Memorex's manufacturing plant are subtle, e.g., extremely wide width vinyl sheeting on floors to minimize dust-inviting cracks. Others are striking — Memorex, to our knowledge, has the longest tape drying and curing oven in the world. Obviously, many of our manufacturing innovations are proprietary and we should be ill-advised to parade them before our industry. But, we wish to make point of Memorex's originality in the design and engineering of most of its manufacturing processess — formulation dispersing, treatment of backing material, coating, drying and curing, slitting, and even packaging.

Memorex has copied from no other manufacturer. Processes and techniques known to be employed by others in the industry were held suspect, not because of Memorex's ambition to be different, but because innovation was considered essential to overcome quality

limitations inherent in some of the commonly used processes. Those which experimentation and pilot line production proved to be suitable for precision tape manufacturing were incorporated into our production line. Those established as unsuitable were replaced with Memorex-developed processes and new techniques.

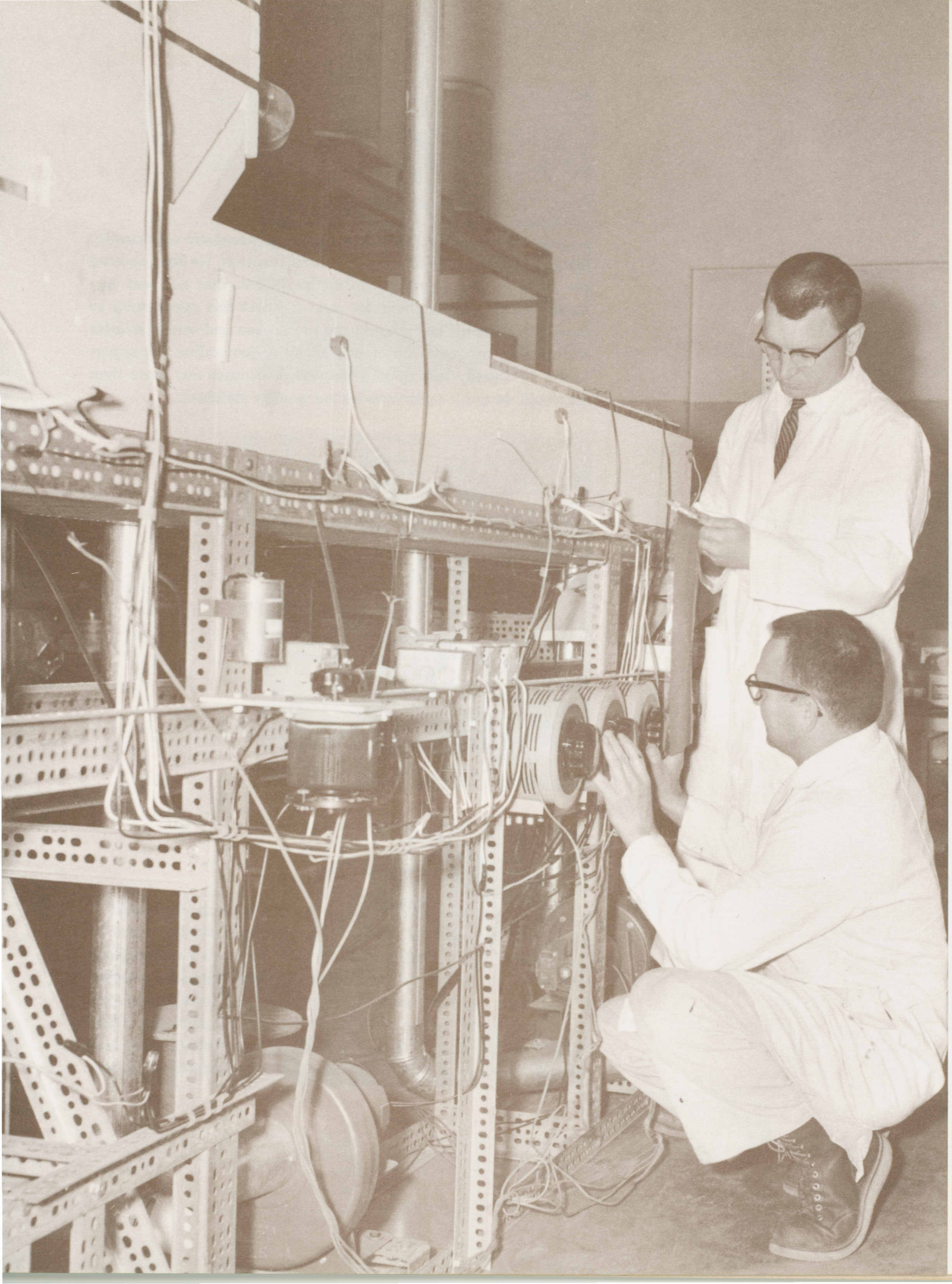


Strip-chart recorded information of oven temperatures is abstracted for continuous analysis to assure precision in production.

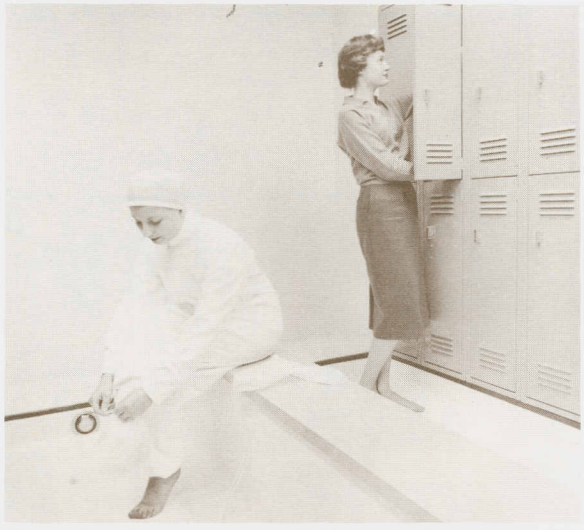


Engineering of manufacturing equipment involves capabilities in chemical, mechanical, and electrical engineering. Robert Brumbaugh, Senior Mechanical Engineer, redesigns a machine component to closer tolerances.

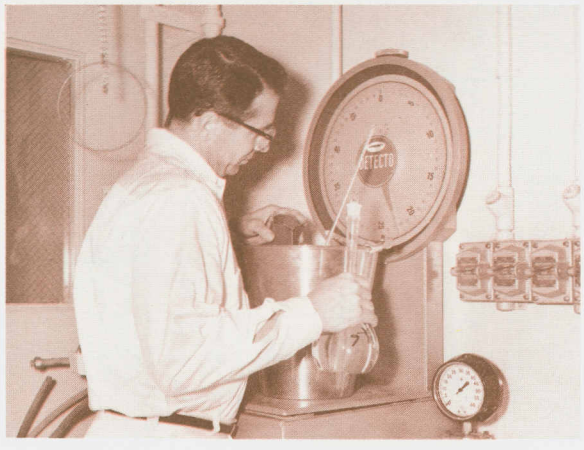
Several pilot lines are employed at Memorex for experimentation and for limited production of non-standard tapes required by customers.



That Memorex is organized to exploit an economic opportunity has an implication for its quality control function. We have entered the *precision* tape industry because we believe that our best economic opportunity lies here. We cannot expect this opportunity to materialize unless we engage in the production and sale of *reliable* high quality products. We do not intend to jeopardize this opportunity by shoddy testing or inspection procedures any more than we would do so by compromising our quality standards.

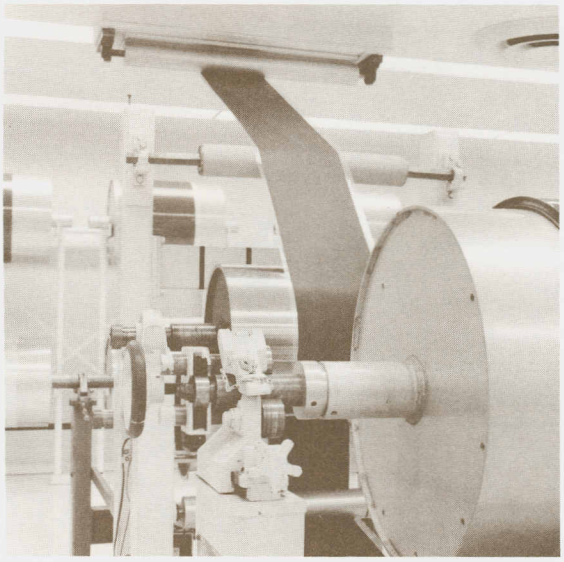


Access to clean room areas is through change rooms where street dress, jewelry, and cosmetics are removed, Lint-free uniforms, caps, and boots are donned from a second locker across the barrier-bench.



Additives to a tape's formulation are accurately weighed prior to dispersion processing. Independent weighing by a second chemist precludes error.

Ultrasonic cleaning system, designed by Memorex engineers, removes foreign matter from film base material before coating.

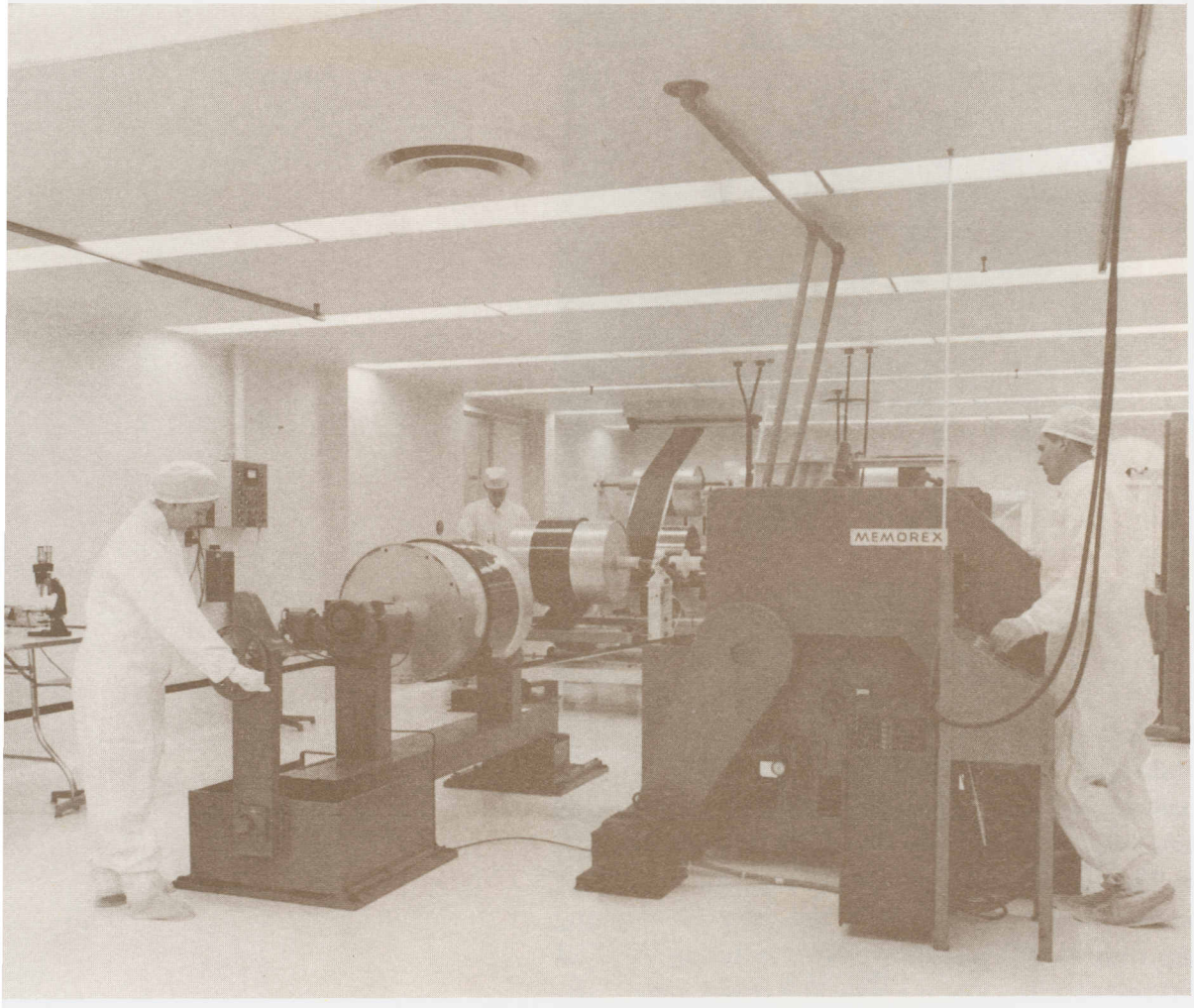


Coated web is wound on jumbo rolls at terminal end of drying and curing oven.

Memorex's standards of quality, which exceed the specifications of users, are established by its Quality Assurance Laboratory, an independently constituted function which cannot be subjected to delivery schedules and other pressures found in every manufacturing organization. The Lab also has the responsibility for continuous audit and enforcement of its standards in the drop-out checking and other quality control activities of our manufacturing. At least one of the several tapes slit from each production run is comprehen-

sively tested by the Lab. Reels of tape are also withdrawn on a statistical basis from various points to assure adherence to quality standards along the production line, up to and including the shipping department.

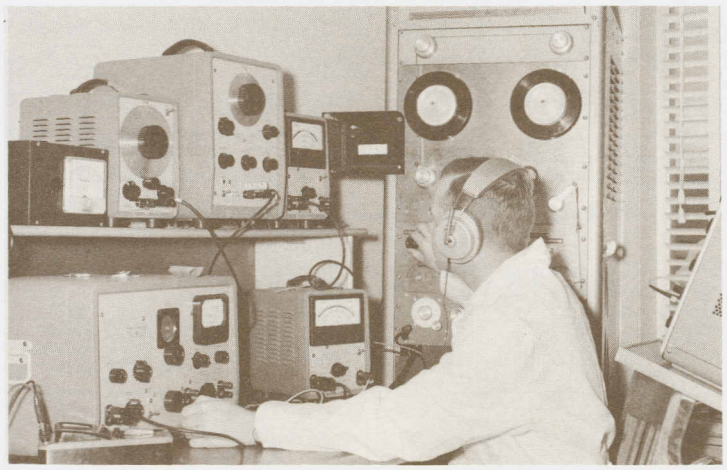
It is not necessary for Memorex's customers to engage in extensive and costly testing of our products because of this high order of quality control and this quality assurance philosophy. We conceive it to be our responsibility to know and to certify the quality of Memorex products without reservation. Our warranties reflect our integrity in practicing what we preach.



Slitting of rolls of the coated web into narrow tape widths is one of the several operations carried on in completely controlled environment.

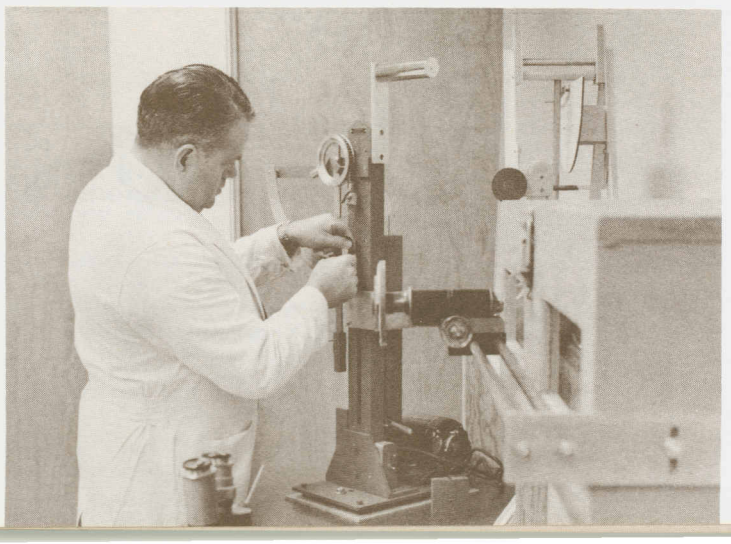
Accurate assays of properties of all materials, purchased and manufactured, are performed in Memorex chemical laboratories.

Infra-red spectrophotometer and gas chromatograph analyses are used to monitor the resin binder systems used in coatings.



Performance evaluation of a tape loop sample, taken from a production run, is conducted in Quality Assurance Laboratory.

Physical properties tests made by Quality Assurance include tensile strength measurement.



Memorex's products are sold directly to users. District offices staffed by technically trained sales engineers are located in principal cities throughout the country.

In our marketing efforts, emphasis is upon technical service and flexibility. Memorex sales engineers talk uses and applications in a professional way and are vigorous advocates of customers' interest in our councils. They provide an open-line of communication from tape user to tape manufacturer and assure that Memorex is responsive and quickly accommodating to your needs.

Our sales engineers also function as a market research staff. They solicit information of your tape problems and your requirements for slightly modified products or for exotic or special tapes, to which Memorex's research and product development efforts can be applied. The pilot lines of our Production Technical Services Laboratory are uniquely able to manufacture modest quantities of nonstandard tapes at a reasonable expense to tape users.

Memorex enjoys the inherent selling advantages of a small company — no rigid procedures, no sacred cows, no ponderous decision-making, no cross-purposes. Our marketing practices are tailor-made to serve you conscientiously and with dispatch. These selling advantages and an unexcelled product line promise you and Memorex a mutually satisfactory and profitable relationship.

Arnold Challman, Vice President Marketing; Edward Seaman, National Sales Manager.

LAURENCE L. SPITTERS, PRESIDENT. Graduate, Western Michigan University (BA), Harvard Business School (MBA), and University of Michigan Law School (Doctor of Law). Affiliated with Blyth & Co., Inc., from 1954 to 1958, as a member of the underwriting and investment banking department. Employed by Ampex Corporation from 1959 to 1960, as assistant treasurer and assistant to the president.

CARL A. ANDERSON, CONTROLLER. Educated University of Nebraska (BAA); certified public accountant. Treasurer and controller of Greene Manufacturing Company, Racine, Wisconsin, from 1950 to 1956. In 1956, regional supervisor auditor of U. S. Army Audit Agency, San Francisco. From 1957 to 1961, employed by Ampex Corporation as assistant secretary and internal auditor.

DONALD F. ELDRIDGE, VICE PRESIDENT AND TECHNICAL DIRECTOR. Educated at Lehigh University with BS in electrical engineering. Seven years experience in magnetic recording at Boeing Airplane Company, including operation of one of the first systems for the acquisition and reduction of tape-recorded dynamic test data. During the period 1956 to 1960 at Ampex Corporation, performed research in magnetic recording and held the position of head of the magnetics department, corporate research division. Numerous publications in the field of magnetism and magnetic recording, and many patents issued and applications pending.

ERIC D. DANIEL, ASSOCIATE TECHNICAL DIRECTOR. Master's degree in physics from Oxford University. From 1946 to 1956, employed by the British Broadcasting Corporation performing basic research in magnetic tape recording. Affiliated with National Bureau of Standards, Washington, D.C., from 1956 to 1959, where principal project was the establishment of tests and specifications for magnetic tape. From 1959 to 1961, employed by Ampex Corporation as research scientist and as director of research of English subsidiary. A frequent contributor to technical publications and holder of a number of patents in the field of magnetic recording.

ALBERT BAABA, SENIOR RESEARCH ENGINEER responsible for projects in advanced measuring techniques, new instruments, and process innovations. Trained in electronics in the U. S. Air Force. Research experience gained in Ampex Corporation research laboratories, conducting extensive studies of the application of various magnetic phenomena to new techniques of recording and reproducing. A contributor to technical journals; patents have been applied for on several inventions.

LOUIS HIGASHI, SENIOR RESEARCH CHEMIST responsible for development of surface coating materials based on high polymers. Graduated from University of Texas with BS in Chemistry. Experience includes two years in nuclear chemistry at University of California Radiation Laboratory and eight years with Monsanto Chemical Company in research and development of thermosetting and high temperature polymers. Five patents on thermosetting resins and a number of additional patents pending.

W. L. NOON, VICE PRESIDENT MANUFACTURING. Educated at California Institute of Technology with BS in applied chemistry and MS in chemical engineering; post-graduate work at University of California in mathematics and electronics; registered professional engineer. Process engineer for Technicolor Motion Picture Corporation, 1948 to 1950. Manager of chemical engineering and assistant to the vice president-manufacturing and later plant engineer of Cutter Laboratories, 1950 to 1957. Senior project engineer in chemical engineering for Dow Chemical Company, 1957 to 1959. Chief application engineer of magnetic tape division, Ampex Corporation, 1959 to 1960.

GORDON MAC BETH, MANAGER OF PRODUCTION TECHNICAL SERVICES. Graduate in chemical engineering from Rose Polytechnic Institute (BS) and University of Pennsylvania (PhD). Instrumentation engineer at Oak Ridge for U. S. Army, 1943 to 1945. Graduate student and instructor in chemical engineering at the University of Pennsylvania, 1947 to 1951. Research and development engineer with responsibility for design and operation of pilot plant facilities for Dow Chemical Company, 1951 to 1961. Dr. Mac Beth has applied for patents on several processing innovations and has been a contributor to technical publications.

REX D. LINDSAY, PLANT MANAGER. BS degree in polymer chemistry from University of Illinois and MS degree in biochemistry from Oregon State College. From 1949 to 1951, partner and general manager of a small manufacturing concern producing agricultural and rare organic chemicals. From 1951 to 1962, employed by Cutter Laboratories, a pharmaceutical manufacturer. Experience at Cutter, as manager of blood processing and chemical processing departments, involved white-room manufacturing and close-lot control responsibilities. Immediately prior to joining Memorex, served as assistant production superintendent. Several technical articles published.

ROBERT M. BRUMBAUGH, SENIOR MECHANICAL ENGINEER. Electrical and mechanical engineering graduate of University of California. Twelve years of experience in electromechanical engineering, primarily in the magnetic tape recording equipment manufacturing industry. From 1955 to 1959, held a number of engineering positions at Ampex Corporation, including project engineer on the first three generations of that company's digital recorders. From 1959 to 1961, employed as senior project engineer by Midwestern Instruments, Inc., with responsibility for mechanical and electrical design of its digital recorder. Several technical papers and several patents issued.

RICHARD C. VASEY, PRODUCTION MANAGER. Educated in chemical engineering (BS) at Yale University. Industrial experience with Procter & Gamble Co., Standard Oil Co. of California, and Dow Chemical Co. In five years with Dow, engaged in the design and project management of numerous chemical processing facilities.

RONALD D. HATCH, SUPERVISOR OF PURCHASING AND PRODUCTION PLANNING. BS degrees in chemistry and chemical engineering from Brigham Young University. Experience includes graduate study and instruction at BYU, and three years of engineering with Procter & Gamble Co., and Dow Chemical Co.

J. D. PETTIGREW, COATINGS DEVELOPMENT ENGINEER. Graduate of University of California in chemical engineering. Employed by Shell Chemical Co. for a period of five years in work involving resin synthesis and adhesive formulations based upon thermosetting and thermoplastic resins. Two patent applications.

WILLIAM H. CHRISTIE, PRODUCTION SUPERVISOR. Graduate in biochemistry from University of California. Employed for seven years at Cutter Laboratories as supervisor in white-room manufacturing operations.

ELISABETH HERZFELD, PHYSICAL CHEMIST. Master's degree from University of Goettingen. Prior to Memorex affiliation, employed in the corporate research division of Ampex Corporation.

ARNOLD T. CHALLMAN, VICE PRESIDENT MARKETING. Mechanical engineering graduate of University of Washington; registered professional engineer. Employed eleven years by Minneapolis-Honeywell Regulator Company in sales and administrative capacities. Joined Ampex Corporation in 1956, organizing and directing national sales of magnetic tape from 1957 to 1959, and serving as marketing manager of contract research subsidiary in 1960.

EDWARD S. SEAMAN, NATIONAL SALES MANAGER. Engineering graduate of New York State Maritime College. Held various sales positions with Minnesota Mining and Manufacturing Co. for 13 years prior to affiliation with Memorex, including Washington, D.C. representative, magnetic tape division; field manager of Federal Government services, magnetic tape division; and Washington, D.C. representative, recording equipment manufacturing division.

MEMOREX CORPORATION SANTA CLARA, CALIFORNIA 248-3344