

STATEMENT OF CONSIDERATIONS

REQUEST BY EATON INNOVATION CENTER (EATON) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE GRANT NO. DE-FG36-06GO16054; W(A)-07-005

The Petitioner, Eaton, has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above referenced grant entitled "Nanocoatings for High-Efficiency Industrial Hydraulic and Tooling Systems." The Petitioner will be collaborating with subawardee Greenleaf Corporation, which is not subject to this waiver request.

The objective of the grant is to develop and commercialize nano-coatings of AlMgB_{14} and $\text{AlMgB}_{14}\text{-TiB}_2$, as degradation resistance materials applicable to both industrial hydraulic and tooling systems, that result in surface hardness exceeding 30 GPa. For hydraulic products, the degradation improvement targets for the new nano-coatings are 1) sliding friction reduction of 50%; 2) torque-to-turn reduction of 50%; 3) volumetric loss reduction over simulated lifetime of 50% (resulting in pumping efficiency improvement of 3 to 5%); and 4) start-up torque reduction of 75%. These coatings are also targeted at increasing coated cutting tool life by 50%. The technology advanced by this project is expected to result in U.S. energy savings of 31 trillion Btu/year by 2030 with associated energy cost savings of \$179M/year.

The total anticipated cost of the grant is \$2,929,600 with Eaton providing 30% cost share for its total costs for the award, including material, equipment, and labor, totaling \$935,065 for the three budget periods of this award, with \$142,500 of that cost share coming from its subawardee, Greenleaf. Eaton has also invested close to \$2 million in coating and related equipment, as well as funded tribology research and modeling applicable to hydraulic products worth approximately \$2.5 million. Eaton's Fluid Power group is funding projects to develop past and present research into products. This waiver is contingent upon the Petitioner maintaining, in aggregate, the above cost sharing percentage over the course of the agreement.

Petitioner is a worldwide leader in the design, manufacture, and marketing of a comprehensive line of reliable, high-efficiency hydraulic systems and components. Petitioner manufactures hydraulic pumps for both industrial and mobile hydraulics, including aerospace hydraulics. In addition, Petitioner also manufactures hydro-electric transmission controls and transmissions for automotive and truck markets, where the coating technology developed under this project may be utilized. Petitioner's 2005 sales in the fluid power business segment amounted to \$3.24 billion, with about half of that derived from hydraulic products. All industrial hydraulics are sold to commercial users and not directly to the Government. Petitioner distributes its products and services via 2,000 distributors with 4,000 locations worldwide.

Petitioner has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Petitioner has agreed that products embodying intellectual

property developed under this agreement shall be substantially manufactured in the United States, and that Petitioner will not license, assign, or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition because it will not substantially change Petitioner's position in the marketplace. Petitioner is a global hydraulic component manufacturer having a varying percentage of market share depending on segment type. There are many competitors in this business segment, who tend to specialize. Therefore, some of the products position Petitioner as a leader, others place it in the mainstream, and some position it as a follower. A 25% to 30% market share is considered a leadership position in this business. With regard to tooling systems, Greenleaf, the subawardee, is a relatively small company selling primarily tooling components for difficult machining applications. The acquisition of the subject waived rights will not materially change or better the position of Petitioner as a leader in this field, but will benefit many other industries in this market, as well. Further, the success of Petitioner and its partners, under this grant, can be expected to stimulate further investment and competition in this technology.

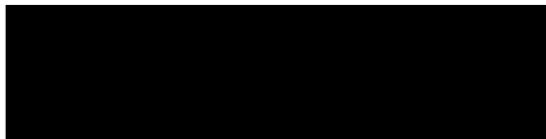
Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in commercializing the results of the grant in a manner that will make the above technology available to the public in the shortest time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.


Julia Cook Moody
Patent Attorney
Golden Field Office

Date: 9 Jan 08

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope determined above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the grant, where through such modification or extension, the purpose, scope, or cost of the grant has been substantially altered.

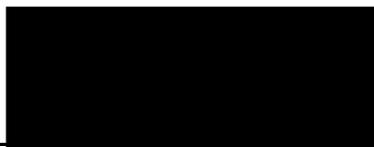
CONCURRENCE:



Douglas E. Kaempf, Program Manager
Industrial Technologies
EE-2F

Date: 1/28/08

APPROVAL:



Paul A. Gottlieb
Assistant General Counsel for Technology
Transfer and Intellectual Property

Date: 1-29-08

U.S. COMPETITIVENESS

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States, unless the Contractor can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor further agrees to make the above condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in any waived invention is suspended until approved in writing by DOE.