



Colorado School of Mines  
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Web site: <http://www.mines.edu/Research/>

## ***Advanced Steel Processing and Products Research Center (ASPPRC)***

The Advanced Steel Processing and Products Research Center (ASPPRC) at Colorado School of Mines was established in 1984. The Center is a unique partnership between industry, the National Science Foundation (NSF), and Colorado School of Mines, and is devoted to building excellence in research and education in the ferrous metallurgy branch of materials science and engineering. Objectives of ASPPRC are to perform research of direct benefit to the users and producers of steels, to educate graduate students within the context of research programs of major theoretical and practical interest to the steel-using and steel-producing industries, to stimulate undergraduate education in ferrous metallurgy, and to develop a forum to stimulate advances in the processing, quality and application of steel.

Research programs consist of several projects, each of which is a graduate student thesis. Small groups of students and faculty are involved in each of the research programs. Sponsor representatives are encouraged to participate on the graduate student committees.

The Center was established with a five-year grant of \$575,000 from the National Science Foundation, and is now self-sufficient, primarily as a result of industry support.

### ***Background:***

- University sponsored
- Established in 1984 with a 5-year National Science Foundation University/Industry Cooperative Research Center Grant for \$557,000
- Currently self supporting with an annual budget of approximately \$1,200,000

### ***Areas of Expertise:***

- Alloy and process design of steels
- Formability and failure analysis
- Mechanical property evaluation
- Fatigue and fracture evaluation
- Low C sheet steels, medium carbon forging steels carburized steels, stainless steels, zinc-coated steels

### ***Sponsoring Organizations:***

- National Science Foundation Partnership Grant
- 22 sponsoring corporations including:
- Inland Steel
- Chrysler
- Caterpillar
- Inco
- Ford General Motors

### ***Method of Technology Transfer:***

- Semiannual technical programs and workshops
- CSM faculty visits to sponsor facilities
- Semiannual progress reports
- M.S. and Ph.D. graduates employed by sponsors
- Web site: <http://www.mines.edu/research/aspprc/>

### ***Spin-offs / Contributions:***

- Improved quality and processing of steel products
- Support for new steel applications
- Patents

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