

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In *Inter Partes* Reexamination of:            )  
  ): Examiner: DIAMOND, ALAN D  
  ):  
  ): Group Art Unit: 3991  
Reexamination Control No. 95/001,453        )  
  ): Confirmation No: 2755  
Patent No. 7,601,662                             )  
  ):  
Issued: October 13, 2009                     )  
  ):  
For: COPPER CHA                                 )  
  ):  
  ): ZEOLITE CATALYSTS

**Mail Stop Inter Partes Reexam**  
Central Reexamination Unit  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SECOND DECLARATION OF PRAMOD RAVINDRAN UNDER 37 C.F.R. § 1.132**

I, Pramod Ravindran, do declare and say as follows:

1. I am currently the Manager, Application Engineering North America, for BASF Corporation, the successor in interest to Engelhard Corporation, later known as BASF Catalysts LLC, the patent owner of United States Patent Number 7,601,662 ("the '662 patent"). I make the following statements based on personal knowledge.

2. This is my second declaration in the above-identified reexamination. I previously submitted a declaration dated January 31, 2011 in this matter ("First Declaration").

3. I have read the '662 patent. Thus, as stated in my First Declaration, I am familiar with the specification and claims of the '662 patent. I understand that the patent contains claims amended during reexamination directed to a catalyst comprising an aluminosilicate zeolite having the CHA crystal structure, a silica to alumina ratio of about 15 to 150 and an atomic ratio of copper to aluminum from about 0.25 to about 1, with specific claims directed to silica to alumina ratios in the range of 15 to 40 and copper to aluminum ratios in the range of about 0.25 to 0.50.

4. Sometime after February 27, 2006, I delivered to Ford Motor Company a core sample with a washcoat Cu-zeolite for evaluation by Ford. A core sample is a honeycomb substrate containing washcoat.

5. After delivery of the first Cu-zeolite core sample to Ford, in 2006 and 2007, I sent multiple Cu-zeolite core samples to Ford. All of the samples were delivered to Ford were labeled with the same designation numbers. Those designation numbers were REX-2XXX. The designation "REX-2XXX" is not the complete designation, as BASF's formulation numbers are proprietary. The fact that all samples that I provided to Ford in 2006 and 2007 were labeled with the same designation numbers means that all samples I provided to Ford were made according to the same formulation. Thus, all of the samples that I provided to Ford were cores having a washcoat of aluminosilicate zeolite with the CHA crystal structure having a silica to alumina ratio of about 30 and a copper to aluminum ratio of about 0.45. These catalyst samples did not contain any materials besides the zeolite, copper, and binder, and thus did not contain any other active components such as platinum.

6. I am familiar with the process by which the REX-2XXX formulations were prepared. All samples provided to Ford were prepared by calcining SSZ-13 in air at 640 °C for a period of 16 hours, followed by an ammonium nitrate exchange. The samples were then further exchanged five times with copper sulfate solution, with washing between exchanges. After the fifth exchange, each sample was calcined at 640 °C in air.

7. The samples were provided to Ford under a secrecy agreement and an agreement that Ford would not analyze the samples. Ford was not told the composition of the zeolite material, and Ford only knew the samples were a Cu-zeolite for evaluation. However, as described above, each catalyst sample provided to Ford was prepared according to the REX-2XXX formulation to provide aluminosilicate zeolites with the CHA crystal structure having a silica to alumina ratio of about 30 and a copper to aluminum ratio of about 0.45.


8. On or about December 17, 2010, I received an e-mail from one of the authors of the Ford SAE publication 2008-01-1025 that was attached as Exhibit B to my First Declaration. In the e-mail correspondence, the author confirmed that the sample referred to in the Ford SAE publication 2008-01-1025 in the sample preparation section as "a state-of-the-art Cu/zeolite based SCR formulation [] obtained from a catalyst supplier in 2007" was a sample according the REX-2XXX formulation.

*Inter Partes* Reexamination No. 95/001,453  
Second Declaration of Pramod Ravindran

I hereby declare that all statements made herein of my own knowledge are true and that all statements made herein on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-identified patent.

Respectfully submitted,

Dated: December 14, 2011

By:   
Pramod Ravindran