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Interim Report of A.O.C.S. Subcommittee on Continuous Flow Sampling of Oils—1956

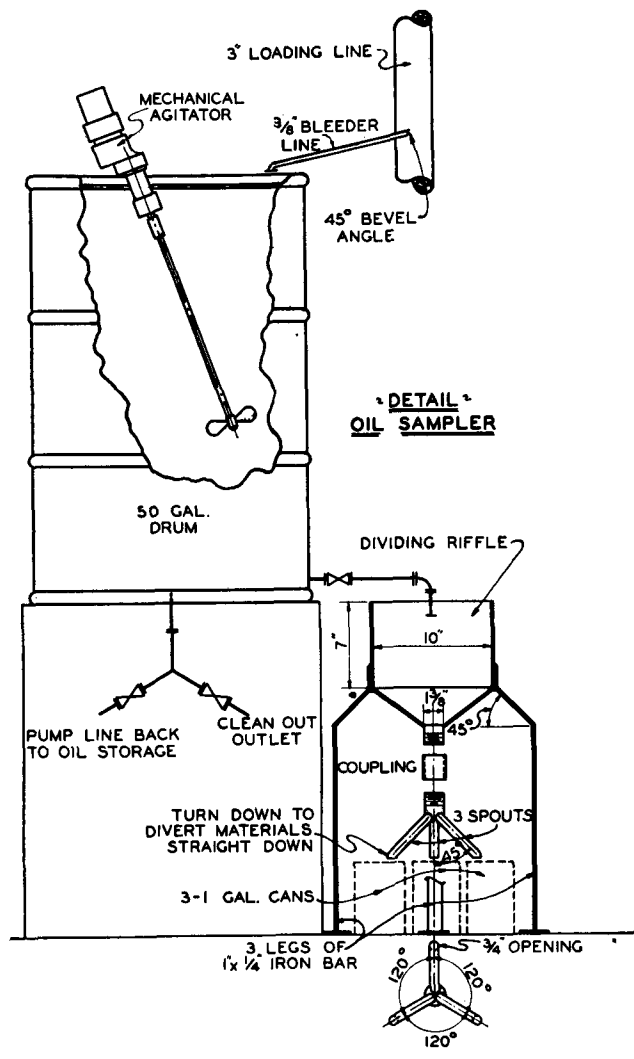
THE FOLLOWING REPORT constitutes the recommendation of the Subcommittee on Continuous Sampling as a revision of the Petcock sampling method, paragraph D(a) of Method C 1-47. This method was rejected by the Uniform Methods Committee as being too cumbersome. However the subcommittee feels that this is an excellent method of sampling and accuracy should not be sacrificed for simplicity. The proposed procedure is intended as a replacement for the Petcock method only (C 1-47, d) and has no bearing on other sampling procedures such as the Core, Bomb, Trier, or Thief procedures. Although the proposed continuous method does not have A.O.C.S. official sanction, the procedure is being published as a matter of information for those who might be interested. However the subcommittee is being continued to further its search for something more simple.

Sampling

D. Procedure:

a) Continuous Flow Method for Sampling Tank or Tank Cars During Loading or Unloading.

- If the conditions are suitable, this is a very satisfactory method of sampling. This method is applicable only if the product is completely liquid and free-flowing and does not contain any material that may plug the bleeder line.
- A bleeder line, $\frac{3}{8}$ in. minimum inside diameter, with a slight downward slope is located in a vertical section of the pumping line through which the product is continuously flowing upward to the individual tank or tank car being sampled. The sample line should be located as far away from elbows or tees as possible, should penetrate to the center of the pumping line, should be cut beveled at the end looking downward, and should discharge into a sample tank or drum as illustrated in the accompanying sketch. The sample line should not have a petcock.
- The metal sample tank or drum is of approximately 50-gal. capacity. Just above the bottom a $\frac{3}{8}$ in. draw-off line equipped with petcock is installed, and leads into a dividing riffle, which discharges through separate lines into three 1-gal. sample cans. At the center of the tank bottom a wye is installed to facilitate emptying the sample tank; the two emptying lines are each equipped with a petcock, one line serving to pump or drain unused oil back to storage or to the tank car, the other to act as a clean-out line. To prevent loss of solvent by evaporation, a suitable metal cover, with slots or holes to permit insertion of sampling pipe and mixer shaft, should be placed over the sample tank or drum during the sampling and mixing operation.
- Prior to the start of the pumping period, the sampling equipment should be examined and the draw-off lines closed. During the pumping period it should be made certain that a continuous flow of oil is being obtained. When the filling of the tank or tank car has been completed, the mechanical mixer is started, and the gross sample is mixed thoroughly in order to obtain uniform distribution of moisture, meal, and impurities. After thorough mixing, with the agitator still running, the draw-off line is opened, and three 1-gal. samples withdrawn through the dividing riffle



into new and dry 1-gal. containers to a level about 2 in. from the top. The sample containers are immediately closed and properly labeled.

- The unused oil remaining in the sample tank is returned to oil storage or to the tank car if the official weight were obtained prior to sampling, and the tank is thoroughly cleaned by flushing, washing, and drying, or other suitable means, depending upon conditions. The cleaning procedure should be such however that there will be no contamination of the next sample drawn.

NOTE: Where multiple loading or unloading facilities are in use, a separate sample tank should be available for each unit although individual agitators and dividing riffles are not required.

A. R. BALDWIN
 H. T. IVESON
 H. T. SPANNUTH
 F. C. WOEWEL
 L. R. BROWN, chairman