

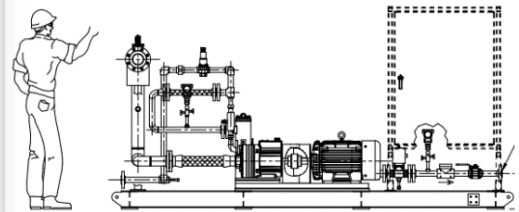
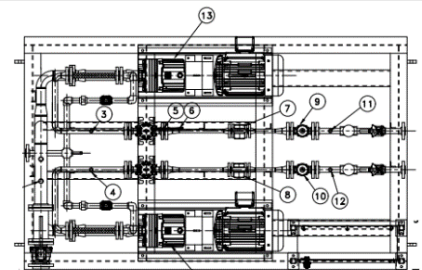
TTS DELIVERS GAS TURBINE EMISSIONS REDUCTION SYSTEMS TO 2 POWER PLANTS IN UPSTATE NY.

Project Overview

TTS Power, a division of TTS Energy Services, recently designed, built, and delivered two (2) water injection systems for Alliance Energy at two sites in Middletown, NY, and Hillburn, NY. The customer's goals were to meet new emissions standards as directed by the state of New York.

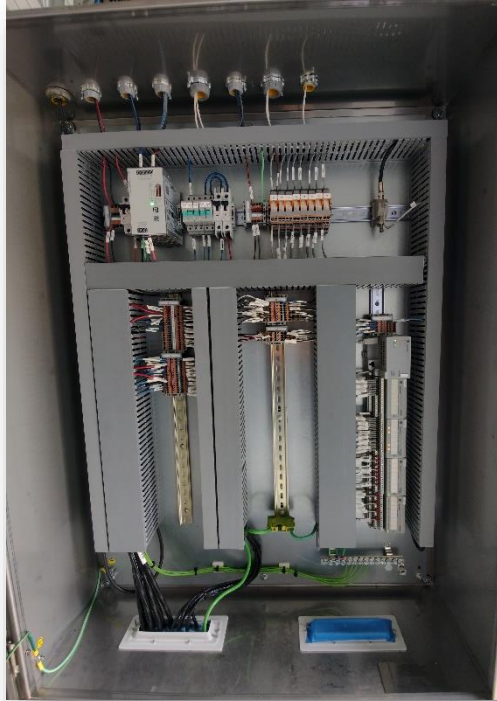
Skid Design

The system was designed to provide each Pratt and Whitney FT4A gas turbine engine in a TwinPac configuration with controlled amounts of water up to 33GPM. The water injection mechanical components (including pressure switches, VFD-controlled motors, filters, flow meters, and pressure transmitters) were packaged into a single skid with a single inlet (from a TTS-supplied water forwarding skid) to a dual outlet for each engine. The flow to each engine is controlled by VFDs that receive their signal from the TTS-supplied remote I/O junction box near the skid.





Controls modifications



TTS integrated the new system into the customer's Allen Bradley control system. The system utilized TTS standard logic blocks for water injection that were modified for this purpose. The control's I/O was expanded using fiber optics to the new junction box and integrated into the existing ControlNet bus. TTS provided a new HMI interface screen that displays critical operating parameters. This screen was integrated into the original Wonderware HMI.

Reflection

The overall project was considered a success. The customer had a limited timeframe to implement the water

injection system and depended on TTS 'engineering calculations to meet the emissions standards. Time and budget constraints meant that creative solutions had to be developed to meet delivery and performance requirements. TTS 'customer Said: "TTS was presented with many challenges during this project and met our required delivery and performance requirements. Overall, it is a very successful project that will allow these peaking assets to continue supporting the bulk electric system in times of high demand."



For more information on TTS Power's power plant services, engineering, control panel, or CM&U (Controls, Modifications, and Upgrades) for your vintage fleet, please see [TTS Power - TTS Energy Services](#) or contact David Donnaruma, Manager, Business Development for more information.



About TTS

TTS Energy Services is the corporate parent for Turbine Technology Services, TTS Midstream, and TTS Power. TTS provides engineering and construction expertise for the energy industry worldwide. The company's long history and experience providing technical solutions to global energy entities makes it a leader in its field. TTS has successfully managed numerous power and compressor station modernization projects and supplied innovative and unique engineering solutions to challenging problems for our energy customers. Since 1983, their leadership and engineering teams have provided innovative technologies and engineered high-value solutions to over 450 clients worldwide.