

By the processes described in Dr. Zitkowski's paper, a hastily erected plant last year was constructed by which this dilute solution of Steffens water was sprinkled down a tower up which the fire gases were ascending and the solution was thus evaporated. A rather large amount of loss by K_2O by volatilization took place rather unexpectedly, and the lime salts in the Steffens water were also troublesome in forming scale. I think that this year a much improved apparatus has been put up.

The manufacture of potash from kelp has been touched on rather extensively by Mr. Meade in his paper, but while the kelp is undoubtedly in smaller quantities than was originally supposed, yet the Pacific Ocean is rather large and though it is only in favored spots that the kelp grows, there is quite a considerable shore line along the United States and Canada and Mexico that is as yet untouched. The kelp nearest the plants, of course, disappears rather rapidly, so that they have to go farther away. The Diamond Match Company has a rather large plant seemingly in rather successful operation at Los Angeles harbor, San Pedro, and the other plants have been mentioned.

I might state that the plant of the American Products Company that was presumably making knife handles has been reorganized as a potash producing plant again and I think is producing on a fairly commercial scale now at rather profitable prices, having suffered from some early contracts where they contracted for potash at much too low a price. The developments at San Diego have been mentioned. The Swift plant could best be described by Mr. Richardson and I hope he will give us some information on the subject. And the Hercules Powder Company's plant down at Chula or San Diego Bay is worthy perhaps of more mention than has been given.

The idea of utilizing the kelp by first fermenting it, is perhaps novel, and has the great advantage of destroying the colloid form. This colloid has as its special mission in life the retention of potash against a world of salt water, but after fermentation you have merely a crystalline solution of potash and other salts. After fermentation as described in the presence of calcium carbonate, sodium sulphate is added forming acetate of soda, and the precipitation of the residual lime as calcium sulphate, and lately another step has been added, the addition of carbonate of soda and the elimination of sulphate of lime, which is troublesome in later evaporation. This fermented solution is decanted or separated in a Dorr separator or