

THERMAX CHILLERS COOLS COMPRESSOR INLET AIR FOR FERTILIZER AND CHEMICAL MAJOR



Fertilizer is key in feeding a growing global population, which is expected to surpass 9.5 billion people by 2050. The global fertilizer market is expected to grow multifold, and it is expected to register a CAGR of 3.8% during the forecast period (2019-2024). India is predominantly an 'agrarian' economy and the agricultural output contributes to about 25% of the country's GDP. India is ranked as the third-largest exporter and producer of nitrogenous fertilizer. Indian manufacturers of chemical fertilizers are now adopting some of the most advanced manufacturing processes to come up with innovative products to supplement the Indian agriculture. It is also helping India achieve the objective of being self-sufficient in the production of food grains and has accelerated the growth of agriculture.

The chemical fertilizer industry is one of the most energy-intensive sectors, and it is very vital from the viewpoint of environmental discussions. Today, there is a great need to increase the productivity of chemical fertilizers through implementation of pollution-free and environment-friendly technologies. This helps in achieving economic, social and environmental development objectives.

Chambal Fertilizers and Chemical Limited (CFCL) is one of the largest private sector fertilizer producers in India. Its two hi-tech nitrogenous fertiliser (urea) plants are located at Gadepan in Kota district of Rajasthan, India and can produce about 2 million MT of Urea per annum. CFCL caters to the need of the farmers in twelve states in northern, eastern, central and western regions of India and is the lead fertiliser supplier in the State of Rajasthan. CFCL has a vast network comprising 15 regional offices, 2,000 dealers and 20,000 village level outlets.

CFCL enable farmers to buy all products from one source by creating the mantle of all agri-products through a 'single window'. The company dealers provide urea and other agri-inputs like DAP (Di-Ammonium Phosphate), MOP (Murate of Potash), SSP (Single Super Phosphate), pesticides and seeds. Today, CFCL has attained a leadership position in the pesticide business in North India.

Thermax has successfully installed and commissioned three double-effect steam-driven vapour absorption chillers of 994 TR each and two hot water driven absorption chillers of 815 TR each at Chambal Fertilizers and Chemical Limited (CFCL). Thermax received this order from TOYO Engineering India Pvt. Ltd., a Japanese EPC. Thermax chillers are catering to their process cooling requirement by providing chilled water at 7°C for their urea and ammonium plant. The chilled water is used to cool the compressor air supplied to gas turbine resulting in increasing the efficiency of the turbines.



Thermax's smart and innovative solution for inlet air cooling application provided for CFCL improves the turbine and PAC capacity. As a result, the capacity is maintained throughout the

year keeping it intact- consequently reducing the operational costs and dependency on the power grid.

Project Highlights:

**Customer: Chambal Fertilizers and Chemical Limited (CFCL),
India**

Product: three stream-driven vapour absorption chillers

Capacity: 994 TR (steam driven) / 815 TR (hot water)

Application: Process Cooling

Our smart and energy-efficient steam driven vapour absorption chiller is an alternative for conventional electrical chiller. The product is available in capacity ranging from 50 to 3500 TR.

Thermax hot water chillers are available in the capacity ranging from 15-1650 TR, specially designed for low temperature, medium temperature and high temperature hot water.