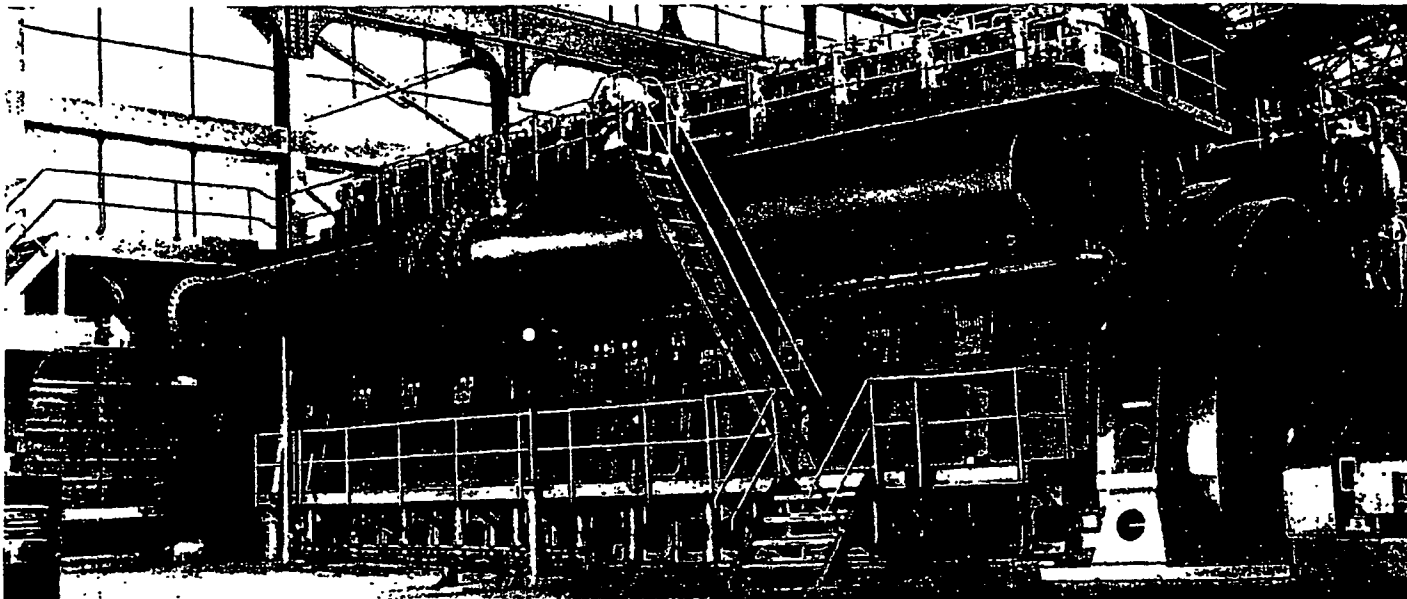




This 10-cylinder, 7100-hp Nordberg Diesel was installed last year at plant in Pedro de Valdivia, Chile.

big diesel serves Chilean Nitrate Industry



● The 7100-hp Diesel engine-generator unit illustrated was installed last year in Pedro de Valdivia, a large sodium nitrate plant in Northern Chile, owned and operated by the Lautaro Nitrate Company, Ltd. Already operating, since 1932, in the plant were five 4700-hp Diesels. And the plant is interconnected with another power plant of the company about 20 miles away having a capacity of 24,000 hp. The two plants represent the largest Diesel power block in South America.

Nitrate-bearing rock is mined in the vicinity, the ore hauled to the plant by electric railroad, where an average of 30,000 tons per day goes through the crushing plant. From there conveyors carry the product to large concrete vats where nitrate salts are leached out and the residue hauled away, again by electric locomotive. The sodium nitrate is recovered by means of refrigeration and centrifuging.

The final product amounts to some 2000 tons daily. Considerable electric power is required for such an operation, which also includes the pumping of 10,000 tons of water per day.

Increased mechanization at the plant and world demand for Chilean nitrates called for a substantial addition to the Pedro de Valdivia power plant. The new engine-generator unit consists of a Nordberg 10-cylinder, 2-cycle, single-acting Diesel with a sea level rating of 7100 bhp at 164 rpm, direct-connected to a 6600-volt alternator. At the altitude of 5000 ft, the engine develops 6400 bhp.

The Elliott motor-driven scavenging blower which was selected for this engine, was located 8 ft below the basement floor level and the distributing header for scavenging air was placed underneath the floor, where the fresh air duct was already located. The single-stage blower, rated 34,500 cfm,