MELPAR-A-GRAPH

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1962 SALES HIT $45.7 MILLION, UP 26%

MELPAR AWARDED CONTRACT FOR BIOCHEMICAL FUEL CELL STUDY

Melpar has announced the receipt of a $35,997 contract from the U. S. Army Signal Supply Agency for a 12-month research program in the biochemical fuel cell (or biocell) field. The specific area of investigation involves the study of the evolution of hydrogen by various micro-organisms and the subsequent utilization of this hydrogen in a fuel cell.

Using the enzymatic action of bacteria as catalysts, biocells convert chemical energy into electrical energy. This is accomplished through the transfer of electrons from the fuel (i.e., food for the bacteria) at the anode to the oxidant at the cathode just as in conventional fuel cells and batteries.

Since biocells can use materials such as sea water, human waste and decaying vegetation as fuel, it may be possible to utilize them in spacecraft ecological systems, sewage conversion systems, or as buoy power sources. They might also be used to supply power for communication in inaccessible regions where conventional fuels are not available or to supply electrical energy for a mobile field army in an emergency. In its present stage of development, however, the biocell is an experimental device with relatively low power density.

Assigned to the Research Division's Chemical and Biological Sciences Department, the biocell research will be a joint enterprise between the Microbiology and Electrochemical Branches. Dr. R. T. Foley and Dr. G. C. Blanchard have been designated as the Principal Investigators. Technical supervision will be provided by the U. S. Army Signal Research and Development Laboratory, Fort Monmouth, New Jersey.

Other work at Melpar in this field is directed toward obtaining basic information regarding the conversion of metabolic energy to electricity. Understanding of these basic biological mechanisms will facilitate selection of the proper bacteria, structural materials and their most efficient configurations for the design and development of a practical biocell.

POTENTIAL LASER MATERIALS TOPIC OF KAGAN ADDRESS TO APS

Melpar's research in organic systems potentially applicable to lasers was the subject of a paper presented by Senior Physicist Morton R. Kagan at the March 1 meeting of the American Physical society in Houston, Texas. Co-authors of the paper, entitled "Spectroscopic Properties of Europium β-Diketone Chelates in Polymeric Hosts," were Mr. Kagan, Nicolae Filipescu, Wilson McAvoy, and Francis Serafin, all of the Research Division.

The Company's physical scientists have succeeded in incorporating certain rare-earth organic complexes in plastic

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FOURTH QUARTER ORDERS SET RECORD

A sharp upturn in the yearly sales and earnings of Melpar and its consolidated subsidiaries has been announced by President Edward M. Bostick. Sales for the year ended December 31, 1962, were $45,753,800, a 26% increase over 1961 sales of $36,246,294. Net income rose 61% — from $746,316 for 1961 to $1,204,542 for 1962—and earnings per share increased from 30¢ to 48¢.

Mr. Bostick also stated that new orders for the fourth quarter of 1962 were the highest, for that quarter, in the firm's history. Sales and earnings should continue to increase during 1963, Mr. Bostick said.

Employment at the end of 1962 was 3616, approximately 25% greater than at the end of 1961. Present employment exceeds 3700.

TUITION REFUND PLAN PASSES TWO MILESTONES

Melpar's Tuition Reimbursement plan passed two milestones in recent months. Another employee—the second to do so —completed a master's program supported by the plan from beginning to end, and total Company contributions to the plan topped the $100,000 mark.

Proud owner of a new sheepskin is Charles N. Adkins, Principal Engineer in the Vehicle Laboratory of the Aerospace Division. The George Washington University awarded him the Master of Science in Engineering on February 21.

For his thesis Mr. Adkins chose a topic that has been close to his heart since a summer stint, during his student days, at the Naval Ordnance Test Station at China Lake, California. Its title is "Determination of the Mass and Configuration of a Rocket Vehicle for Given Performance and Trajectory." A copy is filed with the Technical Information Center. (See photo on page 3).

In June 1962, Simeon H. Cotton, Senior Electrical Engineer in the Computer Laboratory, received the M.S.E. degree from GWU and became the first employee to complete all graduate course work for a master's degree under the plan.

Mr. Adkins came to Melpar in 1957, shortly after receiving a Bachelor of Science in engineering physics from the University of Oklahoma. He began studies for his master's degree in February 1960. What with meeting the responsibilities of job and family (the Adkinses have two little girls), hopping over to GWU several times a week, and writing a thesis, the past three years have been somewhat less than restful for him. But he has no intention of slowing down now. No doubt with a certain performance and trajectory in mind, he has set his sights on a Ph.D. in theoretical mechanics.

Under its refund plan, Melpar has reimbursed employees $101,856 for tuition for shop, technical, and both graduate and undergraduate scientific courses. This sum speaks well for the Company's interest in the future of its employees and indicates in a modest way its concern for the future of the nation. Enrollment in engineering schools last fall was alarmingly low. With normal attrition, only 28,000 engineers will graduate in 1966, instead of the previously projected 33,000. These figures, released by the Engineering Manpower Commission, dramatize the importance of industrial support for continuing technical and engineering education.

"Work Smarter, Not Harder" Theme of Operation Greenlight

Has there been a slackening in the stream of paperwork crossing your desk?

Have you found yourself suddenly freed from the tedium of searching through three file cabinets, instead of one, for a wanted folder?

Do you spend even a little more of your time with your mind in gear, actively engaged in a problem worthy of its attention, rather than idling along in a dreary routine?

If so, you're among the first to feel the benefits of Operation Greenlight—you're working smarter, not harder!

Operation Greenlight, as reported earlier, is a work simplification campaign sponsored by the Value Improvement Program. "Greenlight" signifies the open mind, the mind in the GO condition, the mind that greets a suggested improvement with "Let's get all the facts! Let's give it a try!"

To kick off Operation Greenlight, the Value Improvement Program conducted a Work Simplification Course for 54 supervisors. The course, which ended February 21, was a smashing success. Roger Bublitz, VIP coordinator for the operation, reports that the class came up with 263 ideas for simplifying their work and the work of others. Of these, 216 suggestions were accepted. The annualized savings netted by these changes total $107,498.

BRAINSTORMERS. Nowhere is the Greenlight philosophy more in evidence than at a brainstorming session. Ideas fly as minds strike sparks off each other. Negative comments are forbidden—judgment comes later. Here O. D. Falck, at rostrum, presents a problem to Doyle Liggett, John Rooney, William Davis, Charles Zimmerman, and Will Wilmon, seated clockwise from the left around the table. George Smith, of Plant Management and Maintenance Co., who gave the Work Simplification Course, stands ready to chide any naysayers. The course featured one session of brainstorming, to acquaint the class with this technique.

A-TISKET, A-TASKET, HOW D'YOU THINK HE FILLED THIS BASKET? John J. Rooney shows what can happen when one takes a long, hard look at the contents of a single file cabinet. Outdated directories and unneeded papers are being wheeled to the incinerator. Frank Carau carries more fuel for the fire. Faces registering varying degrees of approval and thoughtfulness belong to (left to right) O. O. Alderman, W. L. M. Hux, O. D. Falck, J. R. Barrick, D. C. Liggett, and N. Langford.

Not covered by this figure are improvements on which it is hard to hang a dollar sign. Thirty-three file cabinets have been retired, for example, and 14 forms have been eliminated. The enrollees in subsequent work simplification courses have quite a record to shoot at.

Here's how some members of the first Work Simplification Course worked smarter:

—Josephine Giamporcaro of Purchasing noted that when a buyer wanted to wire a vendor on urgent business, he had to locate one of five standard messages, printed on five separate forms, or else compose an original message. Her suggestion: Print five standard messages on a single form, and cut out additional charges by holding all messages to fewer than 15 words. This was one form-elimination suggestion that could be assigned a dollar value. Annualized savings: $3000.

—Budget Control, Accounting, was preparing manually a complete report of proposal costs until F. Wallace DeDier dug up the facts to show that the Budget Control mechanized report system, with only slight modification, could handle the proposal report. Annualized savings: $5000.

—R. Keith Felty of the Manufacturing Division questioned the utility of three direct-labor reports that were prepared daily. He found that none of them was used! The reports were eliminated at annualized savings of $1020.

NEW VIP COURSES FOR MM AND OTHER DIVISIONS

Delighted with the success of the first Work Simplification Course, and acting on the theory that you can't have too much of a good thing, the Value Improvement Program has scheduled two additional courses for March starts. One of these, set up in cooperation with and exclusively for Minuteman Division, will introduce personnel of the division to new techniques of simplifying the procedures of jobs under their cognizance. The other course will draw its students from all divisions of the Company.

"M IN A TRIANGLE" REGISTERED

The familiar "M in a triangle" is now a registered trademark for Melpar products. Trademark Registration #744,395 was assigned to the symbol by the Patent Office on January 29, 1963, according to Austin G. Roe, House Counsel.

—Richard A. Markham of Material Handling suggested the use of inexpensive plastic trays, instead of snap-cover tote boxes with adjustable inserts, for moving and storing printed-circuit boards. The trays have been found acceptable in all areas affected, and in some areas have been judged much more efficient than the tote boxes. Mr. Markham's suggestion netted annualized savings of $3450.

Mr. Bublitz also reports that annualized VIP savings for January were $97,235. Included in this figure is $20,000 of the $107,498 savings reported for Operation Greenlight.

Operation Greenlight is a Company-wide project. You, who know more about your job than anyone else, are encouraged to examine it with a critical eye and look for ways of simplifying it. Your intelligence, your energy are precious resources. The Company can't afford to squander them—not it if is to meet competition and grow.

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New Technical Information Center Offers Fuller, Faster Service

Melpar's new Technical Information Center now offers fuller, faster service to expand and speed up the flow of technical and professional information throughout the Company. The Center, the erstwhile library, houses a collection of 5500 books, 27,000 reports and other documents, and issues of some 600 periodicals that the Company receives.

Visist the Center and you'll be struck immediately by the physical changes that have been made. The reading area is quieter, more secluded. The card catalogs are nearby, in an open area. Big new bulletin boards carry notices of meetings, calls for papers, press releases from NASA, DOD, CDO, and other agencies. But there are other innovations as well. Here is a rundown of some of the more important ones. Maybe they will suggest ways in which the Technical Information Center can serve *you* better.

—The staff has been expanded and otherwise strengthened. The time needed to fill a request for a book, journal, or report is being cut to the minimum, and backlogs have virtually disappeared.

—Sign-out procedures for borrowing material have been greatly simplified, and a new due-date policy has been adopted to induce greater readership turnover of technical publications.

—Reading rooms are being set up at Hardin Street, Shirley Research, and Shirley Engineering. New scientific books and current technical periodicals will circulate from reading room to reading room.

—The collection of scientific abstracts and indexes (among them *Chemical Abstracts, Index Medicus, Electronics Express*) is being filled in. Soon all subjects of interest to Melpar will be covered back to 1955.

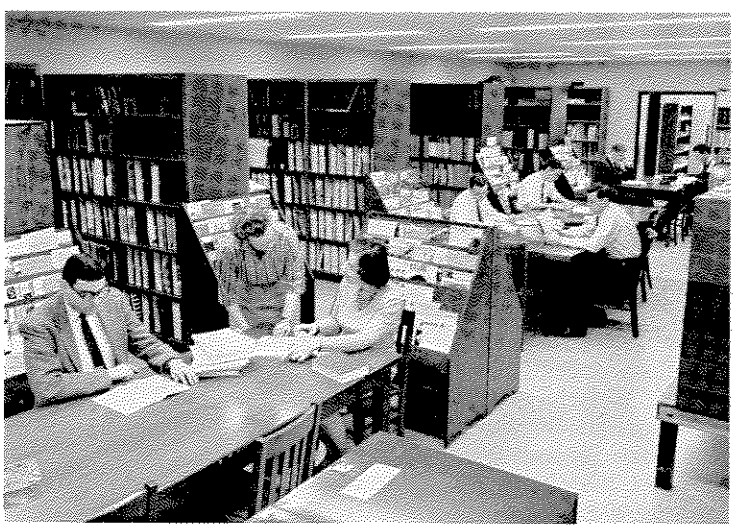
—Coming soon: a reference and literature research service. Bibliographies on technical subjects will be prepared in close cooperation with technical personnel—for Company projects, of course.

BEHIND THE SCENES. At left, in the usual order, are Dorothy Miller, accessions clerk, Exie Henderson, classified reports clerk, and Adrienne Harkins, typist. Secretary Laurene Burch basks in the sunlight by the windows. In the center background are Benjamin Dennison, conferring with Mr. Vachon, and behind him, Cyprien Brien.

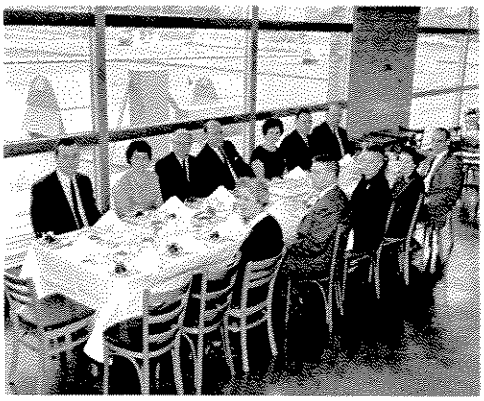
FAIR EXCHANGE. Charles Adkins, right, gives Dave Vachon a copy of his master's thesis for the Center, while Josephine Boyd, at the circulation desk, hands a book to Dr. F. E. Nagel. Others in the picture are staffers James Rice, left, and Madelyne Williams, next to Mrs. Boyd.

With mountains of technical literature being ground out daily, in pace with our accelerating technology, retrieval and dissemination of information have become jobs for a specialist. A specialist is what Melpar has in P. David Vachon, Head of the Technical Information Center. Mr. Vachon, who holds B.S. and M.S. degrees in physics from Villanova and Notre Dame respectively, has spent most of his professional career in documentation technology. His is co-founder of the New England chapter of the American Documentation Institute. Graduate work in communications at Boston University, and in library science at Catholic University, has sped his advancement in this relatively young science.

What's been the response to the changes already in effect? Quite favorable, according to Mr. Vachon. More and more people are using the Center. For example, requests for periodicals and books to be obtained from outside libraries have tripled since August, as have requests for the purchase of books and for reports. Apparently, the demand for service is growing with the increase in the quality of the service. If this trend continues, the Technical Information Center has even busier days ahead.



SILENCE OF THE DEEP. Mary King, Technical Information Analyst (standing), helps Dr. Jenny Bramley with a literature search. Scholars deep in thought are, left to right, Gerald Halpert, Edward Kelso, Maurice Hart, Ronald Long, John Goan, and Louis Glekas.



DECADE OF SERVICE RECOGNIZED. Eleven employees marked their tenth anniversary with Melpar in February. Newly eligible to wear the triangle with the green apex are H. J. Bailey, R. J. Bottenfield, Carmen L. Bowles, W. R. Heflin, R. C. Little, Helen R. Maddox, R. B. Marsh, Faith V. Monch, L. A. Schmidt, Helen C. Styne, and Ada I. Taylor.

Ten Year Pin recipients, accompanied by their operating unit head and an officer of the Company, celebrated the occasion at a luncheon in the cafeteria on February 21. Seated clockwise around the table are L. C. Wright, Carmen L. Bowles, L. A. Schmidt, A. C. Weid, Helen R. Maddox, R. G. Murrell, H. J. Bailey, R. J. Bottenfield, Helen C. Styne, Joan T. Lafrank, R. C. Little, and Faith V. Monch. W. R. Heflin, R. B. Marsh, and Ada I. Taylor were unable to attend.

WALTERS' GROUP WINS MM GROUP PERFORMANCE AWARD

Jack Walters' Drill, Route, and Mechancial Assembly Group (second shift) won the Minuteman Group Performance award for December-January. Kenneth E. Schreiber, Minuteman Division Manager, announced the award on March 1. The group works in the Board Fabrication Shop, which is supervised by Robert J. Moneyhon.

Mr. Walters has been Shop Foreman only since November. The victory, earned in the first period in which the group competed under his leadership, was therefore doubly sweet.

Rivalry was keen for the December-January award. Close runners-up cited by Mr. Schreiber for their fine showing were Printed Circuit Fabrication Shop Plating (second shift) under Montford Burgess, Printed Circuit Fabrication Shop Inspection (first shift) under Gerald Donohue, Receiving Inspection under Karl Dreyer, Component Test under Kenneth Friend, and Material Handling under Richard Markham.

Mr. Walters accepted the G-PEP award plaque for his group at a luncheon at the Seaport Inn in Alexandria on March 1. Guests of honor, besides Mr. Walters, were Mr. Dreyer, whose group won the October-November award; Dixie Williams, representing Mr. Dreyer's group; and Gene O'Brien, whose Screen Printing and Photo Group won the August-September award. Also present were Joseph W. Hall, Assistant Manager of Minuteman Division, Dr. Thomas L. Wood, Personnel Manager of the Division, and James W. Fowler, representative of the Training Group.

Jack Walters (right) receives MM G-PEP award plaque presented by Joseph W. Hall.

KAGAN TALK *(Continued from Page 1)*

hosts in such a way as to retain in the complexes the spectroscopic properties required for laser operation. The organic systems investigated by Melpar may advance laser technology by providing greater energy transfer and by making tunable lasers a reality. They may also permit laser fabrication costs to be cut to a fraction of present ones. In short, a major breakthrough in laser materials could be in the offing.

Mr. Kagan's talk was a followup of an article in the November 3, 1962, issue of *Nature*, one of the most respected British scientific journals. The article, "Fluorescent Properties of Rare Earth Chelates in Vinylic Hosts," by Messrs. Kagan, McAvoy, and Serafin and Dr. Filipescu, was the first published account of an investigation of line-fluorescence characteristics in certain organic systems. It stirred world-wide interest. The authors report that requests for reprints have come from all corners of the earth.

These rush jobs sure are a pain, aren't they, Harry? - - - - - Harry?

GOING UP!

Recent promotions include O. O. Alderman to Shop Supervisor, S. M. Benford to Manager of Field Offices (Engineering Services), and B. S. Bernard to Manager, Government Marketing Development.

S. A. Bradeen rose to Senior Systems Engineer, W. A. Burke to Planning Coordinator, and W. A. Campbell to Chemist.

E. L. Culver was promoted to Fabrication Estimator, J. M. Hadley to Contract Administrator, and G. Halpert to Senior Chemist.

G. B. Havens stepped up to Assistant Supervisor, Data Processing Systems; G. L. Hillegas to Planning Coordinator; and E. M. Hixson to Shop Foreman.

J. A. Jobe moved up to Construction Superintendent, V. J. Koebert to Junior Engineering Assistant, and R. L. Krenning to Engineering Assistant.

C. L. Lacey advanced to Supervisor, Central Data Processing, and E. H. Laubenstein to Planning Coordinator.

F. G. Mahoney won promotion to Senior Planner, J. C. Maycock to Assisant Test Supervisor, and W. Meyers to Senior Planner.

S. F. Muzidal rose to Electrical Engineer, A. M. Pecone to Engineering Assistant, and R. W. Righter to Senior Draftsman B.

B. P. Sollers stepped up to Systems Engineer; A. W. Wagner to Senior Electrical Engineer; R. C. Wakeford to Director, Advanced Analysis Staff; and M. A. Wales to Shop Supervisor.

HOT CHOCOLATE, BIGGER SOFT DRINKS IN VENDING MACHINES

As you've probably noticed, the hot-drink vending machines in all plants are now dispensing whipped chocolate. The cold-drink machines, as soon as they can be converted, will serve nine-once drinks instead of the present seven-ounce ones. The larger drinks, which will have the added feature of crushed ice, will cost 10 cents.

Melpar has several times warded off price increases in soft drinks, despite rising costs. But the profit squeeze seems to have caught up with the fizz bizz. The new price is the usual one in this area. Movie houses, bus and tra depots, and supermarkets, with fe exceptions, are vending nine-ounce drinks for 10 cents. Our vending machines were probably among the last of the holdouts.