

# WALL STREET JOURNAL

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NEW YORK, MONDAY, MAY 26, 1952

VOL. CXXXIX.

## Cost Control

### Giant "GE" Finds That Penny-Pinching Pays In a Buyer's Market

### Nothing-Is-Too-Little Drive On Expenses Brings Big Savings in Manufacturing Gears, Pins, and Nylon Nuts

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SCHENECTADY, N. Y. — The purchasing agent for the giant General Electric Co. here turned to an engineer not long ago, handed him a temperature control gadget, and said:

"Larry, look this over and see if there's any way we can cut the cost of making it."

Several days later the engineer—Lawrence D. Miles—reported that production cost of the temperature control unit could be slashed without impairing either its quality or function. How?

"We did it," engineer Miles recalled the other day in his modest office here; "by checking each piece of material in the item to determine whether it was the proper one for the job. For instance, the cover on the control unit was held in place by a springy bronze

*Big and little businessmen today find the growing buyer's market putting a premium on cost-cutting. Here's how one of the nation's largest manufacturers is doing its trimming.*

clip for which we were spending about \$7,000 a year. But we don't need a clip with all that springiness—since its only function is to hold the cover in place. We found a less springy clip, made of tin-plated spring steel, which did the job just as well—and for 50% less.

"The same item had a wire spring which cost us \$11,000 a year. We scouted around, found another spring just as satisfactory at a cost of only \$3,000 a year. By the time we finished our study we were able to cut the cost of that temperature control unit by 25%."

#### Pennies and Parts of Pennies

This incident typifies the campaign General Electric is waging to eliminate all unnecessary costs from its products. The drive isn't limited just to materials, either. Every conceivable operation from design and the purchase of materials to actual manufacturing is getting a similar going over.

"Today with prices of many products, especially consumer items, being slashed in an effort to revive lagging demand, cost-elimination has become a major production tool," remarks G.E. purchasing agent W. A. Sredenschek. He adds: "Manufacturers no longer can afford to use yesterday's materials or methods in today's competitive market."

G.E.'s cost-cutting campaign, though launched about three years ago, has only recently begun to pay off. Says Mr. Sredenschek:

"We're saving millions of dollars a year as a result of our penny-clipping. No amount is too small. We look for places where we can save pennies, even fractions of a penny."

#### A Unique Approach

Cost-cutting in industry is not new. Most businessmen have taken a whirl at it off and on over the years. But G. E.'s approach to the problem is unusual. It has turned the job over to a group of specially trained engineers—they're called value analysts—under the supervision of Mr. Miles. In the three years the program has been in effect, Mr. Miles and his crew have dissected several hundred major units made by G. E.

"But we've barely scratched the surface," asserts Mr. Miles. "At present we have value analysts in half the company's purchasing departments. Our aim is to have at least one of these cost experts in every purchasing department in the company."

Most cost-cutting studies undertaken in the G.E. trim-the-waste drive are completed within 30 to 90 days, although some complicated ones have required as long as five months. After a value analyst has completed his study he forwards his findings and recommendations to the production engineer in charge of the particular product. It is then up to the production division to accept or reject the value analyst's suggestions.

#### "A Teamwork Job"

"It isn't often," relates Mr. Miles, breaking into a smile, "that our recommendations are turned down. In fact, about 80% of the suggestions made by the division have been put into effect. Actually, this is a teamwork job with the purchasing, engineering and manufacturing groups working together."

G.E.'s success in its penny-pinching drive can be chalked up, in part to its ability to make the firms it buys from cost-conscious, too. It does this by pointing out that a reduction in expenses not only benefits G.E. but gives the supply firm an edge on its competitors. G.E. will even send its own experts into the vendor's plant to show where savings can be made.

#### Fifty Million Pins

Take, for instance, the time when value analysts felt G.E. was paying too much for a stainless steel pin. It uses around 50 million of them a year, and until recently was paying one-third of a cent each.

"We worked with the supplier firm's sales manager," recalls Mr. Miles, "to find out where the excess cost was in his plant. We discovered, for example, they had been inspecting every single pin as it came off the machine. In place of this routine, we set up a sampling inspection system approved by our engineers. We eliminated some unnecessary handling, too. As a result of our recommendations that supplier was able to get the price of the pin down to a fifth of a cent—which means a yearly saving to us of \$112,000."

Buying completely assembled components, where feasible, is another valuable trick developed by the value analysts. For instance, G.E. had been buying from outside suppliers

four different parts of a three-unit electric switch at a cost of 88 cents. Assembling the switch in its own plants cost G.E. an additional 42 cents, bringing total cost of the switch to \$1.30.

When the value analysts got on the job one of the first questions they asked was: "Why not buy the entire switch already assembled?" They got together with the suppliers and outlined the problem. Now G.E. buys the assembled switch from the suppliers for 90 cents—two cents more than it had been paying for just the parts.

#### Junking the Elbow

"Changing the design of a component often helps, too," explains Mr. Miles. "We'd been using a small brass elbow joint in a refrigeration circuit which cost 11 cents—a lot of money for the simple function it performed. The analysts on the job suggested some minor changes in design of the product so a straight piece of pipe could be used instead of the elbow. The production department accepted the change; now they're using a straight piece of pipe costing a nickel instead of the elbow at 11 cents."

Similarly, a change in manufacturing techniques frequently produces startling savings. The expense ferrets shaved the cost of a stainless steel flame detector button used in oil burner controls from six cents apiece to two cents simply by suggesting that it be made on a less complicated machine.

Buying from specialty suppliers some items previously made in its own plants is another cost-saving technique developed by G. E.'s value analysts. On one product alone—a copper clamp used to secure a wire—it is saving \$8,000 a year as a result of buying it from suppliers.

#### Switching the Switch

In another case the cost of a switch for an appliance timing device was slashed from 86 cents to 16 cents by using the services of specialty suppliers. G. E. had been buying the switch parts from various vendors and assembling them at a total cost of 86 cents. The value analysts however, found a supply firm which sells a "kit" of standard switch parts needed for this unit. G.E. now buys the kit and assembles the switch at a total cost of 16 cents—70 cents less than it cost when the parts were bought separately.

G.E. has found that a shift in materials often will result in huge savings. For instance, it had been making contact points for its electric ranges from phosphor bronze at 70 cents a pound. But the value hunters found that a contact point made from carbon steel did just as good a job—at a cost of only six cents a pound.

Before V. A. (value analysis), G.E. used a brass nut in the temperature control unit of its electric blankets. It cost two cents. Now it uses a nylon nut which costs 1½ cents. "And it gives a much better performance than the one made of metal," says Mr. Miles.

#### A Weekly Report

To keep the engineering and manufacturing divisions up to date on developments, Mr. Miles' value analysis division each week distributes leaflets outlining its latest findings. The leaflet, called the Value News, has an eye-catching caption and cartoon.

For example, there's one depicting two gears, one of giant size, the other a tiny one. The caption reads: "WHAT . . . drive a battleship with nylon gears? Not yet . . . But motors, controls, timers and appliances . . . Yes. And often a better job for less cost."

Then it cites a bronze timer gear which costs 20½ cents and a nylon gear at 2¼ cents. And adds: "We should be using 10 times as many nylon gears."

#### Pudding or Poison?

In another issue of Value News a commutator is pictured with this caption: "Is yesterday's pudding today's poison?" The copy then goes on to say that when the commutator was designed copper was selling at 8 cents a pound (it uses 41 pounds) and mica at 5 cents. Today copper is tagged at 24½ cents a pound, mica at 15 cents. It adds: "Using today's cost relationships and new functional materials we believe the cost can be halved." It then lists four proposals on how costs of the commutator can be axed.

G.E.'s success in the battle against costs has spread beyond the confines of the company. Officials of several score firms have visited here in the past couple of years to watch the value analysts at work.

In addition, the National Association of Purchasing Agents' educational committee, of which Mr. Sredenschek is chairman, is preparing a value analysis program patterned after G.E.'s which it will make available to industry generally this fall.