

FRIGIDAIRE CORPORATION

SUBSIDIARY OF GENERAL MOTORS CORPORATION

CABLE ADDRESS
"FRIGIDAIRE"
ALL CODES USED

DAYTON, OHIO..U.S.A.

May 28, 1930.

Dr. Robert A. Kehoe,
University of Cincinnati,
Cincinnati, Ohio.

Dear Dr. Kehoe:-

We have, in the past, endeavored to keep all materials used in finishing work at the Moraine City Plant, free from lead. In the past white lead paints were used, and various leaded materials, in various ways. These have all been replaced by zinc pigments with the exception of the Duco primer, which contains basic lead sulphate which is, according to the reports of the duPont Company, insoluble.

We have always insisted that the frit from which our porcelain is made be free from lead. This was due to the fact that this frit was ground in a ball mill to a very fine slurry with tin oxide and clay. This ground frit is put on the work by dipping or spraying. The frits used in the past for this purpose were not acid proof and did not contain any lead. We are now able to purchase an acid proof frit containing 1 to 1-1/2% of lead. The lead is placed in to a melt, which is a glass mixture, and in the final condition the lead is probably present as silicate. At any rate the lead is in an insoluble form.

This frit is ground, as mentioned above, and then is sprayed on to the work and baked at about 1500°F. After it comes out the finished article is acid proof and is not affected by such acids as hydrochloric, tartaric, citric, acetic, malic, and oxalic. We would like very much to go to the use of this type of acid resisting frit and it is practically impossible to use a frit entirely lead free on account of the fact that the fusing point is too high and our liners are warped by such high heat. By the addition of this small percentage of lead to the mixture, the fusing point of the resulting porcelain is brought into working range and inasmuch as the lead is in an insoluble form, in both the frit state and in the final fuse state, we feel that we will be justified in going to this material for use on our linings. We would like very much to have your opinion in this matter before we take any steps in following out this program.

Everything is progressing very nicely with the fluoride refrigerants; the only difficulty is that progress seems kind of slow when we are in such a hurry to work out the usage of F₁₂.

With best regards.

Very truly yours,

FRIGIDAIRE CORPORATION

M. J. Adams
Manager - Research and

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