

MeeFog™ Project Profile

Gas Turbine Inlet Air Fogging

1 x GE/Alstom GT-26 Gas Turbine - Chiba, Japan



Project Summary:

JFE Steel Corporation is a power producer in Chiba, Japan. In 2003 they installed a MeeFog™ System on their GE/Alstom GT-26 gas turbine. It provided evaporative cooling and a small amount of wet compression. In 2016 they replaced that system with a larger MeeFog™ System. The flow rate increased from 42 gpm (160 lpm) to 134 gpm (506 lpm). The system is now capable of providing evaporative cooling and 1% (of the air mass flow) as wet compression spray. The new system provides twenty-four stages of fogging, and produces a 38 MW power boost.

Project Conditions:

- Location: Chiba, Japan
- Hot day conditions: 35° C & 40% relative humidity
- Elevation: 10 meters above sea level
- Max power boost: 38 MW
- Mee's scope of work: Supply of fog pump skids, nozzle manifolds, and supervision of installation and commissioning.

Fog System Design:

- Fogging stages: 24
- Operating pressure: 2,000 psi
- Fog droplet size: 12 microns
- Nozzle flow rate: 0.045 gpm (0.17 lpm)
- MeeFog™ nozzle count: 2,976
- Pump skid power: 240 HP