

superconductivity research and development activities of the Department of Defense, shall give emphasis to fundamental research, materials processing, and applications of new superconducting materials.

**(b) Additional activities**

In conducting research under subsection (a) of this section, the Secretary of Defense shall—

(1) systematically define the engineering parameters for high-temperature superconducting materials; and

(2) conduct the necessary development, engineering, and operational prototype testing considered appropriate to the overall mission of the Department of Defense. Such operational prototype testing shall, where appropriate, utilize criteria developed by the Defense Advanced Research Projects Agency.

**(c) Defense Advanced Research Projects Agency**

The Director of the Defense Advanced Research Projects Agency shall, in conformance with the Superconductivity Action Plan, conduct activities to—

(1) augment, as appropriate, basic and applied superconductivity research conducted in other Federal agencies and industry; and

(2) develop criteria for operational prototype testing within the Department of Defense.

(Pub. L. 100-697, § 8, Nov. 19, 1988, 102 Stat. 4615.)

**§ 5208. International cooperation**

The President, as part of the Superconductivity Action Plan, shall establish a program of international cooperation in the conduct of fundamental and basic research on superconducting materials. Such program of international cooperation shall include the exchange of basic information and data, as well as the development of international standards for the use and application of superconducting materials.

(Pub. L. 100-697, § 9, Nov. 19, 1988, 102 Stat. 4616.)

**§ 5209. Technology transfer**

**(a) Promotion**

In pursuance of the goals of this chapter, all Federal departments and agencies shall conduct technology transfer activities as appropriate to the overall mission of each department or agency to—

(1) complement basic superconductivity research by promoting the rapid development of manufacturing and processing technologies necessary for the commercialization of high-temperature superconductors; and

(2) promote collaborative arrangements and consortia of industry (which shall include small business) in order to lower the barriers to deployment of advanced high-temperature superconductor technology; such consortia to also include, as appropriate, universities and independent research organizations.

**(b) Impediments to commercialization**

The Director of the Office of Science and Technology Policy, in collaboration with the Secretary of Commerce and the Secretary of Energy, shall identify those Federal policies and regulations which impede the ability of the pri-

vate sector to undertake long-term investment programs to commercialize superconductivity applications.

(Pub. L. 100-697, § 10, Nov. 19, 1988, 102 Stat. 4616.)

**CHAPTER 79—METAL CASTING  
COMPETITIVENESS RESEARCH PROGRAM**

Sec.	
5301.	Findings.
5302.	Definitions.
5303.	Establishment of program.
5304.	Operation of program.
5305.	Review.
5306.	Industrial Advisory Board.
5307.	Authorization of appropriations.
5308.	Protection of proprietary rights.
5309.	Omitted.

**§ 5301. Findings**

The Congress finds that—

(1) metal casting is an important process for manufacturing many items imported into or exported from the United States;

(2) the encouragement and maintenance of a technically advanced United States metal casting industry is essential to the competitiveness of many American industries;

(3) maintaining a viable metal casting industry is vital to the national security and economic well being of the United States;

(4) the promotion of technology competitiveness and energy efficiency in the United States metal casting industry by the Federal Government is necessary to maintain a viable metal casting industry;

(5) many metal casting companies lack the resources to conduct metal casting research alone, placing them at a serious competitive disadvantage;

(6) the support of university-based research in metal casting is important in promoting technology development and providing industry with qualified engineers; and

(7) by combining the resources of the Federal Government, universities, industry, and private organizations, to conduct research and development activities, substantial technological benefits will result to the metal casting industry.

(Pub. L. 101-425, § 2, Oct. 15, 1990, 104 Stat. 915.)

**SHORT TITLE**

Pub. L. 101-425, § 1, Oct. 15, 1990, 104 Stat. 915, provided that: "This Act [enacting this chapter] may be cited as the 'Department of Energy Metal Casting Competitiveness Research Act of 1990'."

**§ 5302. Definitions**

As used in this chapter, the term—

(1) "applicant" means:

(A) an educational institution;

(B) a consortium of educational institutions;

(C) a consortium of an educational institution or educational institutions with one or more of the following: Government-owned laboratories, private research organizations, nonprofit institutions, or private firms;

that is located in a region where the metal casting industry is concentrated;