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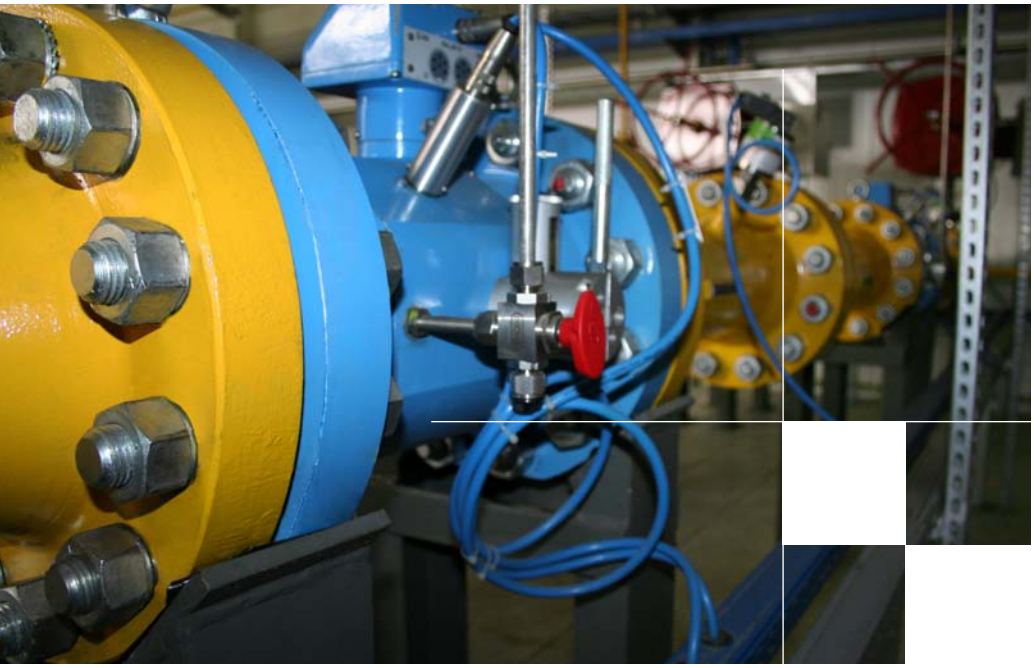
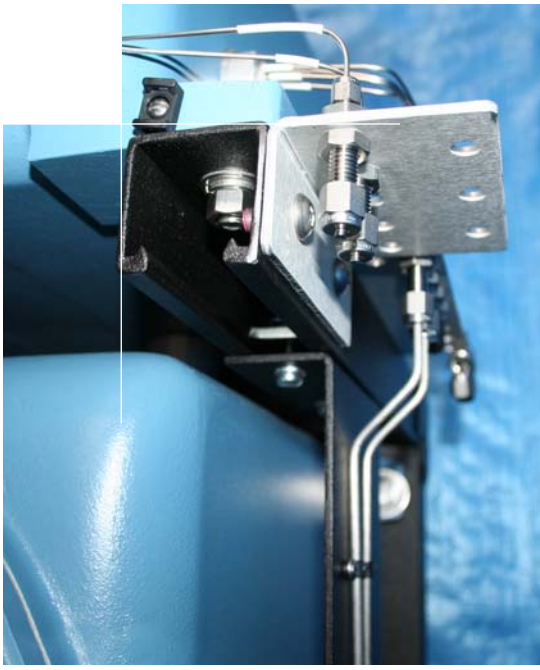




PBG PORTFOLIO: OIL&GAS SECTOR

SNOWIDOWO GAS BLENDING STATION, PHASE II,III,IV

Revision: January 10, 2011

Project info

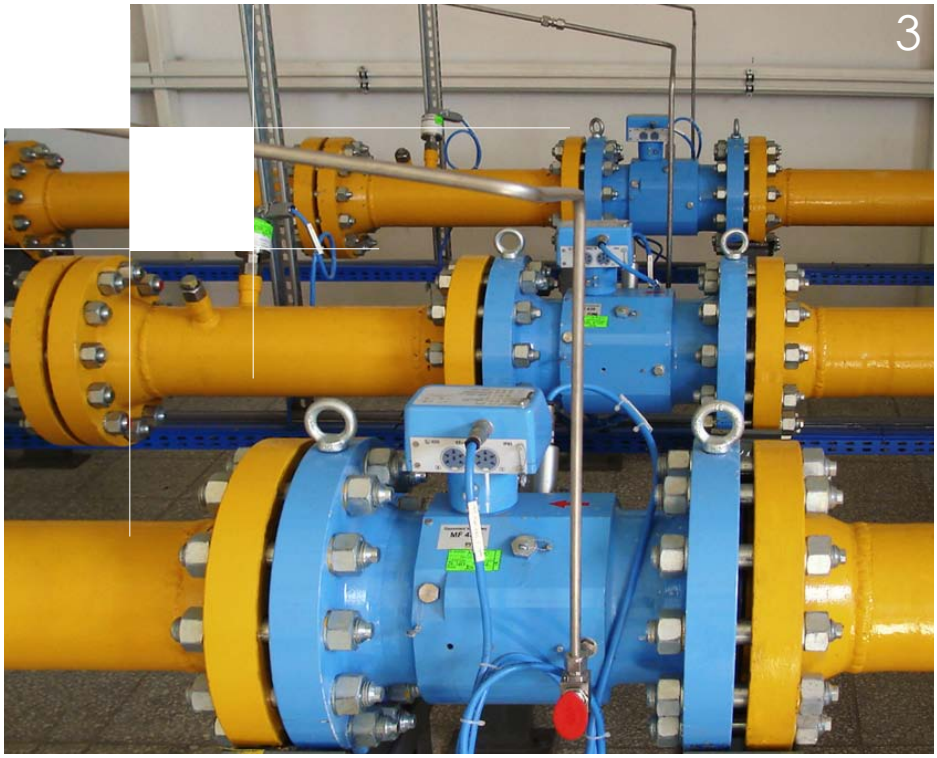
Project name	:	Snowidowo Gas Blending Station, Phase II, III, IV
Completion	:	2007
Role	:	Prime Contractor
Location	:	Snowidowo, Poland
Design Data	:	Feed gas pressure: 50 ÷ 63 barg
		Feed gas temperature: 10°C
		Design temperature: -29 ÷ 50°C
		Gas flow rate: 2,000÷100,000 nm^3/h
Client	:	Polskie Gonictwo Naftowe i Gazownictwo S.A.

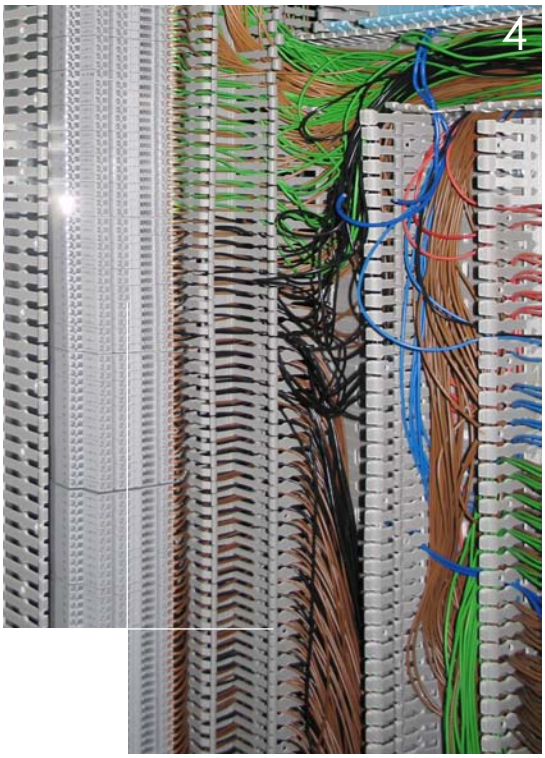
Scope of Works:

- Engineering
- Procurement
- Construction

of:

- Three (3) feed gas block valve stations
- Four (4) feed gas filters
- Four (4) feed gas heaters
- Six (6) flow gas regulation & metering systems
- One(1) flow gas regulation system
- One(1) technical gas metering system
- Two(2) fiscal gas metering systems
- Vent gas system expansion
- Underground gas pipelines
- Static gas blender/mixer
- Eight (8) Calometers/Wobbe index meters
- Heat medium system expansion
- Instrument air system expansion
- Control system
- Electrical
- Cathodic protection
- Civil works



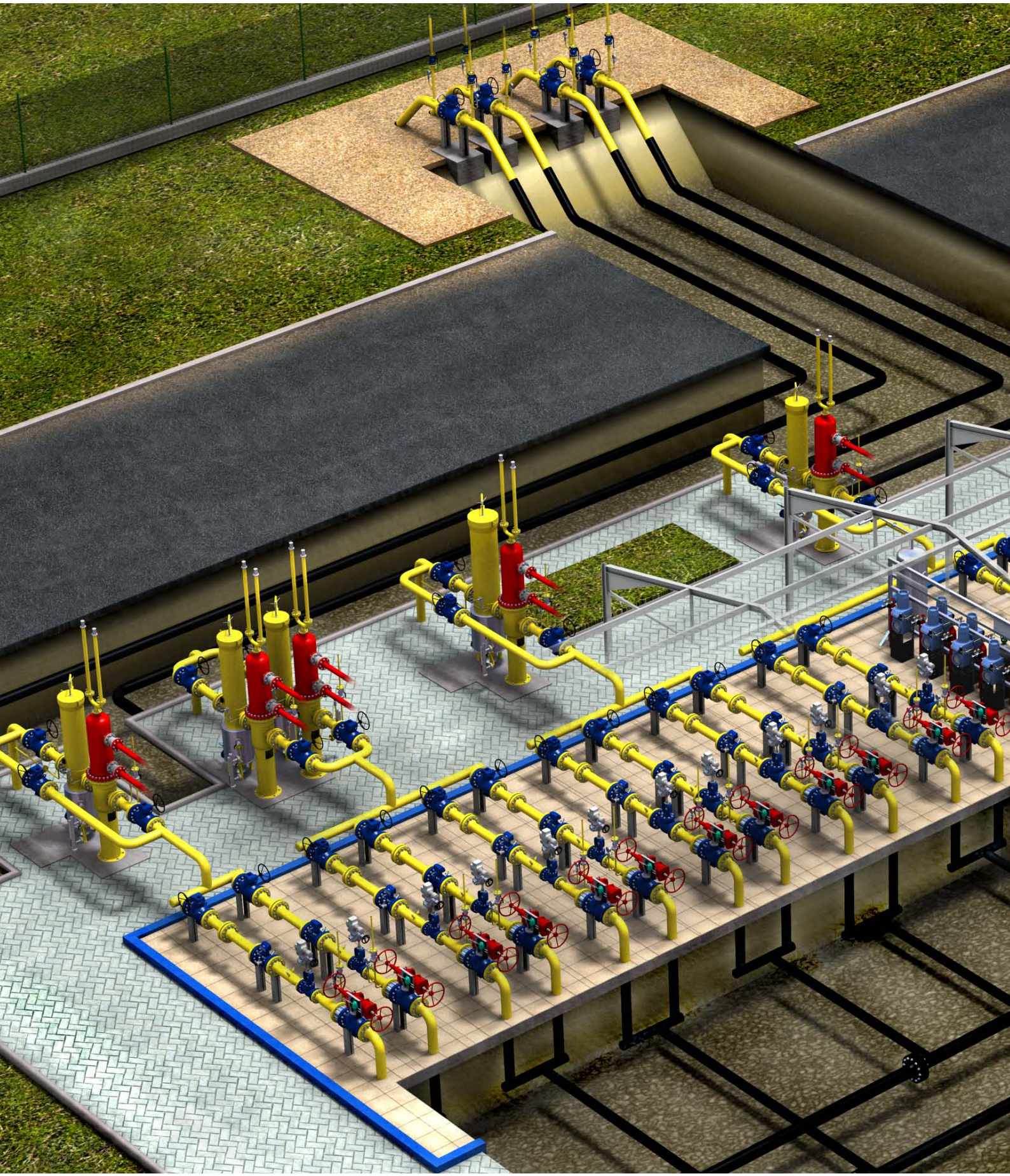


1 Snowidowo Gas Blending Station, Snowidowo, Poland

2 Gas Chromatograph, Snowidowo, Poland

3 Turbine Gas Meters, Snowidowo, Poland

4 Control Cabinet, Snowidowo, Poland



Inlet Gas Composition (train IV - Wielichowo)

- Methane [CH_4]: 73.1493 %vol
- Ethane [C_2H_6]: 0.9906 %vol
- Propane [C_3H_8]: 0.0574 %vol
- Butane [C_4H_{10}]: 0.0126%vol
- Pentane [C_5H_{12}]: 0.0077 %vol
- Hexane [C_6H_{14}]: 0.0020 %vol
- Hydrogen [H]: 0.0099 %vol
- Carbon Dioxide [CO_2]: 0.5864 %vol
- Nitrogen [N_2]: 25.0490 %vol
- Helium [He]: 0.1351 %vol
- Oxygen [O_2]: 0.0000 %vol

Inlet Gas Composition (train V - LMG)

- Methane [CH_4]: 38.4808 %vol
- Ethane [C_2H_6]: 7.4182 %vol
- Propane [C_3H_8]: 6.0315 %vol
- Butane [C_4H_{10}]: 4.2394 %vol
- Pentane [C_5H_{12}]: 2.3610 %vol
- Hexane [C_6H_{14}]: 1.8413 %vol
- Hydrogen [H]: 0.0100 %vol
- Carbon Dioxide [CO_2]: 1.0867 %vol
- Nitrogen [N_2]: 38.5210 %vol
- Helium [He]: 0.0100 %vol
- Oxygen [O_2]: 0.0000 %vol

Outlet Gas Composition (train VI - reserve)

- Methane [CH_4]: 72.0426 %vol
- Ethane [C_2H_6]: 1.0004 %vol
- Propane [C_3H_8]: 0.0561 %vol
- Butane [C_4H_{10}]: 0.0138 %vol
- Pentane [C_5H_{12}]: 0.0066 %vol
- Hexane [C_6H_{14}]: 0.0030 %vol
- Hydrogen [H]: 0.0004 %vol
- Carbon Dioxide [CO_2]: 0.6178 %vol
- Nitrogen [N_2]: 26.1265 %vol
- Helium [He]: 0.1328 %vol
- Oxygen [O_2]: 0.0000 %vol

Main Equipment Data:

- Feed Gas Filter (Wielichowo)
  Size: 400mm ID x 2100mm S/S
  Design Pressure: 100 barg
  Design Temperature: -29 ÷ 50°C
- Feed Gas Heater (Wielichowo)
  Size: 400mm ID x 1650mm S/S
  Design Pressure: 100 barg
  Design Temperature: -29 ÷ 50°C
  Heat Duty: 390 kW
- Two (2) Feed Gas Filters (LMG)
  Size: 400mm ID x 2100mm S/S
  Design Pressure: 100 barg
  Design Temperature: -29 ÷ 50°C
- Two (2) Feed Gas Heaters (LMG)
  Size: 400mm ID x 2150mm S/S
  Design Pressure: 100 barg
  Design Temperature: -29 ÷ 50°C
  Heat Duty: 537 kW each
- Feed Gas Filters (reserve)
  Size: 400mm ID x 2100mm S/S
  Design Pressure: 100 barg
  Design Temperature: -29 ÷ 50°C
- Feed Gas Heaters (reserve)
  Size: 400mm ID x 2150mm S/S
  Design Pressure: 100 barg
  Design Temperature: -29 ÷ 50°C
  Heat Duty: 175 kW
- Instrument Air System expansion
  Air Flow: 28.2 nm^3/h
  Design Pressure: 10 barg
  Water Dew Point: -40°C
  Power Duty: 4 kW
- Heat Medium Boiler expansion
  Type: Viessmann Vitoplex 100
  Heat Duty: 1120 kW
  Burner: Giersch NG-3.1-ZMLN
  Fuel Gas Consumption: 117 nm^3/h
- Static Gas Blender
  Type: Sulzer SMV
  Size: 219.1mm OD x 1700mm L
  Pressure Drop: 0.007barg

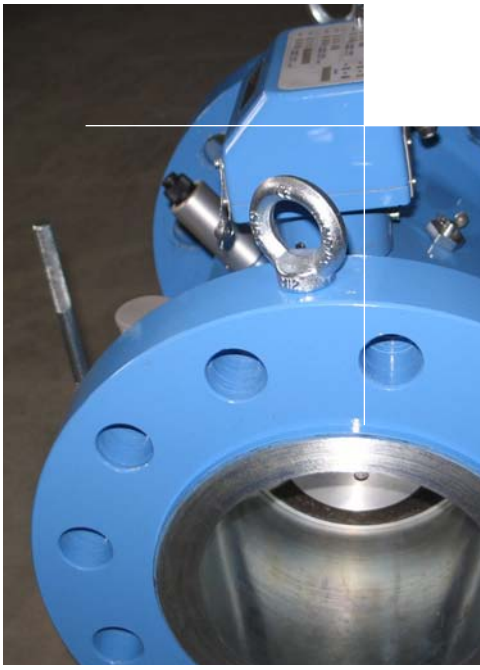
1 Shut-Down Valve, Snowidowo, Poland

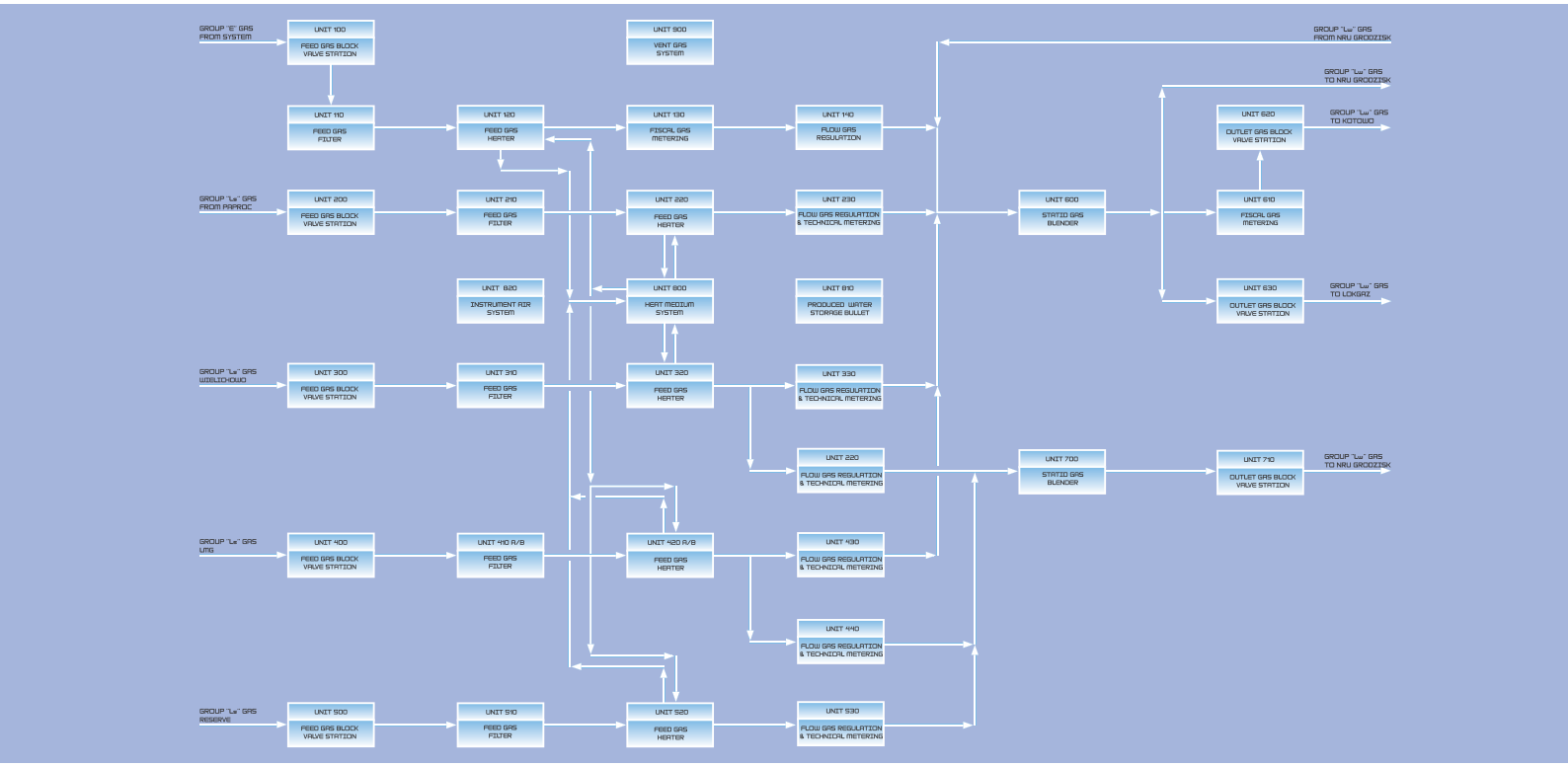
2 Heat Medium Collectors, Snowidowo, Poland

3 Control Valve, Snowidowo, Poland

COVER PAGE 1 Turbine Gas Meters, Snowidowo, Poland
2 Wobbe Index Meters, Snowidowo, Poland
3 Flow Gas Metering Systems, Snowidowo, Poland

CURRENT PAGE 1 Project location, World Map
2 Turbine Gas Meters, Snowidowo, Poland
3 Block Diagram, Snowidowo, Poland





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