

# MELPAR-A-GRAPH

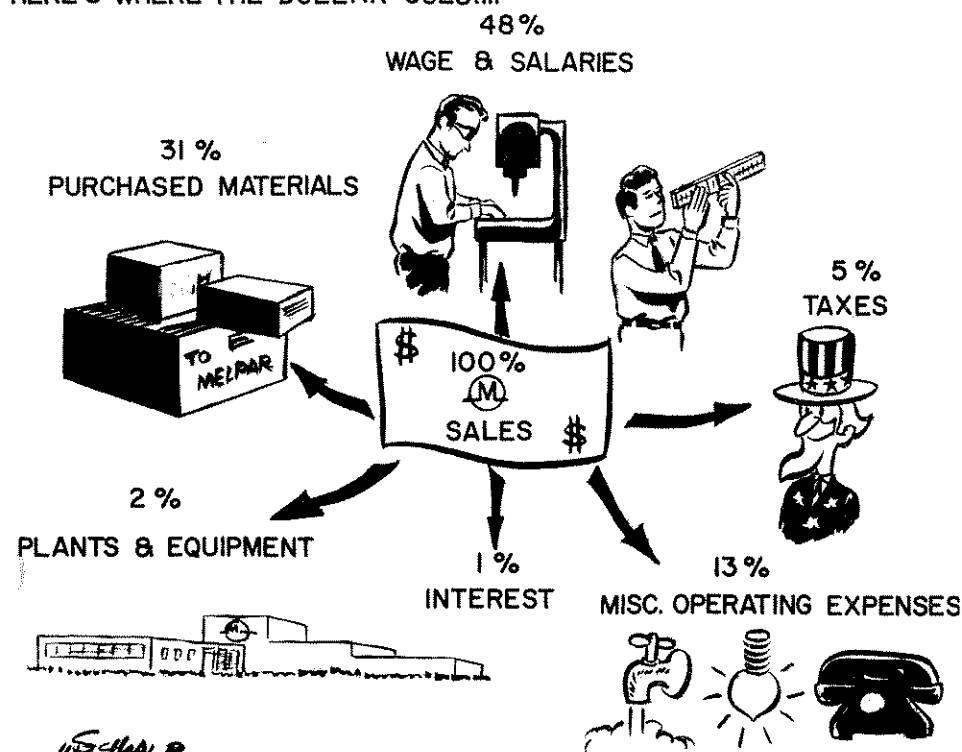
MELPAR, INC. • A SUBSIDIARY OF WESTINGHOUSE AIR BRAKE CO.

Volume 5, Number 3

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## Melpar Sales Reach \$65.5 Million For 1959

HERE'S WHERE THE DOLLAR GOES....



**ACTIVE CURRENCY** . . . Few industrial tools are more active than the dollar. The dollar is expected to satisfy a variety of demands, as can be seen from this representation of Melpar's cash outlay during 1959.

### \$46 Million Backlog Listed At Year's End

Melpar's sales again, as they have each year since the Company was founded, established a new record during 1959, according to figures released by Vice President and Treasurer R. T. Cosby.

Sales, as reported by Mr. Cosby, amounted to a sum of a little over \$65,500,000—up better than nine percent over 1958, when we registered slightly over \$60 million.

Payroll totals for the past year also established a new high. About one-half or \$31,250,000 of the Company's total expenditures for 1959 was paid to employees as wages and salaries. This was an increase of nearly \$7 million over payrolls for 1958.

Although the Company acquired more work space and employment set a new record in 1959, Melpar maintained a relatively high work backlog at the year's end. Figures released by the Treasurer indicate that our backlog was a healthy \$46,380,000 on December 31.

The Company's Executive Vice President and General Manager E. M. Bostick, in reference to the financial report for 1959, feels that "the mammoth growth of the electronics industry within the past ten years and anticipation of projected new markets cause us to believe Melpar will continue as one of the top industrial leaders in electronic research and development in years to come."

To carry on its many projects, the Company was occupying 986,616 square feet of plant space in Northern Virginia, Massachusetts and Arizona by the end of last year.

Capital investment by the Company in property and equipment for 1959 amounted to \$8,684,531 and our Purchasing Department placed orders exceeding \$20 million for a variety of materials and services during the year.

In addition to a utilities (electricity, water, gas, etc.) bill of \$395,539, Melpar paid the various tax gathering agencies a grand total of \$3,585,995 for 1959.

## Plasma Physics Branch Set Up In Company's Physical Sciences

Mr. R. C. Jones has been named Acting Supervisor of the Physical Sciences Lab's Plasma Physics Branch which was established last November.

Plasma Physics is a comparatively new field involving a particular species of ionized gas in which the number of positive and negative charges per unit volume are the same. Work in plasma physics has taken on increasing significance because of its role in the control of thermo-nuclear reactions, the propulsion of outer space vehicles and re-entry nose cones.

Experimental and theoretical work in which Melpar's Plasma Physics Branch is presently engaged includes: re-entry plasma sheath studies, plasma propulsion devices, microwave plasma antennas,

plasma microwave generators and amplifiers, high intensity light sources, general plasma diagnostics, natural plasma phenomena and direct energy conversion.

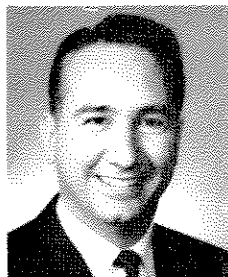
Re-entry plasma sheath studies and plasma propulsion devices are of direct importance in the missile and space programs. Most of the remaining areas are also vital to the nation's defense efforts, while others, such as direct energy conversion, have commercial applications.

Mr. Jones joined Melpar in 1957. His five years experience in the plasma physics field includes work in plasma diagnostics, plasma oscillation, probe theory and plasma devices. He was formerly an electronic scientist with the Naval Research Laboratory.

# W. Purple Elected Production Vice President

The election of Mr. W. C. Purple by the Board of Directors of Melpar, Inc., as the Company's first Vice President in Charge of Production was announced by Executive Vice President and General Manager E. M. Bostick on February 19.

Mr. Purple's election—at the age of 34—is the culmination of thirteen years service with the company. Beginning as a Junior Engineer in February 1947, he rose to Project Engineer, Section Head, Project Services Manager, Production Division Manager and finally to a vice presidency.



W. C. Purple

In his previous position as Manager of the Production Division, Mr. Purple had technical and administrative responsibility for the Company's production programs, including simulators, beacons, countermeasures systems, radar systems and data reconnaissance systems.

Mr. Purple graduated with a Bachelor of Science degree in Electrical Engineering from Princeton University in 1947 and did graduate work at the University of Maryland.

He is a member of the Institute of Radio Engineers and active in civic affairs, having been a Charter Member of the Fairfax County Junior Chamber of Commerce and a member of the Board of Directors of the Fairfax Country Club Hills Civic Association.

## E. F. Henry Gives Talk

Principal Engineer E. F. Henry of Melpar's Antenna Laboratory was guest speaker at a meeting of the Johns Hopkins University Student Chapter of the IRE-AIEE in Baltimore, Md., on February 26.

Mr. Henry spoke to the group on a "Survey of Industry for the Graduate Engineer."

## R. I. Cole Is Appointed To Advisory Committee

Mr. Ralph I. Cole, Manager of Military Project Planning for Melpar's Engineering Services, was recently appointed to the Committee on Missile Support Equipment by the Advisory Council on Federal Reports.

The scope of the Committee's activities will be to advise the Bureau of the Budget in connection with the development of a reporting program covering missile support equipment and to assist in the review of reporting forms and plans which may be submitted by the Department of Defense.

The Advisory Council is financed by the American Retail Federation, American Society of Association Executives, U. S. Chamber of Commerce, Controllers Institute of America and the National Association of Manufacturers. It was organized in 1942 at the request of the Director of the Bureau of Budget.

## WABCO Announces Increased Net Sales

Westinghouse Air Brake Company, Melpar's parent company, announced in its 1959 Annual Report that net sales in the past year amounted to \$209,448,298—up slightly more than \$3 million over 1958 sales.

WABCO earnings, however, were listed as \$11,393,756, representing a 25 percent increase over earnings for 1958.

Melpar, according to the report, contributed approximately 30 percent of the total sales. Also, an increase in orders received by Melpar were, according to the report, primarily responsible for WABCO's \$84,900,000 backlog of unfilled orders at the year's end—compared with \$71,600,000 at the end of 1958.

## Price Serves As Panelist For Technical Program

Douglas S. Price, Supervisor of the Specifications Section of Melpar's Technical Services, served as one of two panelists for a program on "The Use of Practical Standards and Specifications" held by the Washington Section of the Standards Engineers Society at the Anacostia Naval Station on March 8.

The other panelist was Ellsworth Seamon, Head Engineer for the Standardization and Conservation Planning Section of the Navy's Bureau of Ships.

## Engineers to Present Papers and Products At IRE Convention

Melpar Engineers will be among the active participants at the 1960 IRE International Convention to be held in New York City's Waldorf-Astoria on March 21-24.

Two Company Engineers will present papers at separate sessions of the convention and members of the Special Products Department will exhibit some of the line of new commercial products Melpar is marketing.

Mr. H. L. Dudley, Supervisor of the Reliability Group, will present a paper entitled "The Reliable Application of Electronic Component Parts" at the convention's Component Parts sessions. A second paper, entitled "An Electromechanically Scannable Trough Wave Guide Array," will be presented at the Scanning Antenna Arrays sessions by Senior Engineer A. Maestri and a representative of the Cambridge Research Center.

## New Products Corner

(Ed.'s note: This is the first in a series of thumbnail sketches we will present regularly in an effort to keep employees informed of products being marketed by Melpar's Special Products Department.)

### MEL-INK MARKING COMPOUND TYPE M-100

Permanent marking is no problem with MEL-INK M-100. White or black MEL-INK can be applied to metal, plastics, glass or wood. Its hard-setting epoxy base eliminates smeared stencil information and resists the action of cleaning solutions such as xylene, toluene, chloroethene, solox and methyl alcohol. Markings are color stable on surfaces exposed to temperatures up to 260°F for white ink and 350°F for the black ink. MEL-INK markings satisfy the requirements for permanence of MIL-STD-130 without the use of a protective coating. Typical uses of MEL-INK include identifying nomenclature on printed circuit boards, sheet metal chassis and components of all types.

## AT FALLS CHURCH

# Melpar's Environmental Test Puts Equipment Through Rigorous Operational Conditions

LOWER SLOBOVIAN CITIZENS PLEASE TAKE NOTE: *Electronic components now being produced by Melpar, Inc., are tested at -100° F and are guaranteed to operate during the coldest Slobovian Winter.*

Such an advertisement could, if it ever appears, be attributable to the efforts of a specialized group working in the Company's well equipped Environmental Test Laboratory.

The Lab's capabilities are not limited to frigid testing, however, but extend to high temperature, humidity, shock, altitude and vibration testing of electronic component chassis and small antennas, according to Manager W. F. Dupree.

Mr. Dupree's group—which includes Supervisor Eli Parrish, five Engineers, two Junior Engineers, eight Technicians, a Draftsman and two Engineering Aids—is located in modern facilities on the lower level of the Falls Church plant and provides readily available support for Melpar's Engineering and Production activities.

In addition, the Laboratory facilities are used to aid the Company's Incoming

Inspection group in evaluating vendors' products.

The Lab is particularly well equipped to run temperature, altitude and humidity tests. Nucleus of the equipment for these tests is a walk-in chamber (interior dimensions: 96 x 60 x 96 inches) capable of performing all three types of tests. Its temperature range is from -100° F to 185° F and altitudes can be simulated up to 120,000 ft. Relative humidity can be controlled from 20 to 100 percent within the temperature range of 35° F to 185° F.

The Lab also has a smaller chamber with the same capabilities except it simulates altitudes up to 80,000 ft. Seven smaller temperature testing units supplement these two chambers.

Equipment used by the Lab for vibration testing include a MB model C-5 exciter with a 650 force-pounds capacity and two MB model C-25H exciters with 3500 force-pounds capacity. One of the C-25 machines is powered by a Ling 20 KVA electronic power supply. To increase the versatility of these machines, Melpar recently designed accessory equipment which permits coupling of the two exciters to provide almost double the force output.

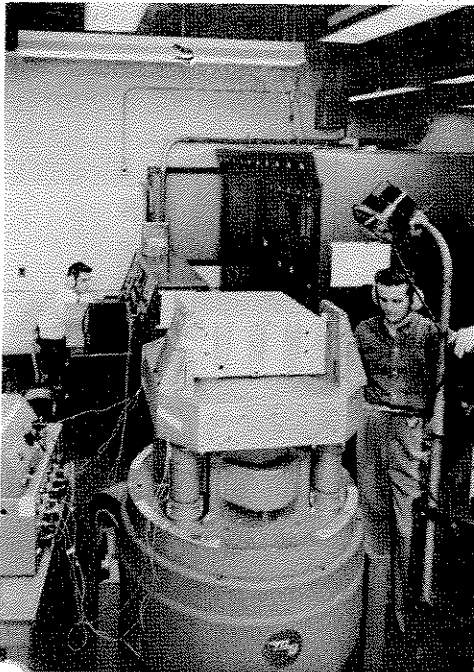
Shock testing facilities consist of a

sand-drop testing machine with a medium impact shock pulse up to 65 g's, and a hammer-type machine with an impact up to 500 g's. Both of these machines take specimens up to 400 pounds.

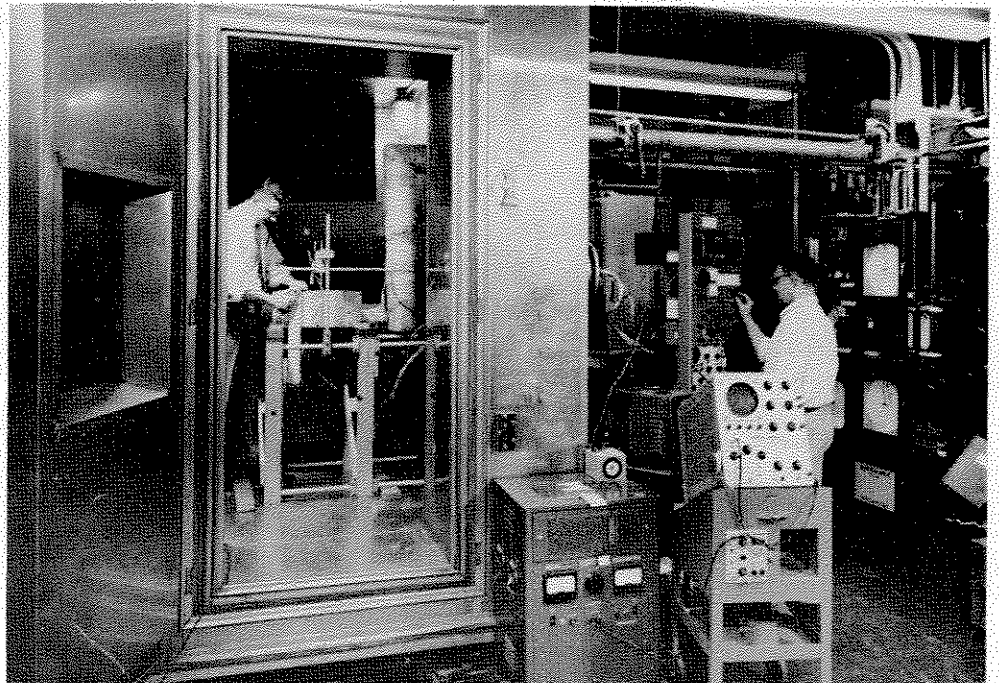
Rounding out Environmental Test's assorted equipment is a Salt-Fog Chamber and a complete X-ray facility, including darkroom and film processing equipment used to support the inspection departments of Quality Control. In addition to the environment simulating equipment, a considerable amount of supplementary instrumentation is on hand in the Laboratory.

Several types of accelerometers are available for monitoring vibration and shock tests. Oscilloscopes, oscilloscope cameras and recording oscillographs are available for these tests. For temperature, altitude and humidity testing, thermocouples, aneroid barometers, manometers and a direct reading Relative Humidity Meter are available.

By purchasing a variety of fundamental equipment and modifying for specific needs, or fabricating supplementary equipment, the Laboratory has been able to maintain an environmental facility providing a high degree of versatility.



VIBRATOR AND POWER CONSOLE . . . Test Engineer N. J. Struttman (seated) and Junior Engineer W. J. Brady are shown running vibration test on an electronic package with Environmental Test's C-25H exciter (foreground). Console in background is Ling 20 KVA automatic electronic power supply unit. Ear muffs are worn to protect ears at high noise levels.



WALK-IN TEMPERATURE, ALTITUDE CHAMBER . . . Junior Test Engineer B. B. Armstrong (left) and Test Engineer R. W. Baker make last minute adjustments before submitting electronic package to environment tests in the Lab's walk-in temperature and altitude chamber. The chamber's temperature can be varied from -100° F to 185° F and it can simulate altitudes up to 120,000 ft. (Photos by Meinke)

## Employees Receive \$65,000 In Payments For Studies Program

Payments for Fall semester courses taken under the Company's Tuition Reimbursement Plan had, by March 1, increased the amount received by Melpar employees from the three and one-half year-old program to \$65,254.68.

Two hundred and thirty-four employees have been, as of March 1, reimbursed a total of \$7,898.57 for courses completed during the 1959 Fall semester. A few Fall semester reimbursements are still being processed for payment.

A total of 300 Northern Virginia and 17 Massachusetts employee applications were approved for participation in the Spring semester education program. One hundred and fifty-nine of these approvals are for In-plant courses, held in Melpar facilities and supervised by local educational institutions.

The full pace of employee education participation is not completely reflected by these figures. They do not take into account the number of employees taking courses under government training programs and those engaged in studies at outlying plants and stations.

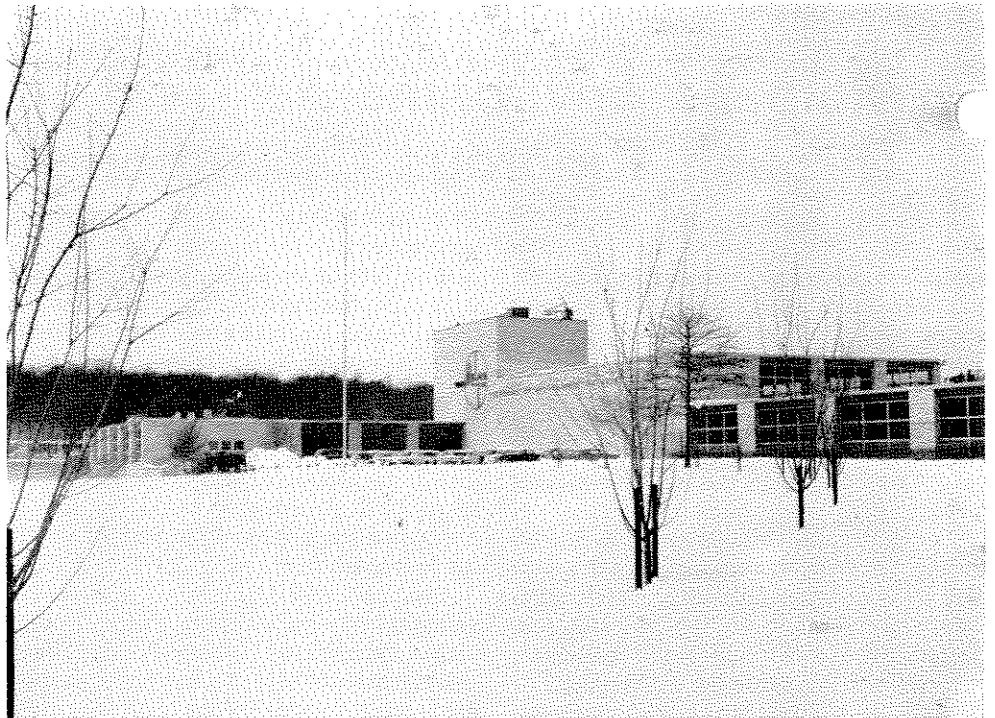
Melpar makes 50 percent tuition and lab fee reimbursements on all prior approved, successfully completed scientific and technical courses.

## Alstadter To Present Antenna System Paper

Principal Engineer David Alstadter of the Antenna Laboratory will present a report entitled "A Millimeter Wave During Re-entry Telemetry Antenna System" at the National Telemetry Conference to be held in Santa Monica, Calif., on May 23-25.

Co-authors of the paper are Project Engineer W. G. Scott, Engineer M. E. Schwartz and AVCO Group Head T. W. Halloran.

This paper describes the design and development of an EHF during re-entry telemetry antenna system intended to operate specifically during the re-entry portion of hypersonic ballistic missile flight.



**WINTER'S BLANKET . . .** Approximately 80 percent of the Company's Northern Virginia employees braved near-blizzard weather and almost impassable roadways to show up for work on Thursday, March 3, when the season's worst snow storm unleashed eight inches of snow in the area. The above picture of Melpar's snow-clad Falls Church plant was taken by Senior Photographer Dick Sakamoto on Friday, the day after the storm.

## GOING UP!

Falls Church promotions include A. Maestri to Senior Engineer, B. McAfee to Senior Procedures Analyst and C. C. Shaeffer to Test Equipment Planner. M. M. Bilyard rose to Senior Payroll Clerk and J. de Butts was promoted to Lead Key Punch Operator.

W. H. Kinney advanced to Print Control Leadman, R. W. Putnam rose to Senior Personnel Clerk and P. L. Reece was promoted to Group Leader.

Arlington promotions include C. J. Morgan to Senior Engineer, H. D. Steward to Lead Test Technician and D. Fornes to Senior Clerk Typist.

At Columbia Pike, W. T. Williams was promoted to Lead Porter, T. L. McGovern advanced to Senior Technician and K. W. Wright rose to Junior Engineering Assistant.

Bailey's Crossroads promotions include D. A. Shaw to Lead Duplicating Machine Operator, W. A. Birchard to Planner and D. S. Farrier to Junior Planner.

G. Linder advanced to Technical Editor and R. H. Lester was promoted to Design Engineer.

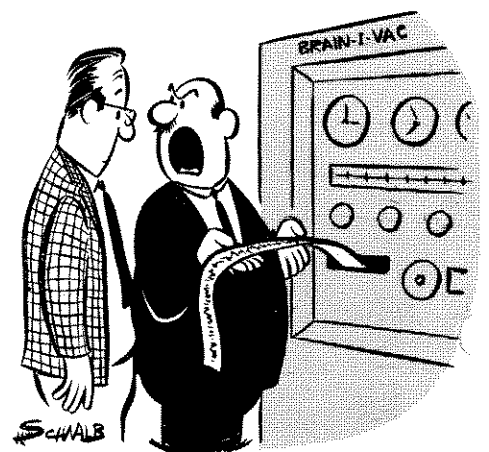
Leesburg Pike promotions include H. L. Keaton to Lead Duplicating Machine Operator, C. D. Barb to Shipper and Packer and D. W. Caldwell to Junior Engineer. J. B. Hodgson and K. J. Fawcett were promoted to Senior Member in the System Analysis Groups.

E. W. Burns was promoted to Line Inspection Foreman and R. N. McNeal advanced to Senior Engineer at Hardaway Street. M. A. Moris was promoted to Senior Draftsman at Alexandria.

Shirley promotions include D. M. Pearce to Senior Personnel Assistant and M. E. Henley to Junior Planner.

Watertown promotions include R. H. Rosebaum and J. Rossbach to Senior Research Engineer and E. C. Anders to Senior Engineering Assistant.

J. M. Gaven advanced to Supervisor of Computing Services and N. D. Couture was promoted to Senior Accounting Clerk.



"I don't care if it is overworked! I won't tolerate that kind of language in this office."