

Statement of Considerations

REQUEST BY KYOCERA INDUSTRIAL CERAMICS CORPORATION FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS IN SUBJECT INVENTIONS MADE IN THE COURSE OF OR UNDER DEPARTMENT OF ENERGY SUBCONTRACT NO. 86X-SM400C UNDER CONTRACT NO. DE-AC05-84OR21400; DOE WAIVER DOCKET W(A)-94-007 [ORO-574]

Kyocera Industrial Ceramics Corporation (KICC) has made a timely request for an advance waiver to worldwide rights in Subject Inventions made in the course of or under Department of Energy (DOE) Subcontract No. 86X-SM400C. The scope of the work calls for the development of improved manufacturing techniques for making ceramic components for automotive and truck use, particularly KICC's SN235 silicon nitride (Si_3N_4). The work is sponsored by the Office of Transportation Technologies.

The dollar amount of the subcontract is \$3,915,673 with KICC cost sharing \$2,297,626, 59% of the subcontract, which includes waiver of fee, which is 7.5% of the estimated cost.

KICC has been investing its own resources to develop, test, manufacture and introduce ceramic materials and processing methods for heat engine applications since the mid 1970's. It has established research and production facilities for Si_3N_4 of over 18,000 square meters in Japan and a development and pilot production facility of over 3500 square meters in the United States. KICC's investment in the technology directly related to this subcontract exceeds \$75 million in facilities and labor. Therefore, KICC has demonstrated that it is capable of developing technology in the area of ceramic materials for automotive and truck use.

KICC is the world's largest producer of technical ceramic products and one of the largest producers of silicon nitride engine components, supplying 23% of the world market. Although there is presently a limited market for Si_3N_4 engine components in the United States, KICC has about 35 to 50% of the commercial market for these products in Japan. What U.S. market has existed in Si_3N_4 products such as diesel engine cam roller followers and turbocharger rotors has been manufactured in Japan. However, KICC is now investing in the production of these products in the United States. Considering its market position, it has the capability to commercialize the inventions developed under the subcontract.

One of the major deterrents to the use of ceramic parts in the large scale production of cars and trucks is the high cost of making the components. Significant investments in capital, materials and labor are needed to develop the technology to reduce manufacturing cost. Therefore patent protection would encourage these investments.

The production of ceramics is critical technology in the future development of domestic combustion engines. However, one of the most promising ceramics, Si_3N_4 , is now being supplied only by foreign sources. KICC will manufacture

this ceramic in the U.S.

The subcontract has been executed and is proceeding with the standard DOE long form patent clause. If the requested waiver is approved, a patent rights clause embodying the standard DOE waiver terms and conditions, approved by KICC, including march-in rights, retention by the government of a license, preference for U.S. industry, and U.S. Competitiveness clauses will be added by a no-cost modification to the subcontract. The advance patent waiver will also contain a paragraph that limits KICC's ability to alienate waived rights. Specifically, KICC shall not transfer rights in any invention without prior approval of DOE. Also, should there be a change in ownership of KICC, rights in inventions will be suspended until approval by DOE of the entity obtaining controlling interest having the waiver.

As noted above, KICC has agreed to the attached U.S. Competitiveness clause in which it agrees that any product, process or service using a U.S. patent resulting from a subject invention or any other intellectual property used in performing work under its subcontract shall be manufactured or practiced substantially in the United States.

Granting of the waiver should have little effect on competition since there are several suppliers of Si_3N_4 parts and processes for making them, this being one of many previously or yet-to-be developed in the marketplace. Therefore there should not be undue market concentration of KICC products.

Grant of the requested waiver should serve as encouragement to other DOE contractors that significant cost sharing will be recognized as an acceptable consideration for granting greater rights in Subject Inventions.

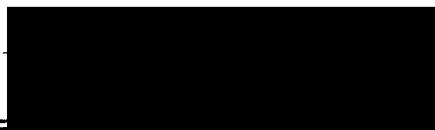
In view of the acceptable level of cost sharing by KICC and the objectives and considerations set forth in 41CFR 9-9.109, all of which have been considered, it is recommended that the requested waiver for worldwide rights be granted.



Katherine Lovingood
Senior Patent Attorney

Based on the foregoing Statement of Considerations and the representations in the attached Waiver Petition, it is determined that the interest of the United States and the general public will best be served by a waiver of U.S. and foreign patent rights, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the cost-shared subcontract where, through such a modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:



Thomas J. Gross
Deputy Assistant Secretary
for Transportation Technologies,
Energy Efficiency and Renewable
Energy

Date: 8/29/95

APPROVAL:



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

Date: 8-29-95

W(A)-94-007
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WAIVER ACTION ABSTRACT

REQUESTOR

Kyocera Industrial
Ceramics Corporation

CONTRACT SCOPE OF WORK

Development of improved
manufacturing techniques
for making ceramic
components for automotive
and truck use

RATIONALE FOR DECISION

Fifty nine percent cost
share, extensive technical
and commercial experience,
contribution to U.S.
industrial competitiveness,
relates to improving the
efficiencies of the internal
combustive engine

DISPOSITION

Grant waiver