CO-OPERATIVE FELLOWSHIPS LEAD TO GREATER INTEREST IN JOINING THE STEEL INDUSTRY AND INCREASED ENTRY-LEVEL WORK EXPERIENCE

The Steel Manufacturers Association (SMA) in concert with steel industry companies will establish a co-operative education program for selected college students who have completed the first or second year of a four or five year program. SMA together with sponsoring companies will select participating colleges and universities for program promotion. Students will be selected on the basis of knowledge, experience, desire, and initiative. The sponsoring company will submit details for a project that the student will work on. At the conclusion of the work effort SMA-Department of Energy Fellows and Industry Mentors will provide a joint critique for the purpose of ascertaining the success of the study program and the student’s interest in the steel industry.

ON-SITE PROJECT PARTICIPATION

The student gains valuable experience participating in steel plant R&D projects.

OFFICE OF INDUSTRIAL TECHNOLOGIES
ENERGY EFFICIENCY AND RENEWABLE ENERGY • U.S. DEPARTMENT OF ENERGY
**Project Description**

**Goal:** To assist those companies that have not implemented a co-op program, the SMA recently partnered with the U.S. Department of Energy to attract and provide work experience for undergraduate engineering college students in the steel industry over a three-year duration. This joint program with the Department of Energy will benefit college students and the steel industry.

**Progress and Milestones**

- Program start date, September 1998.
- 9 students have completed the fellowship.
- 10 students are expected to enroll for the Summer 2000 session.

Listed below are some of the projects in which the students have worked during the first year of the program:

- Determining the effectiveness of corrective and preventive actions resulting from customer complaints, product, process, and system non-conformities.
- Improving equipment reliability and product quality - examining history of mill housing wear, casting, and repair procedures to extend housing life.
- Correlating the current electrical energy consumption data from electric arc furnace operations with standard operating procedures to determine best practices for maximizing energy conservation.
- Conducting and analyzing current steel defect investigations, reporting, and testing.
- Facilitating company-wide networking of PCS, including technical support and training and assisting in the systematization of the purchasing function.
- Conducting noise monitoring, toxic release inventory reporting, and general assistance with environmental compliance issues.
- Optimizing electric arc furnace control to improve energy efficiency and throughput while reducing emissions.
- Field testing on electric arc furnaces to optimize natural gas usage.

**PROJECT PARTNERS**

Steel Manufacturers Association  
Washington, DC

Participating Companies

U.S. Department of Energy  
Washington, DC

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April 2000