The basic strategies for success

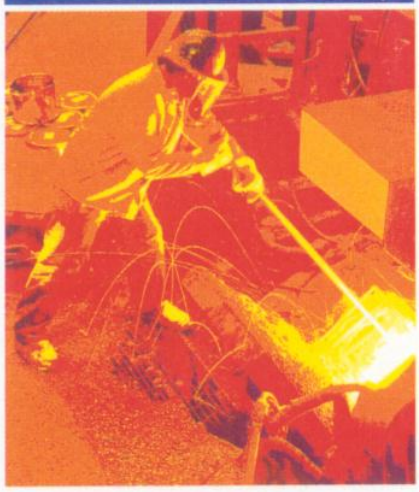
By JOHN E. JACOBSON

Market forces have led to massive adjustments in the steel industry worldwide. Rapid change in three areas—materials science, economic life-cycles, and steelmaking technology—has confounded many steel-industry leaders:

Materials science: Materials science is evolving at an increasingly rapid pace. For steelmakers to survive, they must achieve further gains in the strength-to-weight ratios of steel products. Doing this properly will require a better understanding of customers.

Mankind's use of materials has evolved gradually over thousands of years from caves to tents to cabins to houses. Demand for steel benefited enormously from the shift from horseback to railroads and automobiles. More recently, the plastics industry has developed products to challenge steel, wood, glass, and other materials. Steelmakers have reacted by offering lighter, rust-free, and higher-strength steels.

Economic life-cycles: The steel industry is highly sensitive to the evolution of the life-cycle for economic development. Every region has a unique economic life-cycle based on its mix of natural resources, level of education and training, and leadership vision and courage.



In the early stages of economic development, when regions are building up their highways, bridges, public sanitation, and rail networks, the demand for steel is extremely strong. Robust steel growth also is sustained by individuals purchasing such items as appliances and automobiles and by overall economic growth of more than 3-4 percent.

After these stages, the outlook for steel demand worsens dramatically. During the next phase, one of a mature industrial economy, the steel industry must work very hard, sometimes for the first time, to find and satisfy customers.

Steelmaking technology: Methods of producing steel are subject to constant improvement. Modern steelmaking practices incorporate sophisticated computerized process controls, increasingly continuous product flows, and much higher labor productivity. Due to its high cost and environmental damage, open-hearth steelmaking has been eliminated in nearly every region of the world except for China and the C.I.S.

In 1993, annual labor productivity in the U.S. was 500 metric tons per employee; Japan, 450 metric tons; Canada, 400; European Union, 375; South Korea, 300; Russia, 175.

Now modern steel plants can produce steel at an annual rate of 1,000-2,000 metric tons of steel per employee or better. The need for labor in the steel industry has declined; the reductions in steel-company workforces are far from over.

The most critical factor for a steel firm's success has shifted from raw-materials access to customer access. Scrap-based plants have severed the traditional link between the location of a steel plant and favorable access to coal and iron ore. Also, many steel-producing regions have exhausted the local raw materials that originally fed their operations.

With all these changes, steelmakers should step back, take a deep breath, and reflect on the basic strategies that are most effective. In the 1990s, this means shifting from the Old Steel paradigm to the New Steel paradigm: from centralized decision-making to decentralized decision-making, from work rules to problem solving, from lack of communication to a lot of communication, from investing in equipment to investing in people—and from putting the company first to putting the customer first.

From the operations standpoint, the most important element of a competitive steel company today is reliable, good-quality products. Steelmakers need systems to monitor quality throughout the steel-production process, well-educated and empowered employees, and adequate plant and equipment. Steel suppliers also must have good delivery performance.

From an economic standpoint, the most important element of being a competitive steelmaker today is to have low costs and competitive prices. Steel producers need to achieve excellence in three areas: (1) Operations: The plant is highly productive, and employees take pride in their work; (2) Finance: The company generates profits, which attracts investors to supply funds for modernization and improvement; and (3) Customer service: The steel supplier satisfies customers with consistently good product quality, on-time delivery, and competitive pricing. Nucor is an example of such a company.

Steel-industry leaders who are able to guide their organizations to excellence in the New Steel model will give their people an opportunity for success. Leaders mired in the Old Steel paradigm are destined to fail. ❑

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