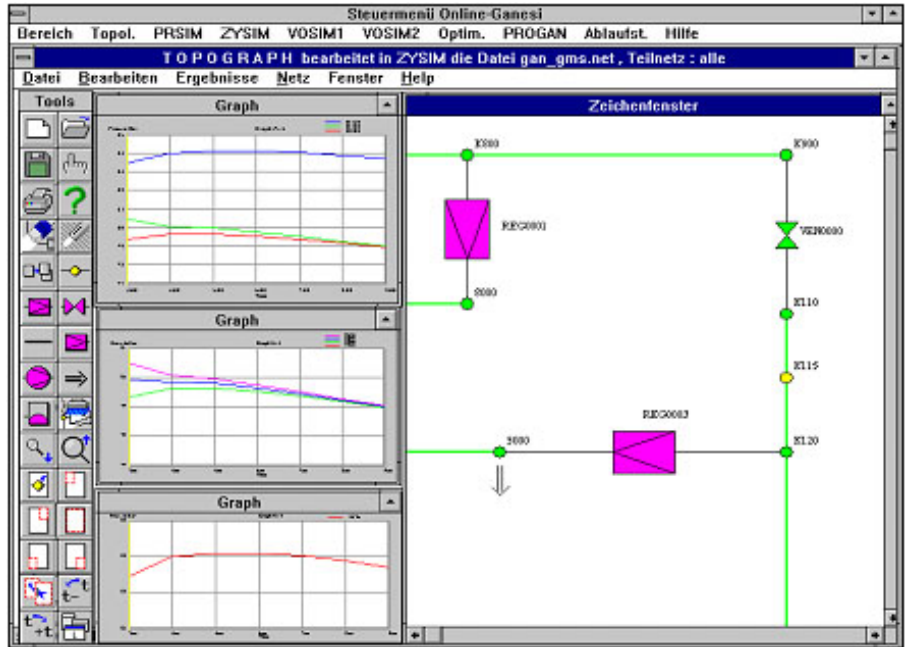


PSIGanproda determines Heat Quantities for Billing Purposes



PSIGanproda (PSIGanesi with process measurement data) calculates precise gas composition billing values for heat quantity billing at any offtake point.

PSIGanproda is based on a reconstruction procedure with an unlimited number of time horizons and an unlimited number of time-oriented discretisations.

PSIGanproda has been approved by the Department of Weights and Measures (PTB) and has been in productive operation for many years.

Requirements

Requirements for the application of PSIGanproda are:

- Measurements of gas compositions at all intake points.
- Quantity measurements at all intake and offtake points.

- Selected pressure measurements for the gas grid.
- Precisely timed acquisition of all valve installations in the grid.

Benefits

Reconstruction with PSIGanproda is always of great benefit when

- the composition of the gas supplied to the grid varies,
- time variations in the composition of the supplied gas exist,
- the gas in the grid is subject to mixing and fluctuation zones and
- many offtake points exist, where the equipment with gross calorific value measurements would be economically not reasonable.

Our Solution

PSIGanproda calculates the actual transient flow state of the complete gas network based on measurement and switch data (valve settings, regulator configuration). To accomplish this, PSIGanproda correlates all measured data as a function of time and location based on grid dynamics. This in turn offsets measurement errors and estimates the best transient flow state.

With assistance from this flow state, the gas composition is monitored for each simulation time interval and if the gas flows combine the mixture is then calculated.

Changes in grid topology are saved in the archive and implemented immediately in the reconstruction function.

PSIGanproda contains a PSIGanesi nucleus which makes it compatible to other PSIGanesi applications. This guarantees the exchange of grid models and facilitates easy data exchange.

PSIGanproda offers

- Effective handling by means of an integrated user interface for topology modifications, data input, execution of reconstruction and presentation of results.
- Error minimisation by means of elaborate control functions.
- Transfer of process measurement data via standard interfacing to control systems and PSIGames or via a customer-specific interface.
- Fully graphical report summary which is selected in the network topology display.
- Printout of all graphics displays.
- Interfaces to other systems for importing and exporting data.

- Consistent data management.
- Integrated help function. For every user input there is a corresponding description which can be easily accessed using this function.
- Excel interface for exporting data.

PSIGanproda meets the requirements of **PTB-A 7.64.**

*PTB
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