

Elgi Compressors for Nuclear Power

They only come into action when other energy supplies fail, but when they do they have to be 100 percent functional and reliable. Diesel powered gensets in captive power plants, that is.

Diesel engine based power generation is widely used by medium sized industries like marine industry, nuclear power plants, spinning mills and small iron & steel plants, as standby power plants. These generation units use Heavy Fuel Oil(HFO) or Low Sulphur Heavy Stock(LSHS) as fuels for power. The popular power ratings of these plants range from 4MW - 6MW or in multiple unit configuration.



Unlike small capacity diesel generating sets which make use of batteries to start the sets, these high capacity power plants make use of high pressure starting air system to crank the engine. Compressed air at 30 bar or 40 bar is used when the diesel engine has to be started in the absence of electric supply from the power grid.

Depending on the location and availability of electric power, the air start system of such diesel power plants normally uses a combination of electric motor driven compressor and a diesel engine driven compressor, with the former working and the latter as standby. A typical air start system comprises of the high pressure compressors, dessicant air driers, moisture separator, bank of filters and a high pressure air receiver.

Reliability of these air compressors is an absolute priority as the power plant, through instant start, ensure that the industry it serves is never without electricity.

Kirloskar Oil Engines Ltd (KOEL), one of the leading and the first engine manufacturer in India, has taken the supply of Elgi super pressure air compressors to ensure safe and reliable operation for standby generator power as a part of a Nuclear Power plant in India. Elgi's scope of supply included supply of two sets of its high pressure reciprocating air compressors mounted on a single skid, and a separate skid for two sets of dessicant driers and filters to meet the end air quality requirements. The compressors have undergone stringent quality tests and approval, complying with Kirloskar's quality norms. Elgi has in total made a supply of four such sets.

Elgi had perfectly custom designed the product to meet stringent quality and safety requirements of the end user. The compressor supplied is a three stage, three cylinder powered by a three phase 20 HP motor. The compressors would provide the required free air delivery at 40 bar. Some safety features included two pressure switches on the compressor skid where one of the switches as a standby in case the other fails to cut in & cut off at preset pressures, and a hooter alarm has been provided in the drier skid to indicate the failure of dessicant generation/regeneration.

Elgi has been the preferred supplier of high and super pressure compressors to most diesel engine power plants in India. Backed up by its 50 years of expertise in compressor design and manufacturing, Elgi is poised to provide the most appropriate solution meeting project schedules wherever there is a critical air requirement.

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