

ETHYL GASOLINE CORPORATION

MANUFACTURING AND TRAFFIC DEPARTMENT

PLEASE ADDRESS REPLY
TO:-P.O. BOX 1271
WILMINGTON, DELAWARE

October 14, 1941

Mr. Lester B. Roberts
Kettering Laboratory
University of Cincinnati
Cincinnati, Ohio

Dear Mr. Roberts:

I was considerably interested in the blueprint illustrating the method suggested by the Boston Division for reducing the time required for washing the drum with gasoline. Apparently they have suggested the brass collar to act as a baffle thus producing a spray effect. Reputedly the time required for drum washing by this method is reduced to approximately eight seconds.

My opinion is that the method may work, but I think investigation should be made on the basis of lead concentrations remaining in Fluid drums after various methods of washing. In 1939, Jack Cole suggested the use of a swaged nipple, cut with slots, to produce a spray effect. This nipple was to replace the regular 4" nipple used in the drum eductor set-up. After preliminary experimental work, we changed from slots to orifices located as a spiral around the nipple. Then, we changed this to two rows of orifices, ten in a row. The bottom row was cut straight through, the top one at a 45° angle to permit partial spray against the top of the drum. Preliminary results were encouraging but not conclusive, and just about the time we were getting somewhere, the experiment was interrupted as a result of the accident which befell Jack Cole.

This experiment was conducted at the Baltimore plant of the Continental Oil Company. All of the holes were 1/8" in diameter, and the swaging reduced the discharge diameter of the nipple from 1-9/16" to 1-1/16". The idea of this was to allow the development of pressure so that the gasoline would spray through the orifices.

Apparently the proposition of reducing the time required for flushing the drum with gasoline would be very attractive to our customers. I believe there is excellent prospect of reducing the time, but I do not think any change should be approved until there has been sufficient experimental work. I am sure that Dr. Kehoe and Mr. Lewis have a mutual interest in the problem, and if the Manufacturing Department can contribute anything in the design of the equipment or the analytical work to determine the efficacy of the washing, you may be assured of our cooperation.

I believe we actually have in stock one of the special swaged nipples drilled with the orifices.

Very truly yours

C. J. Macdonald