

ABRASIVE DEVELOPMENT LABORATORY

9th Period, 1965

Project: E-200

Development of Diamond Products

PLAINTIFF'S EXHIBIT

CGI-21

A. Replacement of Durez 21131 resin.

The 50 lb. sample of this material received last period has been checked out and found to be O.K. for our use if it is needed before successful completion of our replacement program.

The test diamond wheels have been completed in both 21131 and 5417 (the replacement prospect) and comparison testing could begin on the Diamond Room T & C grinder as soon as satisfactory scheduling can be arranged.

BRP5727 has been added to the list of backup prospective resins should the 5417 show up unfavorably in the grinding tests. It is a fine grind version of 5417 and also differs in that it has a slightly longer plate flow.

B. Replacement of Union Carbide 8121 liquid resin adhesive. Testing of wheels manufactured without the use of this material between the hub and rim in the CMM Co. is moving rapidly. No rim separations have been reported. The total of both D11A2 and D11V9 wheel types shipped to Tool Stores now exceeds forty. Two new orders for 20 of each type are now being made without 8121 as are 4 wheels of an 8 wheel D12A2 order. This is a rather delicate 3" saucer wheel. Within the next two periods a decision will be made as to retention or rejection of this material for all manufacturing.

C. Replacement of LS663A Aluminum filler.

All possible combinations using both the dressable and non-dressable formulae and all of the aluminum filler types on hand have been made in hot pressed test bars. As soon as possible, these bars will be used to check heat transfer and thermal expansion prior to molding dummies and speed testing them.

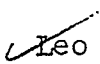
D. Replacement of Union Carbide BMG5251 Molding powder.

This material is used in manufacturing our so-called "Black Bakelite" wheel hub. The reason it has come up as a project for replacement is because it is the last remaining "special" material component of our diamond product line. In view of our continuing experiences involving manufacturers dropping "specials" which hold no potential for them, it is felt wise at this time to hasten the replacement of all such materials without further delay.

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Accordingly, test bars will be made for the same use as with LS663A. 5417 will be the resin (as with the aluminum hub wheels). Johns-Manville 7-RF-3 asbestos, which we use elsewhere in our plant, will be the filler checked out at 20%, 30% and 40% by weight. Black iron oxide will be the colorant and Ferro Corp. has a sample of this material on its way to us now.

The only other material which we will be forced to replace before the year is out is the metallic pink paint. No problems are really anticipated here. It will be an opportunity to eliminate a cure cycle because our present material is thermosetting. An air drying lacquer should be readily available and certainly will easily duplicate the durability of the present product.

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