

Power Generation Fuel System Capabilities



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POWER GENERATION EXPERTS

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April 2008

Overview

- Introduction
- Liquid and Gas Systems
- System Design and Process Engineering
- Equipment Specification and Supply
- Storage Systems
- Automation & Controls
- Startup and Commissioning

Introduction

- Approach
 - Efficiently-engineered, fast track, Turn-Key solutions
 - Specialize in fuel systems for on-site power generation projects
- Resources
 - Licensed Professional Engineers (P.E., USA) in responsible charge
 - Full design/drafting capabilities
 - Best available software technology in use (PipeFlo Pro, Flow of Fluids, AutoCad, etc).
- Experience
 - 10+ years
 - Extensive international experience with all qualities of fuel supplies

Liquid & Gas Systems

- Applications

- Diesel No. 2
- Fuel Oil No. 6
(Bunker C, HFO)
- Natural Gas
(Pipeline quality or
Low Btu sources)



System Design and Process Engineering

- System Design
 - Turn-key design and Project Management
 - Equipment Specification
 - Pump & Pipe Sizing
 - Split Control Algorithms



System Design and Process Engineering

- Process Engineering
 - Licensed Professional Engineers (USA) in responsible charge.
 - PipeFlo Professional Software
 - Full Design/Drafting Staff
 - Designs include full electrical integration



Equipment Specification & Supply

- Sole Source Supplier
- Fuel Conditioning
 - Centrifuges
 - Filtration for Water/Sediment Removal
 - Quality/BTU (Energy Content) Monitoring
- Distribution
 - Pumps
 - Control valves
 - Pressure Control Systems

Equipment Specification & Supply

- Storage
 - Tanks w/ secondary containment
 - Leak detection
 - Auto level controls
 - Buffer air quality management
- Fuel Automation Systems
 - Minimal operator interface
 - Eliminate incidents
- Metering
 - Revenue grade/custody transfer application
 - Mass or volume based

Fuel Conditioning

- Filtration Systems
 - Simplex or Duplex Systems
 - Water & Sediment Removal
 - Filter changes while in operation
 - Auto drain capabilities
 - Spill containment



Fuel Conditioning

- Centrifuges
 - Simplex, Duplex or Triplex Redundant Systems
 - Self-Cleaning Units
 - Skid-based Sump/Sludge Tank
 - Water & Sediment Removal
 - Onboard pumping, water filtration, and sludge removal systems



Fuel Distribution

- Pumps
 - Centrifugal or Positive Displacement
 - Simplex & Duplex Systems
 - PLC-based controls
 - VFD speed and pressure control-outfitted
 - Low flow detection
 - Pump protection system
 - Spill containment



Fuel Distribution

- Control Valves
- Pressure Control Systems
- Auxiliary Systems
 - Water
 - Instrument Air



Fuel Storage

- Bulk Storage Integration or Provision



Fuel Storage

- Mobile, Site Daytanks

- Single or Double Wall
- Floating Suction
- Leak Detection
- Level Monitoring/Control
- Buffer Air Quality Mgt.



Fuel Automation

- Full Site-Level Management
 - Main Pump Control & Monitoring
 - Site Daytank Level Control and Monitoring
 - Forwarding (generation) Pump Control
 - Alarming
 - Integrated Centrifuge Control



Fuel Metering

- Mass or Volume
- Custody Transfer
- Integration for real time plant performance (Site Level Heat Rate)
- Full Support



Startup & Commissioning

- Turn-key Approach
- Multiple Language, International Team
- Customer-Centric Attitudes from top down
- On-site Training for all Equipment and Services supplied



Questions?



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