

EVALUATION OF INDUSTRIAL FILTERS-CASE STUDIES

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The filtration process is observed for fluid-solid separation. There are two types of filtration wet and dry filtration. In this paper author's experience in solving problems in both wet and dry filtrations will be presented. In wet filtration, there was a problem during the filtration of the phosphoric acid slurry. The machine and material and filter fabric used by three different companies were same. There is a big difference in the life of fabric with one company fabric was having a long life.

In another case, the fabric life has suddenly got reduced.

The details of process analysis indicated it was due to the difference in shape and size distribution and presence of unwanted fines. The details of the study will be presented.

In edible oil filtration the economic advantage of selection correct filter fabric will be explained.

In dry filtration, issues will be discussed. In one case the cake was not getting dislodged in spite of repeated pulsing the air jet for reverse cleaning. In another case, the bag filter gets choked in very short time and reverse pulse jet does not dislodge the cake.

The basic requirement of fabric will be discussed related to the formation of primary and secondary cake. The efficiency of dislodgement of selective secondary cake is important. In addition, during the primary cake formation fabric has to be selected such that particles should not plug the opening in the cloth. Test rig description and testing methods will be presented for selection of suitable cloth.