

ABSTRACT

In Caustic soda production, the brine solution is the raw material, so main purpose of this project is ^{to} remove unwanted material from brine solution.

In recent research work anionic polymers and MOL ^{are} used for removing impurities. Four anionic polymers were used for treating brine i.e. Betz Dearborn AP 1120p, AP 1130p, AP 1212p, Food Prosa AP 9841p, solutions of above polymers made by jar test procedure. 36 Combinations of polymers and MOL have been tested with brine solution. The values of total suspended solids (TSS) of above combinations are taken on spectrophotometer. That combinations which give lowest value of TSS, compact structure of layer and the layer settles fastly is considered best. Out of 36 combinations, only three have given good results.

Fortunately, only one polymer which is AP-1120P ^{gave} best results. The selected three combinations ^{after} preliminary analysis, were subjected for monitoring all the parameters. The parameters ^{were}; T.D.S, BOD₅, COD, Oil and Grease, Iron, Copper, Sulfate, Free Chlorine, pH, and conductivity.

After performing above tests with three samples, one sample,

^{Gave} (TSS) 70 ppm, compact layer structure, and ^{gave} reading according to "National Environment Quality Standards" (NEQS).

So anionic polymer AP 1120-P is best for brine purification.