

Midwestern Region

# L-S Electro-Galvanizing: Factory Without Walls



## *Successful start-up with participative management*

Cash Powell, Jr.

How does a company with the labor/management relations history of the American steel industry introduce a participative management style in a start-up factory? At the L-S Electro-Galvanizing (L-SE) plant in Cleveland, OH, the traditional lines between the United Steel Workers of America and management have blurred if not virtually disappeared. The bargaining unit employees are salaried. They design and maintain their own cross-functional training programs, are in full control of their own work and vacation schedules, and they hire their own factory employees.

That is not to say that the factory runs without leadership from management. Vice President and General Manager Don Vernon (42 years in steel operations) and his staff are very much present in the operation of the factory. Vernon's staff provides operational, engineering, and administrative support and final approval of programs which have an economic affect on operations. It's just that Vernon decided from the beginning that the operators can do their work and manage themselves with far superior results compared to a staff person "controlling" their hour-to-hour activities.

### **Background to Participative Management**

In the early 1980s, the automotive industry announced plans to expand the use of coated steel products in the manufacture of external automobile parts. To increase their production capacity, LTV Corporation and Sumitomo Metal Industries (SMI) of Japan created L-SE. SMI had the technical expertise at the Kashima Works in Japan; LTV had the customer.

### **About L-S Electro-Galvanizing Company (L-SE)**

L-S Electro-Galvanizing Company (L-SE) is a \$ 158 million joint venture between Sumitomo Metal Industries (SMI) of Kashima Japan and LTV Corporation. It was formed in the early 1980s to meet the expanded requirement by the auto industry for rust-proof, external body parts. The technology was to be electroplated zinc or zinc alloy as opposed to hot dipped galvanizing. American capacity had to be increased to meet the new demand. While other steel competitors rushed to build capacity, LTV established a joint venture with SMI of Kashima, Japan. SMI had already developed the technology in Japan and had a 13-year-old facility. The Kashima Works was only two years old, built in 1982, and would be the model for the new L-SE plant in Cleveland.

The product is a 20-ton coil of electroplated, zinc-coated steel. The coil is fed through an 890-foot electro-galvanizing line where the steel is coated with zinc and other chemicals, re-coiled and packaged for shipment to the customer. The steel coil is received from another LTV sister plant in Cleveland.

Other steel companies were also scrambling to build galvanizing capacity. The L-SE strategy was based on the realization that galvanizing technology would soon be perfected at all of the new plants and the competitive advantage would lie in quality and service. "The performance of people would be paramount," reads a company history.

LTV staffed the new factory from a pool of laid-off International United Steel Workers of America, Local 9126, in Cleveland. The employees returning to the factory were ready for a new way of work life. L-SE management screened 1100 workers, hired 45 team player types, then sent the 45 from the bargaining unit and 15 from management to the Kashima Works for ten days to review plating technology.

### **High Performance Organization**

Both LTV and labor management agreed from the beginning that the objective would be a high performance organization in an envi-

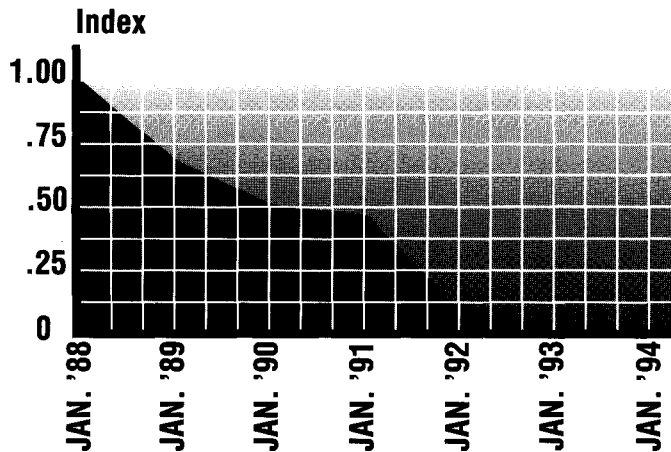
ronment of "trust, respect, and dignity." The key strategy for operating the plant would be:

- A highly flexible work force without traditional boundaries
- Job security
- Problem-solving applied to workplace issues instead of grievance procedures
- Local union latitude rather than a book of rules
- A pay system based on acquiring and demonstrating skills rather than classifying a collection of duties called "jobs"
- A gainsharing pay system in place of incentive systems.

### **Flexible Work Force**

A flexible work force was required to eliminate traditional jurisdictional work rules and labor grades. The key at L-SE is operator cross-training tied to a pay progression plan. The union employees developed their own training program for every skill in the factory.

## Reduction of Customer Claims on Shipments



**Figure 1.** A result of LS-E's emphasis on quality: the reduction of cost of customer claims relative to shipment dollars, actual confidential figures are in dollars/ton.

The work force is staffed with enough people to allow for on-the-job training.

The "Pay and Progression Plan" document details the hours of operation required of the trainee, the requirements of completion, the responsibilities of the task, and the steps of operation.

*As each employee acquires new operating skills and successfully passes a test administered by their peers and/or supervisor, they receive an increase in pay.*

As each employee acquires new operating skills and successfully passes a test administered by their peers and/or supervisor, they receive an increase in pay. The employee receives pay for demonstrated skill rather than pay for just the training. For example, the entry-level utility operator must demonstrate 23 skills (such as removing scrap from the shear and notch pits and loading it onto the scrap truck, or following a customer specification in packaging a coil for shipment) before advancing to the next grade. Some advanced skills require as much as 1200 hours on-the-job training for full qualification. Employees qualified in the highest number of specified skills receive the highest pay. Employees can reach the highest salary in about four years.

After reaching the highest pay skill, they can "stay sharp" by being assigned special production problems or by re-taking any of the training in which they need to be refreshed. Peer pressure is the primary factor for the employee to stay sharp when their team depends on each person for safe work practices, quality work, and a gainsharing bonus.

### Job Security and the Pay System

The bargaining unit at L-SE has the security of a salary pay system. In addition to salary, a laid-off employee can be paid up to 12 month's wages, including supplemental unemployment compensation. With this kind of security built into the labor agreement, L-SE employees have a basis for trust in management. Management has an incentive to manage the human resource with the cost of unemployment in mind; no one at L-SE has been laid off since the plant opened.

Job security historically has been the basis for inefficient and costly jurisdictional job design in union shops. At L-SE, the work assignments were designed to be cross-functional so that any member of the team could do virtually any job on the galvanizing line. This approach eliminates jurisdictional disputes and allows for the efficient use of time.

### Problem-Solving Environment

Formal contract grievances are so rare at L-SE that in 1993 they had two grievances and without looking it up no one could

remember what they were. There have been only seven grievances since the 1986 start-up. Many traditional labor agreements contain several pages of grievance procedure (against management) and several pages of behavior rules and listed penalties for specific negative behavior (against labor). Such traditional contracts reflect a shop floor culture which abounds in wasted time, mistrust, grievance procedures, and meetings over broken rules. L-SE has learned to solve day-to-day disagreements in a mutual problem-solving mode rather than with traditional, confrontational contract rules.

The labor agreement specifically refers to operating committees (teams) where mutual problem-solving will take place in the "Participative Management" section of the contract. For example, a traditional labor contract has a section describing such detailed behavior as allowed employee wash-up time and pay; the L-SE employee is salaried and they devise their own work rules which are not negotiated in the labor agreement.

*L-SE employees establish their own work schedules and are in control of their own overtime assignments.*

Equitable overtime allotment and work schedules are a chronic source of grievances in the traditional workplace. L-SE employees establish their own work schedules and are in control of their own overtime assignments. Since L-SE operates 24 hours a day, seven days a week, a job rotation work schedule is required to provide for each employee working weekends and holidays. A bargaining unit employee developed a complex rotation schedule for his fellow employees and they administer their own agreements.

L-SE employees are cross-trained to do multiple jobs in the factory, so jurisdictional grievances do not occur. Management employees provide technical advice and support; they sit in on the employee committees so potential grievances are resolved in the conference room.

### Joint Participative Management Program

In Section XV, the Joint Participative Management Program of the 1993 L-SE Labor Agreement, the detailed administration of the plant is delegated to committees. Some companies would call the committees permanent teams. The committees represent a contractual commitment between management and labor to a "work life system which will be unique in the domestic steel industry...."

*The hiring committee performs all of the hiring processes and final employee selection.*

The committees are reviewed annually for continuance and revision by the plant manager and the local union president. In addition to the management of the plant administrative issues, the committees are expected to resolve any disputes within 30 days. Failing that, the dispute is brought to the plant manager and the local union president who may review and return it to committee, create a special task force for resolution, or resolve the problem for the committee. Arbitration is the last resort. L-SE has never had a grievance go to arbitration.

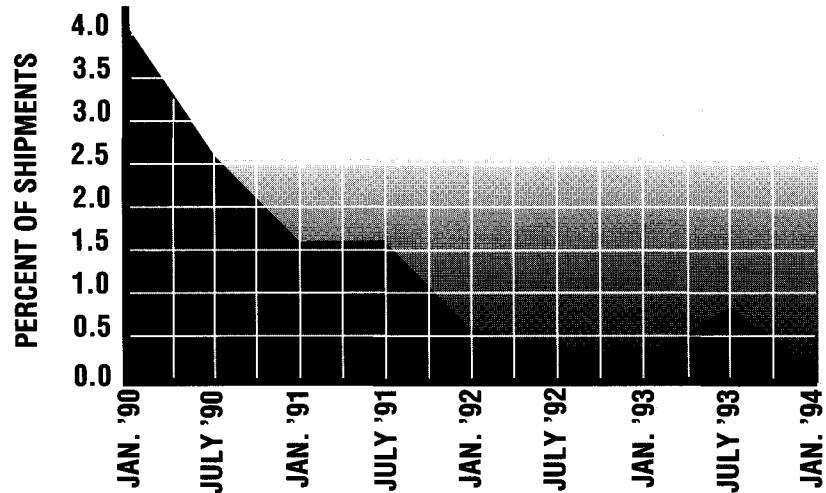
### Hands-On Committees

Since the committees manage the work life of the organization, several management people are represented at a ratio ranging from two to four management people and eight to ten labor. The open seats on all committees are voluntary. L-SE has little problem filling the seats; up to 60 percent of the employees serve on at least one committee. The committees represent the expected range of work life issues in the L-SE factory: hiring, pay and progression, gainsharing, safety, integrated process control, social, and packaging and shipping.

The hiring committee performs all of the hiring processes and final employee selection. This committee has eight bargaining unit members and two management members.

Traditional gainsharing programs are often based on output and revenue which tends to encourage high production numbers at the

### Overall Customer Complaints



**Figure 2.** Overall customer complaints decreased from four percent of shipments in 1990 to .3 percent in January 1994.

expense of a quality product, said Don Vernon. L-SE bonuses are based on quality output objectives established by the Integrated Process Control Committee. Through gainsharing, employees can earn up to 25 percent of base salary but only by meeting gainsharing objectives including quality, cost, and productivity.

The *Integrated Process Control Committee* functions as a means of integrating statistical process control (SPC) training methods into the efforts which produce standards to control the galvanizing process.

The *Packaging and Shipping Committee* also has a quality assurance objective. Its members work with the customer and the freight companies to insure proper handling methods and shipping schedules.

The *Pay and Progression Committee* oversees the Pay and Progression Plan and works closely with the Training Committee on skill progression.

The *Safety Committee* sees to the working practices, the physical plant, and housekeeping.

The *Social Committee* plans work-related social events.

Three committees have exclusively union representation: scheduling, training, and vacation scheduling.

Because the L-SE operation is a seven-day, around-the-clock operation, scheduling

the five work teams was a special problem with time needed for training, vacations, and occasional overtime. No one could be completely satisfied with the results. The training committee was assigned the task of developing the work rotation schedule. Don Vernon said, "It was a valuable lesson for that team to learn. Now the misery of the schedule is shared."

Illustrating the effectiveness of the committees, the company does not have nor want a suggestion system. "They do it before it becomes a suggestion," said Vernon. "Suggestion systems are costly, take time, create conflict, and tend to be bureaucratic."

### Customers and Quality

Since start-up in April, 1986, L-SE has continually improved in all measured areas such as productivity, quality, and customer satisfaction. The Integrated Process Control Committee is responsible for training operators in SPC and establishing operation process standards. Each shift has a production coordinator whose duties include visits to customer operations (sometimes monthly), to identify opportunities for improvement in the L-SE product or service. A result of this emphasis on quality, the reduction of cost of customer claims relative to shipment dollars, is shown in Figure 1. The savings amount to more than \$2.5 million annually. Overall customer complaints decreased from four percent of ship-

ments in 1990 to .3 percent in January 1994 (shown in Figure 2).

This quality focus helped LS-E to be awarded the Ford Q-1 Award, the GM Mark of Excellence, and the Rochester Institute of Technology/USA Today National Quality Cup.

Productivity in tons per line hour also increased 240 percent since 1988. Experienced steel people say that L-SE operates with "substantially fewer" people than their competitors with similar operations.

The plant manager, Cal Tinsley, schedules a monthly meeting to review the previous month's operations, customer problems, and financial status with all employees who choose to attend. Sixty to 70 percent of the work force attends these meetings, which often extend to three hours' time.

### ***Their Work Is Not Done***

L-SE's early experience with the galvanizing process depended heavily on their Japanese co-owners. Quality and productive output in the beginning had a long way to improve. Last year, the on-site Japanese engineer reported to the LTV board of directors that the Cleveland L-SE operation was competitive

with the Kashima Works in Japan.

Unlike other companies just starting with participative management, L-SE is experienced in the concept. Don Vernon doesn't use the popular term "self-directed work teams" to describe the operation. L-SE has management people coordinating committee work. "To try to make the teams self-directed would place too much pressure on team members," said Vernon. "We work as teams."

Both the Japanese and American owners were uncomfortable in the early days of operation with the autonomy Vernon gave to the committees. When U.S. Labor Secretary Robert Reich recently visited the plant, he noted, "Workers on the front line who are the closest to the production process and the customers

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*L-SE knows that ... continuous improvement is a way of life.*

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often have the most valuable information about what needs to be improved."

L-SE knows that their work is not done and that continuous improvement is a way of

life. When asked what he would do differently next time, Vernon replied that the pay progression system takes longer than planned and should have been considered a fundamental objective with the participative style.

L-SE's success has been developed from their version of the three legged management stool: the focused product, the focused process, and the focused human resource.

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