

A-584-019
46-17

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NO. 3 OF 5

16 April 1945

Lt. J. D. Hopper

G. B. Kistiakowsky

Setting up of Casting Tolerances

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FEB 16 1999
OSTI

Awhile ago we discussed the desirability of experimentally determining the effect of density and composition spreads upon velocity imparted to the liner. I find now that Group G-8 is quite anxious to make these measurements and therefore am requesting you to arrange for preparation for them of sixteen cast blocks of Comp. B, 4" x 8" x 12" dimensions. Eight of these blocks should be probably vacuum cast--in any case they should have the highest obtainable density and be rich in RDX (for instance a density in the range 1.715 to 1.725; average composition 60.5% RDX); the other eight should have relatively low density and low RDX content (for instance density 1.670 to 1.680; average RDX 59%).

Group G-8 will fire eight shots in groups of two; one group to have both blocks of high density, next group both blocks of low density, third group having high density on top of low density, and the fourth group low on top of high. They will inform us of the results immediately they are obtained so as to enable us to set up intelligent tolerances for the final castings.

Please clearly mark the charges as intended for this experiment as otherwise there is danger of having them mixed up with other blocks which Group G-8 now has in their magazines.

If this does not interfere too much with other work of high priority it would be desirable to have the blocks made during this week.

G. B. Kistiakowsky

GBK:hs

Copies to: Major Ackerman
Mr. Froman
Mr. Bacher

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Wm

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L. M. Redman
NOV 06, 1980

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PER DOC REVIEW JAN. 1973

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