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Trip Report

Dist: L.C. Maier
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Destination:	Corning Glass Works, Corning, New York
Date of Contact:	December 22, 1954
Report By:	E. F. Schilling - S. T. Jutila
Persons Contacted:	Mr. Malcolm Hunt, Mr. Larry Gehl, Mr. John Cosledge
Purpose of Trip:	To obtain information whether it is possible to make glass pans economically and whether samples could be made.

If it would be desirable to consider a larger scale production of glass-pans for the P.A. screen assemblies, the roughly estimated time for tooling, by Corning, would be from three to nine months. There are several problems to be worked out, for instance, thermal shock and strength problems. The time required to set up mold patterns, castings and other required accessories and to check them out, including regrinding, polish, alignments, etc. would take at least two months. An inside surface grinder must be constructed and such grinders for production are not commercially available.

Usually, in ordinary press work large glass surfaces with a heavy outside edge, or edge bend, tend to be deformed when they cool. We observe:

a. Warp
b. Bow or sink
c. Shrinkage

The press worked pieces have, due to the deformation, tolerances of order of plus-minus 0.040 in. However, by using certain reannealing and sagging techniques, these tolerances may be improved to about plus-minus 0.020 in or better.

There are no serious problems in grinding the edge top surface with respect to the inside surface. Pads on the outside surface would neither present any serious limitations. However, molded holes, pads, edge formings, etc. usually have tolerances of plus-minus 0.020 in. Similarily, if holes are molded on edges the tolerances are of the above dimensions from centerlines to centerlines.

Although Pyrex glass can be treated in molds with a longer hold, thus reducing tolerances, the quality of Pyrex glass is much coarser than that of ordinary glass. Therefore, the finish is usually much more coarse and rough than that of usual television glasses. For glass pans, Corning can supply 9,012 gray glass.

Samples can be provided by Corning provided that:

a. Sample molds are constructed: estimate cost $30,000.
Time - 10 weeks.

b. Sample generator with jigs is simultaneously constructed:
estimated cost $5,000 - $10,000

Samples could be delivered then in three to four months and the presently estimated price per piece would be approximately $50.00.

If one would be interested in production, some additional molds and a generator with jigs may be needed, the estimated cost of such a generator is $50,000 to $100,000. At least five to six months is needed for the set up and first output. The present anticipated price per glass-pan would be approximately $15 to $25.00.

An alternate method of producing samples and/or an alternate production method may be a sagging technique using plate glass. This type of a production is in the sphere of plate glass companies such as Dearborn Company.

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