Featured Application

YZ SYSTEMS HELPS MAINTAIN PUBLIC SAFETY BY DELIVERING ODORANT TO LATIN AMERICA'S LARGEST NATURAL GAS DISTRIBUTION SYSTEM

Brazil's largest distributor of piped natural gas, Comgás, partnered with YZ Systems and its channel partner, EDC (Equipamentos de Controle e Commercial), to design and construct a natural gas distribution site with a massive capacity of 250.000Nm³/h at operating pressures between 17-35bar.

Comgás is a natural gas public utility service provider in Latin America. The company is regulated by the State of São Paulo's Public Energy Services Commission (CSPE), and provides gas distribution in the Greater São Paulo and Paraíba Valley regions, Santos and adjacent areas. This encompasses 177 municipalities that, together require an odorization rate between 16mg/Nm3 and 25mg/Nm3.

Because of this challenging installation, Comgás required a company who could provide a truly reliable odorization solution and selected YX Systems as the equipment of choice.

Based on their technical analysis, EDC recommended two (2) NJEX® 8304 odorant injection systems. Capable of performing complex instructions quickly and efficiently, NJEX systems are technically superior. The big-injection odorizers provide proportion-to-flow odorant injection, onboard metering, system monitoring and alarm notification.

EDC assembled a skid including necessary accessories, such as pneumatic gas supply regulators and a junction box with fully automated signals that connect to the Customer´s main control panel.

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One of the systems operates two 800 model pumps simultaneously, while the other system remains on stand-by with automatic input for start in case of an operating failure on system one.

In addition, EDC connected each control panel to the automation room to enable a telemetry platform, so that Comgás could remotely access critical system information.

Data is transmitted from the NJEX system via modem by RS-485/232 interface and connected in a TCP/IP network for storage in a webserver database that provides the information to control room.

After implementing the communications platform, the customer was not only able to remotely access all critical information, but also execute key control parameters, such as change in odorization rates, alarm handling, consumption rates and switch between principal to standby pumps under emergency conditions.

This installation is a turnkey solution provided by our local partner EDC, that has been operating flawlessly since day one, and that served as a benchmark for several projects within Brazil and beyond.

The system includes:

1. Solar panel for Power supply with 72h autonomy with battery.
2. Electronic switching circuit board - developed to change automatically between main pump and standby pump in alarm conditions.
3. Cellular modem with GPRS technology to receive and transmit telemetry data to control room.
4. RS-485 to RS-232 converter to do communication between 2 N300 controller and cellular modem.

INSTALLATION

Operator: - *COMGÁS , Companhia Distribuidora de Gas de São Paulo* - São Paulo , Brasil

Location of Installation: City Gate Riacho Grande, São Bernardo Do Campo, São Paulo, Brazil

Operating Conditions: Pipeline Pressure: Mín. = 17,0 barg; Operational = 35,0 barg; Max. = 52,5 barg

Maximum Flow: Q Max. = 250.000 Nm3/h , (10 MMPCH) — 10 MMCFH—

Odorization Rate: Max.: 25mg/Nm3, Avg. 16mg/Nm3