Abex

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An IC Industries Company

Memorandum

Date: May 27, 1980

Subject: NON-ASBESTOS MATERIALS

From: B. Iwarsson

To: Steve Conway

On Frank Herlihy's request, I am hereby submitting a summary on the status of our non-asbestos program.

TECHNOLOGY

First, it should be realized that the technology to produce friction materials with non-asbestos formulations has existed for many years. The problem has been to do so without a major price and weight penalty. The most common solution was based on a resin-bonded metallic formulation; and, over the years, we have successfully produced blocks, strips and disc brake parts on this basis. However, until recently, the only serious commercial application of RBM materials was to be found in high performance passenger car disc brakes. This technology was developed by our European operation and later adapted for application in the U.S. Early in 1979, we developed a non-asbestos/non-metallic formulation for strip linings. After considerable dynamometer and vehicle tests, a revised version was introduced to the marketplace in 1980.

In order to produce the same basic formula in blocks, we first had to solve some manufacturing process problems. This was accomplished in the Spring of 1980. The blocks are currently being dynamometer and vehicle tested by Abex as well as by Rockwell and Eaton. We expect to introduce these blocks in commercial quantities later this year.

ASBESTOS REGULATIONS

The current limit of $2f/CM^3$ is in jeopardy. A new limit of $0.2f/CM^3$ has been proposed by NIOSH and OSHA. Although implementation might be delayed by court action, the end of asbestos as a raw material for friction products is in sight.