

The **SMITH SYSTEMS** Advantage



Customer: Conoco

Project: Saraburi Product Terminal

Location: Saraburi, Thailand

Product: Diesel and Gasoline

Free standing, rack-style control console with Smith SyberTrol flow computers and Modbus communication, interfaces to Conoco's Data Acquisition System.

High accuracy measurement using cost effective, two-wire communication from field instrumentation to control room console

The Conoco Saraburi system was designed to meter regular and premium unleaded gasoline and high speed diesel through dedicated meter runs to custody transfer standards at flow rates up to 1,720 m³/hr. The system consists of three single Smith 10" Sentry Turbine meters configured in a 1+2 arrangement, where one meter is dedicated to a single product operating on duty at 100% system capacity. Valve manifolding allows the facility to utilize the other two meters as standby.

To maintain consistent, high accuracy measurement, a Smith 30" bidirectional sphere prover provides for periodic on-line meter calibration. Piping manifolds and valving connect the meter skid and prover

to provide recirculation and bypass capabilities during non-batching operations. Gantry cranes are installed integral to the skids for prover sphere handling and to aid in routine maintenance.

Custody transfer computations and report generation are performed by the Smith SyberTrol flow computer which links via Modbus communication interface to Conoco's Data Acquisition System. Mounting the SyberTrol flow computer in the field on the meter skid provided significant cost savings by utilizing its two wire, high speed, local area network communication to connect field devices back to the control console located in the control room.

Saraburi

Smith Meter Inc
An **FMC** EnergySystems business

Project: Saraburi Product Terminal
Location: Saraburi, Thailand

SYSTEM SPECIFICATIONS

Configuration: 1+2 x Smith 10" Sentry Series Turbine Meters
System Flow Rate: 1,720 m³/hr
Prover Flow Rate: 1,720 m³/hr
Product: Diesel and Gasoline
Viscosity: 4.663 cP @ 30°C; 0.54 cP @ 30°C
Design Pressure: 285 psig @ 38°C (20 bar @ 101°F)
Design Temperature: 30°C (86°F)
ANSI Rating: 150 lb
Design Code: ANSI B31.4 Liquid Transportation Systems For Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia and Alcohols.

INSTRUMENTATION

Supervisor: Smith Supervisory Computer
Flow/Proving Computers: Smith SyberTrol, Model STB-EX2-1BF
Printers: Okidata, Model 184-T
Console: Hoffman, Model A-72P
Pressure Transmitters: Rosemount, Model 1151GP
Pressure Indicators: Ashcroft, Model 45
Temperature Transmitters: Rosemount, Model 444
Temperature Indicators: Ashcroft, Model 50EI

EQUIPMENT

Inlet Gate Valves: DSI, Model 37-XU
Strainers: Smith, Model 12-203D
Flow Meters: Smith, Turbine Meters, Sentry Series, 10"
Double Block and Bleed Valves: Orbit Truseal, Model 211-204G
Actuators: Rotork, Model IQ
Thermal Relief Valves: Taylor, Model 82
Meter Prover: Smith Bidirectional, 24" x 30" x 12", Volume 5 Barrels

Smith Meter Inc

The Most Trusted Name In Measurement

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FMC EnergySystems

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