FILE NAME: Borg Warner (BW)

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TECHNICAL PAPERS DIVISION
MARKETING DEPARTMENT
TRIP REPORT

To: Mr. D. B. Wilkinson, Jr. Date: February 14, 1973

CUSTOMER: Borg-Warner Corporation VISIT DATE: February 8, 1973

ADDRESS : Bellwood, Illinois

Personnel Interviewed:	Title:
Mr. Warren McColl	
Mr. Wayne Bahr	
MEAD ATTENDEES:	
Mr. R. L. Consolini	
Mr. C. J. Lobos	

Nature of Visit : Regular _____ Problem _____ Initial _____

Purpose of Visit: _____

COMMENTS AND RECOMMENDATIONS:

(1) Discussed our general approach in research attempts in the near future or next six months. (3) Some of this work would be in conjunction with previous efforts in developing a Japanese friction paper. This also has domestic applications. (2) We discussed some competitive materials such as a red oxide impregnated paper which is being used in Germany. (1) They were quite concerned about the OSHA pressures on our use of asbestos and requested that not only a letter certifying our meeting present asbestos levels but also a letter containing our expectations in meeting the new, more stringent 1976 levels.

Bob Hornick, Original Equipment Sales Manager, sat in since he is to report to Hydromatic on these talks. It was mentioned that Tod Marrow handles the aftermarket. These two gentlemen are sales managers for these specific groups and report to Jim Gies.

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The grade P-220 was discussed in great detail and it looks very good on their friction tests. It was proposed that we make this grade with less binder to smooth out the curve and lower the noise level. Chet is attending to this.

Also Silane was discussed which would be a better anchor for their resin system. They are testing papers on their own by a stray method and will report to us.

They specifically asked for a price on P-220. It was proposed that grade P-220 would be quoted them in two weeks since we are expecting to run at that time and will have better ideas of the economies we can achieve in larger runs.

Discussed P-105-E which looks very good. Also discussed the P-105-F and P-105-G which were variations, and these also looked very good.

The Mica replacement was discussed. We had run this over six months ago and they wish Chet to run it on another grade so they can check its reliability. Also, they asked to be advised of the relative cost of Mica versus graphite.

They mentioned that they were testing the paper with untrimmed edges and one ran pretty well although they were still pessimistic about it. I pointed out that it was primarily in their interest, along with ours, that we reduce our asbestos count in the air and this would be a great help. They will continue to test other rolls.

Discussed the "W" paper which is a lowering of the caliper plus intensification and they have the roll and will test in the very near future.

The Super-Glass and Mica LPM look very interesting and using this as a base or point of departure Chet is planning to experiment with other materials in combination with the glass. Primarily, one possibility is ceramic and glass or alumina and glass. High termperature type materials with lower cost would be most effective. They asked for a program for an over-all 10-12% improvement in all grades - principally in mechanical shear strength. This was a recommendation of Werner Baule and also is being pushed by Warren as a general look to increase their over-all quality. 123045A-3.15

Mead Baker - Albuquerque Johnson P E and Research at
Des Plains - Hamrick, Todd Hannon, Jim Lee

They are very interested in the latex elimination and possibility of using P.V.A. as a binder and Chet is to check this out and will keep them advised on this point.

Warren's general thrust for new materials is high temperature resistant materials - possibility alternatives to asbestos - to achieve more torque with the same amount of plates. Warren discussed different alternatives such as Hemp and Cotton but it was pointed out that the very radical nature of Hemp in the formation would not lend itself to his application and it was decided that the Super-Glass and Mica would be the best place to start. It was also discussed that the possibility of a lower cost fiber such as the Bethlehem Steel fiber in combination with ceramic might prove to be interesting and this will be checked out by Chet. As far as the unslit edge, the "E" grade ran fine but Warren preferred to wait and see how the 650-D ran which would be the most important. The 650-W grade has been assigned to Tony Ghidorski - that is the denser, lower caliper. Warren passed on the paper work specifying the rolls.

JMN:m

John M. Nolan

cc: Mr. R. L. Consolini
Mr. C. J. Lobos
Mr. S. C. Mason
Mr. T. H. Pering
Mr. D. E. Moffatt

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