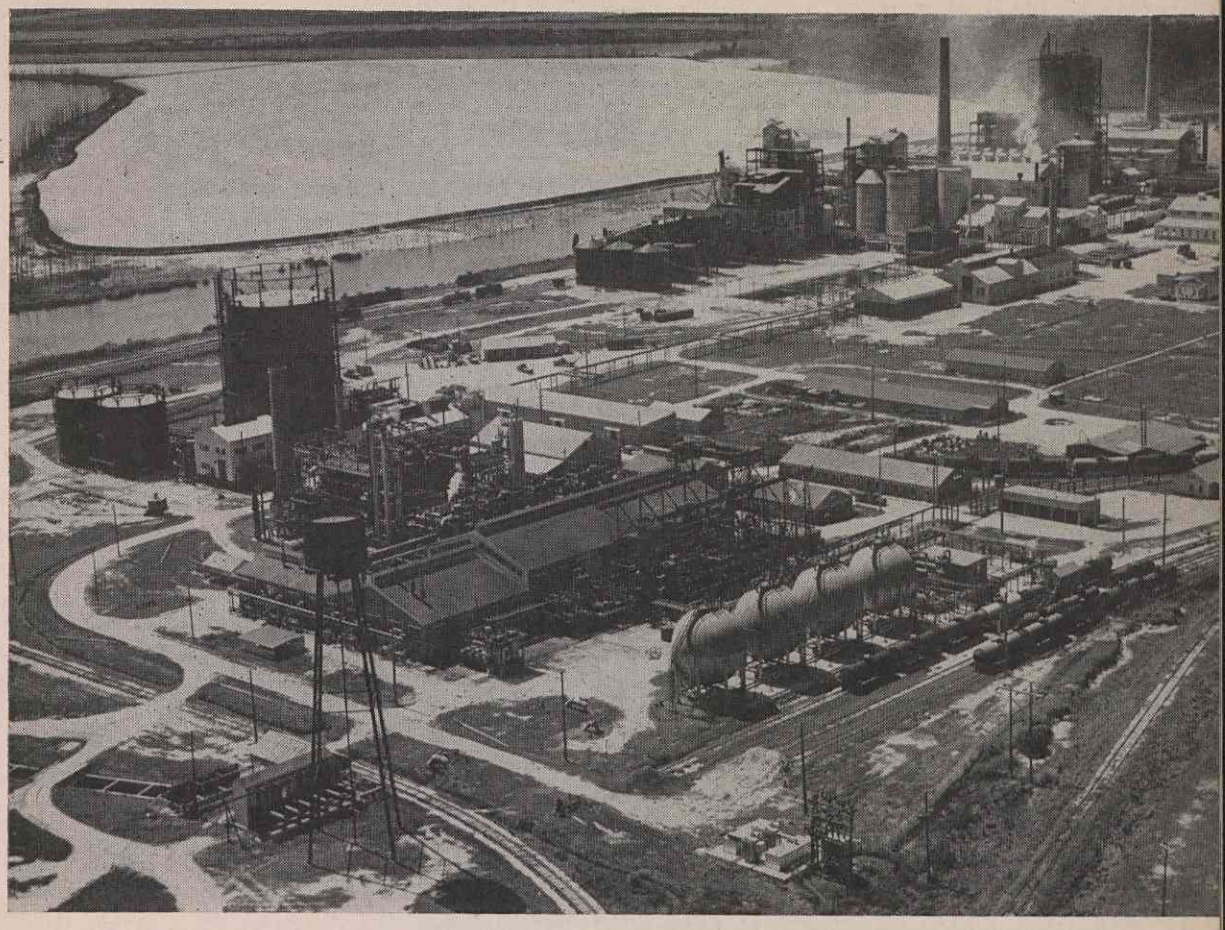

dissolve the salt. The brine is then pumped through a pipeline to the plant where it is purified, ammoniated and mixed with the carbon dioxide in large towers.

The resulting crude sodium bicarbonate is calcined to light soda ash and bagged or shipped in bulk in railroad hopper cars. Some of it is further treated at the plant with milk of lime to make caustic soda.

Olin Matheison's ammonia plant at Lake Charles is one of the most modern and efficient in the country. Ammonia is made from natural gas, steam and air. It is shipped in tank cars, and part of it is further processed at the plant to make nitric acid and sodium nitrate.

Typical of the industrial importance of the products of the Lake Charles plant is soda ash. This product has such wide use in industry that its rate of consumption has long been recognized as a major measurement of industrial activity. The largest single consumer is the glass industry, where soda ash is an essential ingredient of the glass formula. Another large consumer is the chemical industry itself, which uses an enormous tonnage of soda ash in the manufacture of other chemicals. Important quantities of soda ash are also used in the manufacture or processing of detergents, pulp and paper, textiles, soap, iron and steel, aluminum and other non-ferrous metals.

Another product, caustic soda, is used in large quantities in the production of rayon, in the manufacture of chemicals and pharmaceuticals, in textile processing, manufacture of soda pulp for writing and book papers, soap making, refining gasoline and lubricating oils, manufacture of plastics and resins, and reclaiming scrap rubber. Caustic is also used in industrial cleaning preprations of various kinds and wherever the action of a strong alkali is needed. Each pound of rayon that is produced requires approximately one pound of caustic.

Ammonia is the principal source of nitrogen for the manufacture of synthetic fertilizers. In addition it is used as a refrigerant and in the manufacture of a host of synthetics, including plastics and some of the new man-made fibers.

Sodium nitrate is widely used in industry in the manufacture of explosives, pigment colors, porcelain enamel, matches, glass, red lead, dyestuff intermediates, metal fluxes, heat treating salts, drain pipe cleaners and boiler cleaners, and for the preservation of foods. In the agricultural field, it is an important fertilizer chemical.