About SINOPEC
Shanghai Research Institute of Petrochemical Technology

SINOPEC Shanghai Research Institute of Petrochemical Technology (referred to as Shanghai Institute) is a subsidiary of the China Petroleum & Chemical Corporation. Shanghai Institute is mainly engaged in catalyst development, process technology development and industrial applications in petroleum and chemical industry. Shanghai Institute has a large number of test instruments and evaluation devices which can be used in routine tests, pilot evaluation tests, small-scale evaluation tests and micro evaluation tests.

Evaluation of Test Device

Evaluation of test device for data acquisition is the basis of paperless experimental records. The target is to provide laboratory personnel correct data for experimental analysis as well as offer research team an open data platform.

Prosys OPC SDK Sentrol provides rapid application development based on Windows platform Delphi and C++ Builder developer tools. Sentrol has been widely used in data acquisition, man-machine interfaces (HMI, MMI), process monitoring, reporting and system integration.

Shanghai Institute decided to use OPC SDK Sentrol in a Real-Time Process Data Acquisition System for testing process of styrene evaluation device. The collected data can be integrated with chromatograph analysis data, then stored in the database, aiming at implementing the following features:

- Automatic acquisition, processing and storage of processing and equipment analysis data in styrene evaluation device
- Integration of processing and analysis data
Data Acquisition

Frequency of the data acquisition process is generally set to any rate between 1 to 60 minutes, and less than 50 data points in each device. Besides sending data to database, data acquisition system also performs configured data transformations and data acquisition logging.

The OPC server is configured to access the data acquisition devices using the OPC communication protocol. This enables retrieval of real-time process data and storing the collected data into a database.

Data Queries and Integration

Database storage management can effectively protect data when various applications are trying to access data. The data server is receiving real-time data from the remote data acquisition devices. The data server also provides real-time and historical data for the client applications.

Sentrol is an excellent OPC application framework, which greatly improves development efficiency and supports system development in a prompt and reliable way. We willingly continue using Prosys OPC SDK Sentrol and related services of Prosys company.”

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