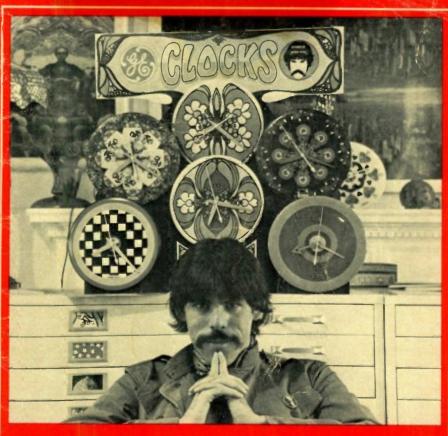
THE MONOGRAM

JUNE-JULY

1968



MOD CLOCK DESIGNER DETER MAX.. D. 4

PLUS: Building Boom ... Motors ... Benefits

LETTERS

Course Credit

EDITOR: Your May Issue of *The Monogram* reports on the contributions of members of the General Management Course to Wayne State University for the purpose of assisting one or more needy students. These individual contributions are eligible for matching through the Corporate Alumnus Program of The General Electric Foundation.

However, you should give equal credit to the members of the Management Development Class 68-II, which made similar contributions to the University of Illinois at Chicago, for the

same purpose.

It might be noted that the matching provision of the Corporate Alumnus Program is often used by employees interested in contributing to scholarship funds, and/or to memorials for friends or colleagues. However, it is important to remember that matching is done on an individual basis in connection with individual contributions to a college or university, and not on a "lump" sum basis.

J. Moreau Brown Educational Support Programs Crotonville, N.Y.

The contribution of Class 68-II is noted in Around the Company, elsewhere in this issue.—Ed.

Safetygram

EDITOR: I would like to extend the thanks of those General Electric associates and myself whose contributions to the Company's growth and profit is the full-time endeavor of accident prevention and control.

Since the circulation of the Monogram provides a readership far exceeding any other Company publication, it is gratifying to be able to acknowledge the safety achievements of our Company's managers and personnel.

To those of us career safety professionals who strive to further the safety movement, the article contained a term which we have strived so hard to eliminate. "Safetyman" goes back to first efforts of the concept of working safe and over the years has slowly fallen to disuse.

I hope we can forget "safetyman" as well as editorman, qualityman, communicationsman.

advanced engineeringman, etc.

EDWARD N. DECK Safety and Plant Protection New York, N.Y. The object of *The Monogram* is to keep its readers informed on General Electric activities so they may contribute more effectively to General Electric progress on the job and better represent the Company in its relations with the public.

IN THIS ISSUE

50 Millionth Motor	2
New Mod Clocks	4
Cordiner Hall	7
New Facilities	10
MIACS	13
Operation Tektite	4
Infra-Red Lamp	17

Devere E. Logan, Editor

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GENERAL 🚳 ELECTRIC

THE GENERAL ELECTRIC MONOGRAM

PUBLIC AFFAIRS

Actions to Match Words

"We must not have a corporate credibility gap," said keynote speaker Vice President Oscar L. Dunn to the audience attending last month's Public Affairs Conference in New York City.

"If there is one single, simple message I have for you today," he emphasized, "it is that this Company's deeds must match its words."

Mr. Dunn's words suggest the theme of the recent conference, sponsored by Community and Government Relations, attended by some 135 Company public affairs and employee relations representatives.

The action theme was reflected in the various panel discussions held during the three-day gathering, and was underscored in remarks by speakers, including Dr.

Kenneth Clark, president of the Metropolitan Applied Research Center and Gerald L. Phillippe, Board Chairman.

Dr. Clark said that the best and most lasting social contributions that business can make are actually those that increase business effectiveness. He suggested that in the areas of education, employment, and housing, business can contribute to observable social change "and therefore to its own profit and growth."

Mr. Phillippe said in his remarks that the work to be done by General Electric Company coincides to an ever-larger extent with the best interests and the higher aspirations of our society.

Among the pressing challenges, he pointed to poverty and our future labor supply, saying that in the next ten years "what many of our key plants will need in the way of a skilled and productive work force will increasingly have to come from what are now the ghettos and from a pool of potential workers who, at present, are

MR. PHILLIPPE ADDRESSING THE PUBLIC AFFAIRS CONFERENCE





largely unskilled in the jobs we shall need to fill."

He said that "we need these people, and we've got to find ways to bring them into our work force."

Mr. Phillippe told his audience that "We are counting on you gentlemen in public affairs to help make this transition easier."

◆ DR. KENNETH CLARK, one of several speakers at the recent public affairs conference. The noted educator said that the issue of solving the problems of the urban ghetto must be removed from the usual approaches because "they haven't worked in the past."

Let's Hear It For Our 50,000,000th Appliance Motor!

Gold-painted parts gave a glow to the Dekalb, Ill., assembly line of the Appliance Motor Department on May 23rd, a suitably shining symbol of having produced 50 million General Electric appliance motors.

Tenderly placing the finished golden motor on a pillow of honor, George L. Irvine (at right in photo), regional vice president, happily gave a hand to Department General Manager Bruce O. Roberts.

A golden moment, indeed!

It was 22 years ago that Company employees began manufacturing one-quarter horsepower washing machine motors at the Dekalb plant—then a satellite of the Fort Wayne works. Today, the business has grown in a competitive marketplace to its present stature and a line of 300 motors ranging from one-sixth to one-half horsepower. The number of jobs has also grown to 1300.

Seven of the first 35 employees at De-

kalb were among those celebrating the 50 millionth unit.

Customers could share in the Department's progress, too. In the past 15 years the Company has reduced the weight of its appliance motors 50 per cent—an important factor in appliance cost and design. In addition, appliance motor prices have been reduced 25 per cent in the past 10 years.

DEKALB'S GOLDEN MOTOR From washing machines, 1300 jobs.



At Deadline...

Summer Programs: At Syracuse, N.Y., General Electric is providing some 200 jobs for young persons as its part in a community-wide youth employment program. The Company participation will attempt to provide both work experience and an introduction to industrial employment for high school students—many from disadvantaged neighborhoods—and also utilize the talents of college-level students in career continuation employment in the months separating study semesters. And at East Cleveland, Ohio, the Lamp Division is joining with the city to provide a summer day camp for underprivileged children. At Pittsfield, Mass., five departments are participating in the "Look Ahead at Industry" program. The program, now in its third year, will allow 22 Negro college students to get a first-hand look at industry while working in GE jobs.

Suggestion Winner: The highest suggestion award ever granted in the Dishwasher and Disposall Department—\$4,575 plus a bonus of \$458—has been presented to a Louisville employee. William Besser said that it was the first suggestion he'd ever submitted in his four years with the Company.

Changes at Syracuse: A continuation of organizational changes and a "slight softening in the large screen color TV market" are causing adjustments in the Company's Syracuse work force. The businesses affected are the Large Systems Department and the Major Color Television Department. About 300 hourly employees are affected, and will be given an opportunity to fill other open jobs there. Some professional employees of the Large Systems Department will gradually transfer to Phoenix, Arizona, phasing out of the local operation through 1969. A special task force is presently assisting placements elsewhere in the Information Systems Group and the Company.



Housewares Division plugs in a bold, colorful, and contemporary group of new clocks by hot mod artist Peter Max. Wow!

of a clock as a canvas for images, color and form," observes contemporary artist and designer Peter Max (see cover). "Something consulted so frequently should be more than functional."

Housewares Division agrees.

In fact, it unveiled a new line of modern clock designs with the bright, bold "now" look by young Mr. Max and priced to please young moderns on modest budgets: \$9.98.

At a press "happening" in New York's Tin Lizzie Restaurant (also designed by Peter Max), a hundred of the nation's top editors jammed the aisles near the housewares displays to meet the talented Mr. Max and inspect the phantasmagoria that was transforming the lowly wall clock into an objet d'art.

Six designs are included in the General Electric Peter Max clock collection. While the photographs on these pages can only suggest their bold designs, they also include lively color combinations. Their titles are similarly colorful: Wow Now, Opticon, Circa 1890, and Daisy Butterfly, to name a few.

Maximizing: Just who is Peter Max?
Son of a Shanghai pearl merchant, he

COSMIC CLOCKS CALLED, FROM LEFT, OPTICON, FLOWER GIRL, AND CIRCA 1890







has lived in the Orient, Europe, the Middle East and Africa. He studied at the Art Students League, the School of Visual Arts and elsewhere.

Although Peter Max comes on strong with the mustache and full head of hair so typical of contemporary mod artists and designers, he has a sound business sense that even draws the admiration of veteran Housewares marketing men.

From a fertile flow of ideas, Peter Max has developed an entire line of kaleidoscopic posters, then tableware, linens, glassware, stationery, rugs, and now clocks. His designs are sought by ad agencies and other major companies such as General Mills and Canada Dry.

Homeart: What the alliance between Mr. Max and the General Electric Housewares Division epitomizes, however, is the movement of pop or psychedelic art into the home by way of home furnishings.

By his own admission, Mr. Max intends to "revolutionize the home furnishings industry." In the present product line, time, to use a pun, will tell.

Certainly the dynamic duo of Peter Max designs and the strong General Electric distribution system will facilitate the efficient transfer of these new products to the consumer, a strong point behind the



MAXIMS: Striking a pose at the Tin Lizzie press conference is Peter Max, seated, with William J. Pfeif, manager of marketing and Willard H. Sahloff, vice president and general manager of the Housewares Division.

quickly-established creative merchandising partnership.

Ring-a-Ding: Things moved quickly following an early call by Peter Max to the Housewares Division. Within two weeks he had a GE contract, and within two months the clocks were coming off the production line at Ashland. Massachusetts.

"Frankly," confesses Mr. Max, "I thought it might take a big company like

OTHER PETER MAX DESIGNS: DAISY REFLECTION, DAISY BUTTERFLY, AND WOW NOW.







General Electric a long time to move."

"On the contrary," replied Housewares Vice President Willard H. Sahloff, "any merchant is accustomed to making decisions like this. It is moves like this which are typical of our success in the fast-paced housewares industry."

Mr. Sahloff adds that innovating new products "has been our stock in trade for the last fifteen years," pointing out that it was a natural to get leading hat designer Sally Victor to design a hair dryer for the Company.

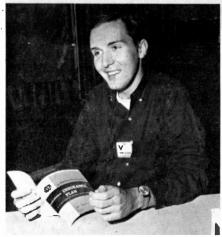
"Now in a housewares market that has a new awarenes of color and style, we're capturing the excitement of the most popular new home furnishings designer with a tremendous talent for color combinations and creative designs — and at the early phase of his fantastic new success," he says.

"We're using the latest trend in color and fashion to approach the market with the fastest growing potential, the youth market, but with a quality and variety of design that reaches into all age groups," adds Mr. Sahloff.

The new psychedelic art in home furnishings finds a major waiting market. In the next 15 years, the 20 to 34 age group comprising the majority of young homemakers will grow by nearly 40 per cent. Today, the under-30 market is 54 per cent of the U.S. population and growing rapidly. Young brides have more housewares today than did the older generation, and market researchers at Bridgeport suggest that American youth is having a growing influence on buying decisions.

Quite obviously, these young consumers will need clocks, and why not a selection from the General Electric collection of Peter Max clocks?

Besides, as our product literature says, they make the "grooviest gifts ever!"



ACCIDENT VICTIM DAN BRADLEY
His bills were \$18,000.

BENEFITS

Lots of Medical Bills

Jim Goodwin, a machine adjustor at the Tube Department in Owensboro, Ky., had a serious auto accident last year that kept him in the hospital for a lengthy stay and piled up over \$32,000 in medical bills.

Equally serious was the fate of Dan Bradley, a 19-year-old mechanical inspector at the Armament Department, Burlington, Vt. He also had an auto accident, and his medical care and hospitalization totaled \$18,000.

Fortunately, both General Electric employees were covered by the Company Insurance Plan, thus averting the depressing financial burden that would have ensued.

Last year, over \$27 million in medical or maternity benefits were paid to employees, part of a hefty \$103 million in benefit claims paid during 1967 under the General Electric Insurance Plan. The total cost of the Plan for the year hit \$109 million, including the \$6 million set aside to help provide life insurance for pensioners and to cover taxes and other items.

The huge totals were the highest ever incurred by the Insurance Plan, and detailed in the report of the Plan's activities in 1967 issued last month. Benefits were 20 per cent higher than the total for 1966 and over 25 per cent higher than the 1965 total.

One suggestion of the figures: the Plan is covering the rising cost of medical expenses while the rate of contributions by employees remains the same.

The number of claims processed—447,000—was higher by 57,000 than in 1966. Nearly 310,000 employees were covered by the Plan.

Of the \$68 million total cost for the coverage, General Electric paid \$47 million (about 69 per cent) while employee contributions were \$21 million (about 31 per cent).

Dropping Rates

About 150,000 employees participating in the Company's Personal Accident Insurance Plan will receive a 10 per cent reduction in the premium rate for the policy year beginning July first.

The new rate of 45 cents per \$1,000 of coverage compares with 50 cents per \$1,000 during the past few years. It will provide employees the opportunity for accidental death and dismemberment coverage at a very favorable rate, according to E. S. Willis, manager of the Company's employee benefits efforts.

. Under the Plan, coverage may be purchased in \$10,000 units up to a maximum of five times annual earnings, but any employee can purchase up to \$100,000.

EDUCATIONAL RELATIONS

Opening Cordiner Hall

At Whitman College in Walla Walla, Washington, one of the newest campus buildings is the sparkling \$1.6 million Cordiner Hall dedicated this spring.

Named in honor of Ralph J. Cordiner, retired Chief Executive Officer of the Company, the auditorium and center is a landmark to one of the school's most distinguished alumni.

"This is a proud day for Walla Walla," said Whitman's vice president Fredric F. Santler during dedication ceremonies. It was "a dream," he noted, "dreamed by so many for so long."

To become a reality, the dream had an assist from General Electric. The Company had made a \$500,000 grant, along with a matching grant from the Ford Foundation and other donations. A portrait of Mr. Cordiner—also a gift of the Company—was unveiled by Mrs. Cordiner, who accompanied her husband to the event. The painting will hang in the foyer of the new building.

"Cordiner Hall is not only a monument to a great man, a captain of industry, but a devoted alumnus," announced Whitman College Trustee Donald Sherwood, receiving the keys to the building.

Also participating in the dedication were Board Chairman Gerald L. Phillippe and Western Regional Vice President Harry M. Lawson.

What was Mr. Cordiner's reaction to the building? "The building is wonderful," he said, "everything I hoped it would be."

While walking across the Whitman campus, the former General Electric executive, who had been instrumental in the Company's major decentralization, noted



MR. WILSON, RIGHT, & EMPLOYEES

A guiding hand still on the move.

that other changes would have to come soon if his alma mater was going to stay with the times. Pointing to the administration building, he noted the sentiment associated with its old tower, saying, "still, it may have to change."

Mr. Wilson Returns

Another former General Electric executive popped up in the news last month as Charles E. Wilson visited Schenectady.

After addressing the Retired Elfun Group, the man who started as a messenger in 1899 and retired as GE President 51 years later, made a sentimental journey through the plant during the afternoon.

Stopping here and there to shake hands with employees, Mr. Wilson toured the Turbine, Generator, and Gas Turbine Departments with his host, Vice President Donald E. Craig.

The tour included the cavernous building 273, a major Schenectady landmark that was planned 20 years ago when Mr. Wilson headed the Company.

UTILITY SALES

Monitoring the System

How does the average utility monitor what's going on throughout miles of high voltage transmission lines in its system? The answer used to be by telephoning and checking readings on a few recorders.

But New Jersey's Public Service Electric and Gas Company recently installed a new system with the help of General Electric that changes all that by switching on one of the most automated and advanced computer-directed monitoring systems in the industry.

The highly sophisticated information gathering and TV-type display system continuously monitors some 700 points in the Public Service system, which extends from Newark in the north to Camden in the south. At the touch of a button, the company's load dispatchers can get a video display of conditions throughout the 2,400-square-mile electric power complex.

Included in the system is a GE-PAC® process computer connected by GE-TAC® supervisory controls to continuously transmit and receive digital information on current flows, voltages, power interchange and circuit breaker positions.

Data is displayed on a DATANET® TV-type display screen, which shows a diagram of the electrical system at any station with conditions existing at the moment.

In addition to monitoring, the computer performs a security check of the system, spots abnormalities, alarms the dispatcher and recommends corrective action as needed.

The system includes General Electric equipment from Phoenix, West Lynn, and Oklahoma City. The sale was handled by the Electric Utility Sales Division.



SEMICONDUCTOR SESSION AT SYRACUSE DRAWS FROM SOME 86 PRODUCT DEPARTMENTS

TECHNOLOGY

GOSAM's Going Great

Few of the Company's businesses have missed the chance to use transistors and solid state techniques in their efforts to stay competitive. So it wasn't too surprising when some 440 persons from 86 product departments showed up in Syracuse, N.Y., recently for the eleventh annual meeting of GOSAM.

The conference derives its name from Group on Semiconductor Applications and Measurements, and is a yearly get-together that has grown steadily since GOSAM's founding in 1958. This year, the crowded agenda was packed with some 70 technical papers and 60 motion pictures plus a round of demonstrations on both GE and competitive semiconductors.

GOSAM actually provides several forums during the year according to John O. Lampkin, chairman of this year's conference. He points out that participation results in a productive interdepartmental exchange of technical information.

This year's record attendance, points out Mr. Lampkin, a senior design engineer at the Industry Control Department, "indi-

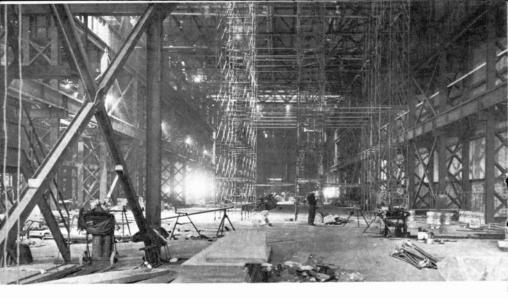
cates that our symposium program was well-suited to the needs of our engineers."

Circuit Center: The keynote speaker, Dr. J. A. Morton, a vice president of Bell Telephone Laboratories, appropriately chose integrated circuits as his topic. The Company officially opened its new Integrated Circuits Center in Syracuse as a highlight of the GOSAM meeting, with Dr. Arthur M. Bueche, vice president of the Research and Development Center, cutting the ribbon.

The IC Center, although part of the R&D Center, is located at Electronics Park in order to work effectively with other Company components such as the Semiconductor Products Department. The Center will serve the entire Company, monitoring industry developments, developing new technical knowledge and seeking possible product applications.

As he snipped the ribbon, Dr. Bueche noted that the creation of the new Center reflects "the remarkable increases in the use of integrated circuits over the past few years. Sales throughout the industry grew from two per cent of the semiconductor market in 1962 to 22 per cent in 1967.

"Five years from now," he predicted, "we may be dealing with an \$800 million market."



BUILD WE MUST

GENERAL ELECTRIC'S skyline is changing. In Shreveport, Wilmington, Greenville, and elsewhere, clawing bulldozers and chattering riveters mark the spots where steel skeletons of General Electric's newest plants are rising.

At Schenectady, Pittsfield, Evendale and other established plants, equally vigorous activities are underway by cramped departments eager to build up, add on, or re-equip.

The GE building boom has been gaining momentum over the past few years. "We have spent almost a billion dollars in the last two years on plant and equipment," said President Fred J. Borch during a press conference late last year. The expenditures, he noted, were "more than the total of capital expenditures for the four preceding years."

Observes Vice President Bryce W. Wyman, general manager of the Transportation Systems Division, "Competition is such, both domestic and off-shore, that

continuing investments in new buildings, machines and technology are necessary for the survival of any business."

So, build we must and build we will. According to estimates of the Company's Real Estate and Construction Operation, current major expansion projects will add over 2.5 million square feet of production capacity. The aggregate cost of facilities projects in progress is over \$500 million.

A Monogram survey of new construction showed a generally upbeat feeling about the future, suggesting the need for more manufacturing space to handle growing markets.

William R. Lynn, general manager of the Meter Department, was typical of those who underscored employees in the growth picture. In announcing a new 56,600-square-foot building to be built in Dover, N.H., he mentioned dedication, quality-consciousness and understanding of objectives on the part of employees as being "a major factor in the Meter Department's success."

New Plants: Many of the new plants being built are in relatively new areas as far as GE is concerned, adding to the already imposing list of 200 GE plant cities world-wide.

In some cases, such as in Henrico County, Va., facilities can be purchased. The Numerical Equipment Control Department found a 128,000-square-foot building near Richmond ideally suited for a badly-needed addition to manufacturing space. It started up in February, and by the end of this year will be the site of some 200 new jobs.

But for other components, the job must be done from the ground up. Wilmington, N.C., is one new plant city where things moved fast. Just one year after getting final appropriations approval from the Board of Directors, the Atomic Power Equipment Department's new plant there began initial production. Next year it'll be in full operation, with some 500 to 600 employees.

SPRINGTIME IN GREENVILLE



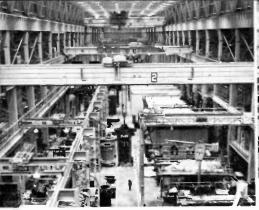
Cement 'n Steel: "It never ceases to fascinate me," confessed John L. Bauer, manager of the new Greenville, S.C., plant of the Gas Turbine Department, "seeing creative ideas turned into stacks of drawings, charts, and plans—then into tangible and visible buildings, intricate machines and working systems." (See photo.)

The object of Mr. Bauer's fascination is a new 314,000-square-foot, \$50 million plant now rising out of the red earth of Greenville. It'll take 4,600 tons of steel and over 29,000 cubic yards of concrete before the job is done, allowing installation of a GE air conditioning plant from Tyler, Texas, and illuminating contribution of the Outdoor Lighting Department.

Citing the "growing world-wide demand for heavy-duty gas turbines," Whitman Ridgway, general manager of the Department, supplied a solid reason for the new plant: GE gas turbine orders have increased about 600 per cent over the past six years, and he said that "we conservatively estimate the present total market to double by 1975."

Iced Foundations: Elsewhere, the Real Estate and Construction Operation reports that construction is progressing at Charleston, S.C., on a new turbine hood plant; in Shreveport, La., where the Company's first plant in that state is due to be completed in 1970; and at Hendersonville, Tenn., near Nashville, a 350,000-square-foot plant for small a-c motors is in the preliminary design stage.

The Charleston plant will house several 225 and 250-ton cranes in order to handle the heavy parts. The size of the machine foundations demands that the concrete be cooled with ice during mixing, and with air blown during curing. The foundations will be held to deflections of but a few thousandths of an inch,





NEW assembly and test building at Pittsfield, left, and new TV line in Syracuse.

even though supported on 50-foot-long piles down into the Carolina marl.

Renewal: At established plants, there's also plenty of action. Among the biggest of new projects is the \$27 million Power Transformer Department's assembly and test building at Pittsfield, Mass. Second only in size to Schenectady's huge building 273, it's longer than three football fields and taller than any other structure in Massachusetts.

"The new assembly and test building will match or exceed any power transformer manufacturing facilities in the world," said Department General Manager G. Ronald MacArthur. "It will give our Department the manufacturing capability to meet the challenge of stronger competition and increased customer needs in the 1970's."

Major Investments: Schenectady has had a vigorous program of major expansion totaling \$110 million since 1964. Included: a new motor-generator manufactural quality and reduced costs.

turing building, new computer center, addition to the wire mill plus expansions of Foundry, Gas Turbine, Large Generator and Motor Departments. The new industrial X-ray facility adjoining building 273 is one of the world's largest, containing equipment that can generate up to 10 million volts while X-raying heavy castings.

Evendale, Ohio, will begin operation this summer of a massive new multi-million dollar test facility to evaluate engines at simulated altitudes of 60,000 feet. At Appliance Park, the Home Laundry Department is building a new 250,000-square-foot addition to handle production needs stimulated by increasing customer demands.

A new \$1.7 million project is nearing completion at Electronics Park in Syracuse, N.Y. The Major Television Department improvement is designed to make its business more competitive in the color TV market. Department General Manager Richard E. Christie said that the new facility contributes to improved product quality and reduced costs.

HOME LAUNDRY ADDS MORE ELBOW ROOM AT APPLIANCE PARK.



The pattern of restless growth and modernization is being repeated around the Company. At Erie, Lynn, Cleveland and San Jose, similar changes are occurring. Service Shops Department, which opened seven new shops last year, has continued its feverish pace with four new shops opening in 1968, according to General Manager Peter C. Van Dyck.

Ribbon snipping being the vogue, one of the most imaginative was by Vice President Hilliard W. Paige, who opened the new European and African Studies building at TEMPO in Santa Barbara, Calif. Mr. Paige eschewed scissors in favor of a Spanish broadsword which he used to cut the ribbon.

INFORMATION SYSTEMS

Manufacturing Under Control

Prestigious pharmaceutical manufacturer Abbott Laboratories has turned to General Electric for help in keeping some 800 products, 900 chemicals, 1100 compounds and 7,000 materials under control.

The helper is a revolutionary new approach to computerized manufacturing information and control introduced by the Company's Information Systems Division. The new approach (called a GE Parts Explosion System or GEPEXS) is a random access application package for use on medium-scale GE-400 series information systems.

Where most manufacturing systems report what is happening in a given manufacturing area, the new manufacturing and information control concept (or MIACS) reports and controls. It looks at the entire manufacturing business as a complete integrated system.

Abbott Laboratories is one of several

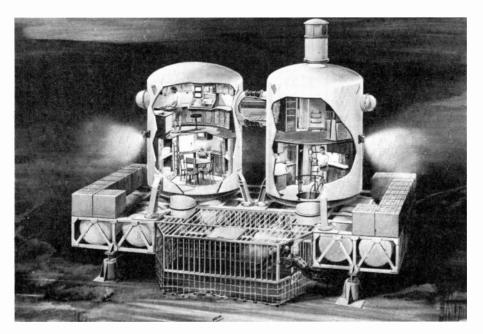


initial users of the parts explosion application system. This is the first step in the MIACS concept originally developed by Manufacturing Services working with the Switchgear Department, Insulator Department and others.

According to Clarence A. Renouard, manager of manufacturing sales development of Information Systems Sales and Services' Sales Programs Operation, one important aspect of the new system is that it's one of the first factory-oriented applications of a business computer.

MIACS breaks down the manufacturing function by recognizing the common physical flow of materials in any manufacturing business. It recognizes that this flow can be readily identified, managed and controlled. By using three basic planning and control models, the system can plan, schedule and control the flow of raw materials, the use of resources, and the activities that go into making a completed product.

In the GEPEXS application, it eliminates costly and wasteful storage of redundant parts list data, simplifies adding, deleting or modifying parts list records, and gives more accurate and consistent product structure information to all areas of the business.



Get Away From it All... Eight Fathoms Deep

Early next year, four scientists will be lowered through the clear, warm waters of the Virgin Islands, and nestling among coral and tropical fish some 50 feet deep, set up housekeeping for 60 days.

Their undersea home will consist of two vertical structures 12 feet in diameter by 18 feet high connected by a four foot diameter tunnel (see photo). Each structure will have two living compartments, one above the other.

Although physically isolated from the world, the men will have voice communication with the surface. A closed circuit TV system will let behavioral scientists observe them from above the ocean floor.

What goes on during the two-month experiment will comprise the longest continuous undersea study by a diving team yet attempted. It's dubbed Operation TEKTITE I. Cooperating are the U.S. Navy, NASA, the Department of the Interior, and General Electric.

The Company's role in the study involves constructing the ocean floor habitat and providing the planning, training, scientific and engineering support plus the systems analysis for the entire program. The project will be handled by the Company's Missile and Space Division, Valley Forge.

The study will be conducted below the

surface of Greater Lameshur Bay, Virgin Islands National Park, offshore from St. John Island.

What the scientists hope to accomplish during their saline sixty days is an extensive marine science study on the ocean bottom and an opportunity to show what happens to the behavior of men living in relative isolation in an alien environment under stress. Such data can be applied to future undersea missions and extended duration space missions.

The program is the first of its kind undertaken by a group of government agencies in cooperation with private industry.

Each cooperating agency is interested in its own area of research. The Department of the Interior, which is supplying the four scientists who will become aquanauts for the experiments, is directing the marine research phase. The ocean bottom studies will cover a lot of ground, but will concentrate on behavior and habits of marine animals and how they interact with their environment. Also studied will be marine geology, mapping, and ocean-ographic monitoring.

Both NASA and the Navy are interested in the behavioral data derived from the test, and all are hoping to refine the technology of saturation diving at relatively shallow depths. A saturation dive is one in which the body tissues become saturated after 24 to 36 hours with the gases in the breathing mixture. This technique allows divers to live on the ocean floor for long periods, but they must go through decompression before returning to the surface.

The name Operation TEKTITE derives from the small mineral objects found on land and in the ocean which have survived a flaming passage through the earth's atmosphere from space.

NUCLEAR ENERGY

Penn's Powermaker

Pennsylvania Power & Light Company has announced that it will buy two General Electric BWR nuclear systems and first core loads of fuel.

Each of the units will have a rated capacity of 1.1 million kilowatts of electrical generating power and are planned for service in 1975 and 1977.

The order, received by the Atomic Power Equipment Department, San Jose, Calif., was placed with the Company following evaluation of competitive bids from Westinghouse, Babcock and Wilcox, and Combustion Engineering.

The General Electric package gives PP&L options to change the size of the units to 800,000 kilowatts and to advance the delivery to accommodate earlier inservice dates. PP&L's final review of plant size and schedule is to be completed by January 1st, 1969. Sites for the two units have not been announced by the Pennsylvania company as yet.

The GE-APED sales effort began in mid-1967, according to Jack Williams, manager of the power reactor sales group II. "This order took longer than most to book," he said, "because of stiff competition not only from Westinghouse, Babcock and Wilcox, and Combustion Engineering, but also from Gulf General Atomics and its high-temperature gascooled reactor."

In the first four months of this year, the Atomic Power Equipment Department has received orders from four utilities for 6,130 megawatts of electrical generating capacity. The total tops the 5,322 MWE capacity ordered by 15 utilities in APED's first 10 years in business.

The Answer Wouldn't Du

"Name the twentieth century French artist who painted this picture of a very famous bridge," shot College Bowl moderator Robert Earle to the Brandeis University team during a late-April telecast.

"Dubuffet," bounced back Brandeis, apparently giving a correct answer and adding to their score against their opponent,

the University of Chicago.

But the similarity of names between Dubuffet and Buffet (the correct answer) and the manner in which the answer was given created a difference of opinion as to whether or not the correct answer was given.

Producer John Cleary played back the videotape recording of the telecast. It confirmed the fact that an incorrect answer had been accepted.

For the first time in its 10-year history, College Bowl had a re-match.

The two teams returned on May 12th to settle the question. Brandeis' team rolled up an impressive 380 to 155 victory over Chicago to capture the honors, with he highest single game score of the season.

Sunny Scholars

Pompon girls bounced by, a brass band struck up "Fight On," and hundreds of anxious USC students and Los Angeles residents crowded around gate 30 waiting for the plane that would bring the College Bowl team back from a triumphal fivegame winning stand.

Students drifted by the waiting television news cameras. One carried a sign saying "Trojan Power is Brain Power!"

When the plane arrived, crowds cheered

the four University of Southern California students and their coach with much of the gusto usually reserved for collegiate sports events. It was typical of the recent Los Angeles reception, and a suggestion that the General Electric College Bowl sometimes spins off a touch of glittering notoriety with its scholarships.

USC had done well in the latter department, too. The \$19,500 winnings from GE, Gimbels and Seventeen were supplemented by USC Trustees by \$24,500, making a notable total of \$44,000.

A congratulatory telegram from the mayor arrived, and the Los Angeles City Council passed a resolution declaring "USC Scholars Day" in the City. The press was alert to the achievement, and to top it off, General Electric Regional Vice President H. M. Lawson hosted a luncheon for the Bowl Champions and their coach.

TIME SHARING

Dial-a-Tape

Users of the nation's 14,000 numerically-controlled machine tools can now pick up a telephone and dial into a time-sharing computer to create accurate, economical tapes in minimal time.

The new system allows manufacturers to prepare coded tapes in a fraction of the time required by manual methods.

By using the new capabilities of General Electric's time-sharing service, parts programmers or other manufacturing specialists can now go directly from engineering drawings to ready-to-run tapes in a few hours or less. The hours saved "permit concentration on the more creative, profit-producing aspects of manufacturing," according to E. L. McCleary, marketing manager for the Information Service Department.

Now You See It

Once upon a time it was considered highly improbable that anyone would be able to convert normally-invisible infra-red radiation into visible light.

But some General Electric researchers did it.

At an April meeting of the Physical Society, Ralph A. Hewes and James F. Sarver of the Lamp Division's Lighting Research Laboratory in Cleveland told how they had accomplished the feat. The answer was in a new phosphor lamp coating that did the infra-red conversion.

Wasting no time in applying the idea, the Miniature Lamp Department also announced the first application of the new phosphor: the industry's first gallium arsenide solid state lamp able to produce

GREEN GLOW FROM INFRA-RED Dr. Galginaitis in the research lab.



green light. The green color emitted by the lamp will prove useful as a "go" indicator in aircraft, computer, and spaceship applications.

The new lamp is basically an infra-red source coated with the new phosphor, which is a white, powdered substance—a specially activated lanthanum fluoride.

Lab tests of the new phosphor indicate an unusually long life—on the order of 20,000 hours.

Co-inventors of the phosphor-diode combination are Dr. Ralph M. Potter of the Lighting Research Laboratory, and Dr. Simeon V. Galginaitis of the Research and Development Center, Schenectady.

The Bluecoats are Coming!

Meanwhile, the Photo Lamp Department flashed word that it had created a new photo flashcube that would produce better color photos and "tell" the user how many unused flashes were left.

The "Bluecoats," as they're called, have a blue plastic cover around the entire cube for better color rendition. This replaces the old-style blue lacquer that produced uneven color rendering.

Green dots on the new flashcubes turn black after a flashcube has been used, thus giving photographers a signal to prevent film-wasting snaps.

James C. Forbes, marketing manager of the Department, said that the innovations were "major advancements which will improve the standards and enjoyment of amateur photography."

With the entry of the "Bluecoats," the Photo Lamp Department will be adding about 50 new jobs, according to estimates of Department General Manager Robert P. Burrows. The new flash resulted from a joint development effort in cooperation with the Research and Development Center.

Talking Points

Clean Sweep

Spring cleaning, long a tradition in the home, has now invaded the office. At West Lynn, Mass., employees of the Instrument Department grabbed brooms and "made a clean sweep of the joint."

Nearly a hundred pitched in, with a group of fastidious workers at the Allerton Street plant requiring two dump trucks to haul away the extra rubbish generated by the drive.

One particularly enthusiastic participant confessed, "I've been itching to get my hands on those old binders for years. Now we've got some room."

Shift Switch

At the Avionic Controls Department, Binghamton, N.Y., an announcement noted the appointment of Chester P. Day to the new position of manager-second shift operations.

Quipped one employee: "Day's on Nights!"

Those Nutty Diamonds

"Help!" Hill DeMent, a Fort Scott, Kansas, teacher wrote in desperation to the Gompany recently because of the reaction to his statement that General Electric had made diamonds from peanut butter.

"Since then, I've been laughed at by fellow teachers, asked what brand of peanut butter I use to make diamonds. I have been called in by the principal and questioned about it because parents have called him."

What the parents were saying about Mr. DeMent is that he was crazy.



INSTRUMENT'S HOUSEKEEPERS
At West Lynn, an itch for a clean sweep.

Obviously a bit miffed by such wild charges, the teacher decided to substantiate his claim. Unfortunately, he couldn't remember where he'd read the story in the first place.

Ford Slater of GE institutional advertising replied to Mr. DeMent, saying yes, General Electric has made diamonds out of peanuts and chunky peanut butter. He pointed out that we could make diamonds out of anything that contained enough carbon. Even peanuts!

Sea Split

North and South America are moving farther away from Europe, and it doesn't have a thing to do with foreign policy. Scientists at the Company's Research and Development Center have announced that the ocean floor is expanding outward from the center of the Atlantic!

New evidence seems to prove this fact as well as the theory that all the continents were once joined in a single land mass that split up and slowly began to drift apart a couple of hundred million years ago. This theory is based upon a striking geological feature, the way the opposite coastlines of the Atlantic Ocean appear to form an almost perfect fit.

The evidence results from determining the ages of rock samples—dredged up from the Mid-Atlantic Ridge—by means of a new dating technique developed by the Company. One of the samples—from the very center of the undersea valley—was found to be 13,000 years old. A second sample—taken part way up the inner all of the ridge and over four miles from the center of the valley—was about 290,000 years old. Ten miles from the center, samples were much older—about 8,000,000 years old, in one case.

The GE dating technique involves etching out the fission tracks found in nearly all minerals. The etched tracks become visible under an optical microscope. For a given concentration of uranium, the older the rock, the more tracks are found.

Meeting with Merit

The largest merit badge award ceremony in the history of the Boy Scouts of America has been held, and guess where? At the General Electric plant in Evendale, Ohio!

Over 450 Scouts and Explorers received Atomic Energy Merit Badges during the event, after having completed six weeks of study in which they learned the fundamentals of atomic energy.

General Electric employees—who sparked the special course—had hoped to attract about a hundred boys to the oncea-week sessions, but about 600 showed up for the first lecture. The stunned sponsors were fortunate in having selected an auditorium capable of holding the enthusiastic multitudes.

Staying Cool

This month's Monogram product longevity award goes to Mr. O. L. Dempsey of Rome, Ga., who has a 41-year-old General Electric monitor top refrigerator. He recalls paying \$77 for the model back in 1927. "I had to pay for it by the month," he said. His monitor top keeps purring away, freezing ice cubes and "defying time," just like the ads in those days said it would. He hasn't had to repair the unit in all of its 41 years.

Hot Dog!

A note from Ralph A. Goldsmith of the Company's Long Beach, Calif.. Servicenter points out that the market for General Electric Heat 'n Serve baby dishes may be bigger than Housewares Division would guess.

A Long Beach canine called "Jet" has submitted a testimonial letter and supporting photograph (see below) showing how much he enjoys eating his meals out of a nice, warm GE baby dish! "Yes, I know your baby food warmers are for babies," scratches Jet, "but after all, us puppies like our meals warm, too!"

WARM MEAL LOVER "JET"
For coddled canines, sales in the doghouse.



PEOPLE



GE'S WHITE HOUSE FELLOW
With congratulations from Mr. Phillippe.

White House Bound: JAMES H. BOCK-HAUS, resources allocation manager for the Industrial Group, is among 19 young Americans recently selected as White House Fellows for 1968-69, Mr. Bockhaus will begin his one-year participation in the government program in September. Announcement of the selection was made by President Lyndon B. Johnson, who established the program "to provide gifted and highly-motivated young Americans with some firsthand experience in the process of governing the nation and a sense of personal involvement in the leadership of the society." White House Fellows are assigned as assistants to cabinet officers, the Vice President, top government officials and White House staff members. In addition to work assignments. Fellows are exposed to a continuing education program of seminars, discussions and visits with scholars and leaders from private life. Mr. Bockhaus is the second General Electric employee to be chosen a White House Fellow since the program began in 1964. The first to be honored was Samuel H. Howard, who served in 1966-67 (The Monogram, April '66). Mr. Bockhaus was nominated for the post by Community and Government Relations after a Companywide canvass last fall.

Taj Mahail: RALPH M. ROWELL, consultant in the Instrument Department, West Lynn, Mass., gathered with his associates recently for a retirement testimonial party marking the end of his 47 years of GE service. The IEEE Fellow was actually starting another assignment, having accepted a post with the United Nations Industrial Development Organization in Bombay, India. Mr. Rowell was presented with a number of gifts, but the most unique item was a gold-plated wattmeter-a duplicate of one shipped by the Company 25 years ago to the Maharaja of India. Mr. Rowell's version was inscribed: "To the Maharaja of Instruments."

Appointed: ROBERT S. OWENS, manager of the applied surface chemistry unit at the Research and Development Center, has been named vice president of the northeastern region of the American Society of Lubrication Engineers . . . C. E. Neil Geary, community relations manager for Pittsfield GE, has been appointed to the City's Urban Coalition . . . Dr. John R. Elliott, manager of advanced materials programs at the R&D Center, has been elected vice chairman of the Polymer Division of the American Chemical Society.

Eye-Saver: RONALD F. CONNERTON, a program planning technician at the Ordnance Department, Pittsfield, Mass., recently returned to work after an extraor-

dinary operation at Boston's Massachusetts General Hospital, Mr. Connerton, now in his ninth year with the Company, had received his second new cornea in a transplant operation. Declared legally blind in early 1966, he had his first corneal transplant in September of that year, which gave him 20-25 vision in one eve. The latest operation meant 20-20 vision in the other eve with the aid of glasses. Mr. Connerton is now an enthusiastic crusader for eye transplants, and pleased with his GE Insurance Plan coverage, which paid 85 per cent of his staggering medical bills. "That GE insurance is the greatest thing going," he says.

Good Cast: NITA PRUTTING of the Apollo Systems Department, Daytona Beach, Fla., hobbled back to work after an off-the-job accident left her with a broken ankle and an inevitable plaster cast. She picked a great May day to return to her post, too, since the plant was playing host to Florida ex-Governor LeRoy Collins, now a candidate for the U.S. Senate. While the chance to meet candidate Collins and Governor Claude Kirk was part of the Department's public affairs program, it had an unexpected turn for employee Prutting. While touring her work area. Mr. Collins spotted the cast and stopped to autograph it. The beaming Nita wasn't talking, but obviously Mr. Collins had done a good job of "casting" his name in a unique, if not highly individual, manner.

Honors: Joseph S. Alford, a design engineer with the Aircraft Engine Group, Evendale, Ohio, has been elected a Fellow of The American Society of Mechanical Engineers... Bruce S. Angwin, manager of business development, Los Angeles office, has been nominated for Director-at-Large of the Institute of Electrical and Electronics Engineers.... Lew Taynton,



CANDIDATE COLLINS AND FRIEND

Casting another vote for constructive citizenship.

manager of personnel development for the Heavy Military Electronics Department, was recently honored by the American Management Association "in recognition and appreciation of the extraordinary and continuing contribution of his services." Mr. Taynton is a frequent lecturer at the AMA.

Authors: A new textbook—the first in the field of computer process control—is being published this month. "Computer Process Control" has been in preparation for seven years, and is written by TSAI H. LEE. manager of planning systems development, Corporate Planning Operation; WARREN M. GAINES, manager of timesharing project, Process Equipment Department; and G. E. Adams of the University of Missouri. The book discusses means of modeling physical, economical, industrial and utility processes and how to control these processes for maximum profit.

AROUND THE COMPANY

College Co-op: General Electric plants in four northeastern cities are participating in a unique education program in cooperation with Mohawk Valley Community College of Utica, N.Y. The four plants-in Schenectady, Auburn, and Utica, N.Y., as well as Burlington, Vt. are employing 16 MVCC students during the college's spring quarter in work experience assignments that are part of the degree requirements for technical and business majors at the college.

Capital Conclave: Chief Justice Earl Warren, leading U.S. senators, and NBC congressional correspondent Robert Mc-Cormick were included in the blue ribbon roster of speakers addressing 21 General Electric managers attending the recent Federal Government Relations Seminar in Washington, D.C. The conference, sponsored by Washington Relations, was a three-day session that also included visits by Eugene Rostow of the State Department, Senators John Stennis, Mike Monroney, Roman Hruska, Mark Hatfield and Claiborne Pell, plus Congressman Wilbur Mills and former Presidential Assistant Horace Busby.

Little License: General Electric and Arthur D. Little have entered into a licensing agreement under which the consulting firm will acquire the right to use GE's technical know-how in the field of metalliding-a basically new method of creating space-age alloys on the surface of a wide variety of materials (The Monogram, June-July '67).

Wonder Welder: The U.S. Air Force Materials Laboratory has awarded the jammed with topical and thought-provok-

\$131,900 contract to integrate a 30kw Sciaky electron-beam welder with one of GE's 39-foot-diameter spherical space simulators. The second phase of the program will involve the application of the equipment to show production capability of the electron-beam welding process to large structures. When completed, the facility will be the largest known electronbeam welder in the world.

Neat Network: The New York State Transportation Department has announced the establishment of a statewide highway maintenance radio system that will soon comprise one of the largest radio networks in the nation. Happily, the hook-up will include 1,380 General Electric mobile radios plus interconnected base stations in 63 of the state's area highway headquarters and 10 district offices in addition to the main office in Albany. The contract exceeds \$1 million, and is being handled by the Communication Products Department, Lynchburg, Va.

Scholarship: Members of Crotonville's Manager Development Class (68-II) have come up with \$390 of their own money to be used for a "culturally deprived" student at the University of Illinois Chicago campus. With matching funds from the General Electric Foundation, the scholarship of \$780 will cover a two-year period starting with the fall quarter.

Going Places: Over the last ten years the Transportation Systems Division has been publishing a quarterly magazine, Going Places, to promote balanced metropolitan transportation. The publication is Company's Missile and Space Division a ing stories and news articles and is distributed to several thousand business, transportation, education, government and civic leaders around the country. Editor Russell L. Bowersox estimates that 500,000 copies of the magazine have been distributed over the decade. In the tenth anniversary issue, *Going Places* comments that both the general public and government is "gaining an increased recognition of the benefits of balanced transportation."

Big Lift: A U.S. Marine Corps CH-53 helicopter powered by twin General Electric T64-12 engines has lifted 141/4 tons of payload and fuel on a recent test flight. Gross weight was 51.900 pounds. Both figures are unofficial records for free world production helicopters.

Superservice: A telephone call from Bergen, Norway, to the Direct Current Much material de trol. Over 170 pe newal parts sales and warehouse subsec-

tion signaled a fast chain of events by Erie employees. A trolley motor was out of action aboard the vessel Sighansa, and a new armature was needed within 30 hours on a dock in Hamburg. Germany, so that unloading operations could proceed. Since there were no spare parts for the unique motor, a replacement armature would have to be built from the ground up. It was. With a chartered plane and help from New York-based IGE Export Division employees, the unit was shipped by air to the customer, who got it on time.

New Course: Large Steam Turbine-Generator Division launches a new automated manufacturing course to help keep manufacturing personnel up to date on new developments and applications. Much material deals with numerical control. Over 170 persons have attended the 12-session course.



Would you make a million-dollar investment in these youngsters?

The Make Asserted Better program of Roshors's salutus General Electric for turning never to the Cleveland Public Schools on untra building to give these youngitors a better

umbilled young people off the stream by giving them paying jobs where they will learn anme base shith incharge auda. In the multi-million doller plant (estimated acho board replacement value 85-million). G.E. and othmolustrial lights will not 89 mmashing Tacturies. Too. regase wedding, even metinerimal food perparation. The school review will grow ode basic education and consonling to brigh these young people group opportunities for a better late in reappassible jobs. You ton room help make America better Jennis of the 55,000 Realows as these labels America Better peopless For mater ideas on help you can perfolips at the address to be been you can perfolips at the address below on her you can perfolips at the address below for a first passible state of the second section of the section of the second section of the section of



General Electric has received the first national award of the National Association of Real Estate Boards' "Make America Better" program. The honor notes the Company's recent announcement that it would donate to the Cleveland Board of Education a 200,000-square-foot plant on Woodland Avenue that was formerly used by the Lamp Division. The building will be used to train unemployed out-of-school youth (The Monogram, Feb. '68).

In a nationwide salute to the Company, the National Association of Real Estate Boards is running an advertisement (shown here) in Newsweek, U.S. News, Saturday Evening Post and other leading publications. Under the headline, the copy reads: "The Make America Better Program of Realtors salutes General Electric for turning over to the Cleveland Public Schools an entire building to give these youngsters a better chance in life. Perhaps such a plan can be started in your community, too."



PRODUCTS

Dishing it Out: For most restaurant and dining room proprietors, the joy of lavishing delectable gourmet delights upon a capacity house of appreciative guests has its inevitable drawback: the towering stacks of dirty dishes that remain. But happily for them, General Electric's Commercial Equipment Department has unveiled 12 new heavy-duty commercial rack conveyor dishwashers that have hourly capacities of up to 9,000 dishes. They feature powerful multi-spray cleaning action and other sanitation advances. Even if you're associated with a large-volume enterprise feeding 250-1200 persons per meal, there's a GE commercial dishwasher to handle the ensuing clatter of soiled dishes. In the honest-to-goodness photo is an hour's output from a new model surrounding William W. Smith, General Manager of the Department (left) and David R. Chase, Marketing Manager.

Motordom: New a-c fractional horsepower motors for use in unusual or extraduty applications have been announced by the Company's Specialty Motor Department, Fort Wayne, Ind. The units include 1/12 and 1/20 horsepower ratings for use in business machines, pumps, water softeners, and coin counters.

Frozen Compact: Hotpoint has unwrapped a brand new 12.6 cubic-foot frost-free upright freezer that stores up to 441 pounds of frozen foods in a compact, 30½ inch cabinet. The "No-Frost 13" freezer is designed to meet the growing demand for a full-featured upright in the small-to-medium capacity range, according to P. J. Drieci, manager of the Household Refrigeration Business Section.

Armor Tape: Motormakers will be interested in a new sealable armor tape being introduced by the Company's Insulating Materials Department. The new FUSA-FLEX^T sealable armor tape drastically cuts curing times and offers superior electrical properties and environmental protection. It's made of a "B" stage epoxy-

coated polyester glass material and designed for a-c form wound motor coils that could be subjected to salt water, abrasive atmospheres, chemicals or solvents.

Thermostat: A new low-voltage heating/cooling thermostat combining low operating differential and high cycle rates has been announced by the Appliance Control Department, Morrison, Ill. The model 3AAT50 unit performs with an operating differential of .5 degree F., thus assuring precision temperature control.

ORGANIZATION

Aircraft Equipment

The personnel, facilities and functions of the Direct Energy Conversion Operation are transferred to the Aircraft Equipment Division and assigned to the Aerospace Electrical Equipment Department. The component becomes the Direct Energy Conversion Business Section.

Appliance Components

Bruce O. Roberts has been appointed General Manager of the Appliance Motor Department.

Construction Materials

Leo T. Bowles is appointed General Manager of the Laminated Products Department.

LEO T. BOWLES



BRUCE O. ROBERTS



Executive

Robert B. Ames, Christy W. Bell, Fred O. MacFee, Jr., Clement E. Sutton and Edward Woll have been elected Vice Presidents of the Company by the Board of Directors.

Industrial Process Control

The personnel, facilities, functions and business scopes associated with Industrial X-ray Products and with Vacuum Products are assigned to the Industrial Process Control Division and assigned to the Deputy Division General Manager—Process Measurement Control.

Information Systems

Bull-General Electric has established two new Departments: the Direct Processing Systems Department, with Jack B. D. Petersen, Manager; and the Input/Output Devices Department, Stephen G. Jerritts, Manager.

Missile and Space

Myron S. Malkin has been appointed General Manager of the MOL Program.

President's Office

Review Boards covering the following areas have been established by the Company: Commercial Aircraft Engine Business, Corporate Approach to Employee Relations, Product Quality and Service After Sale and Television Business.

MYRON S. MALKIN



EDITORIAL

Growing Great

KEPING a little ahead of conditions, observed a sage, is one of the secrets of business. It's no secret that our Company is now actively engaged in a major building boom that should do just that (see story starting on page 10).

While the *Monogram's* story of new facilities concentrated on the brick-and-mortar aspects of the \$500 million building boom, it didn't elaborate on the equally awesome dimensions

of new equipment costs.

Last year at the Lynn River Works, for example, some \$3.4 million was spent on machine tools and processing equipment. And elsewhere, the price tags accompanying badly-needed new tools are sobering: \$2 million for a new shell boring machine; about \$500,000 for a new horizontal boring machine; new crane, \$100,000; new precision grinding machine, \$95,000; new locomotive, \$50,000; tractor, \$40,000; new injection molding machine, \$50,000; new fork lift, \$10,000.

Big as these items are, they must be purchased if we are to have efficient, competitive plants operating. Keeping ahead of conditions requires new grinding machines as well as the

plants in which they operate.

So, as the title of our story suggests, build we must. Most departments can see down the road far enough to note larger markets. To serve them, we, too, must be adequate for the task. If we can manage change through the efficient application of re-invested profits for plants and equipment, change, as the saying reminds us, won't manage us.