

Qualisys®

Spectro Quest

Spectrometer data analysis

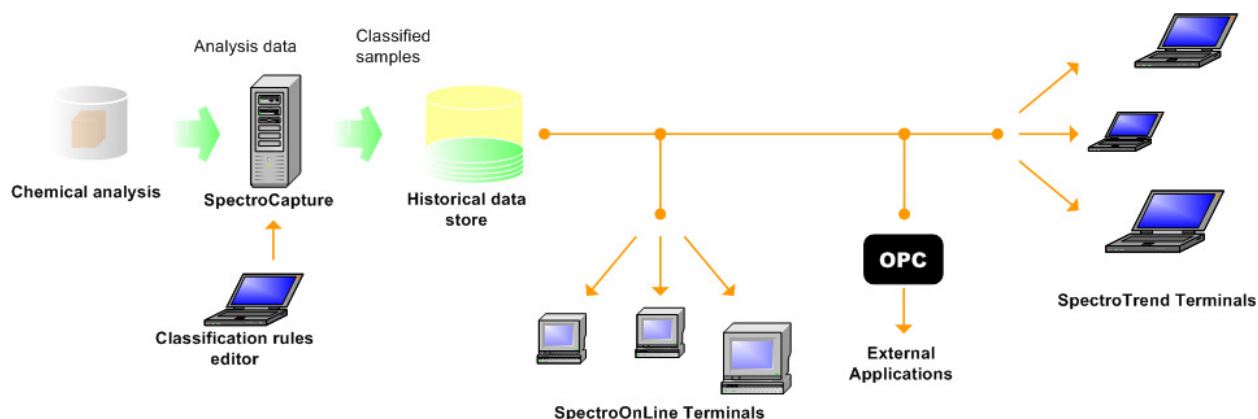
Introduction

Qualisys® SpectroQuest is a system designed to acquire and analyze information obtained from chemical or spectral analyses from laboratory samples. In this case, the unit of information is the result of such analyses, which indicates the composition of each sample. This software package is able to acquire sample composition data, classify the samples according to their composition, store the data in a historical database and distribute this information throughout an industrial plant in order to allow real-time monitoring as well as providing historical and statistical information.

Using SpectroQuest, you will be able to configure rules for sample classification according to their composition, and later obtain different reports and evolution graphs depending on the defined classification. Although this software was specially designed to work with a spectrometer, its flexible architecture makes it able to obtain data from any composition analyzer or similar device. Its OPC Server module enables it to export the data via OPC from the chemical analyzer to integrate it with other systems.

Architecture

Qualisys® SpectroQuest is capable of acquiring, classifying, analyzing and distributing information about chemical or spectral analyses of different materials (e.g. steel) to carry out quality control and assurance of your products. SpectroQuest is composed by a series of modules designed in a flexible and extensible architecture, which can be adapted to satisfy your specific requirements.



Picture 1 – Software Process

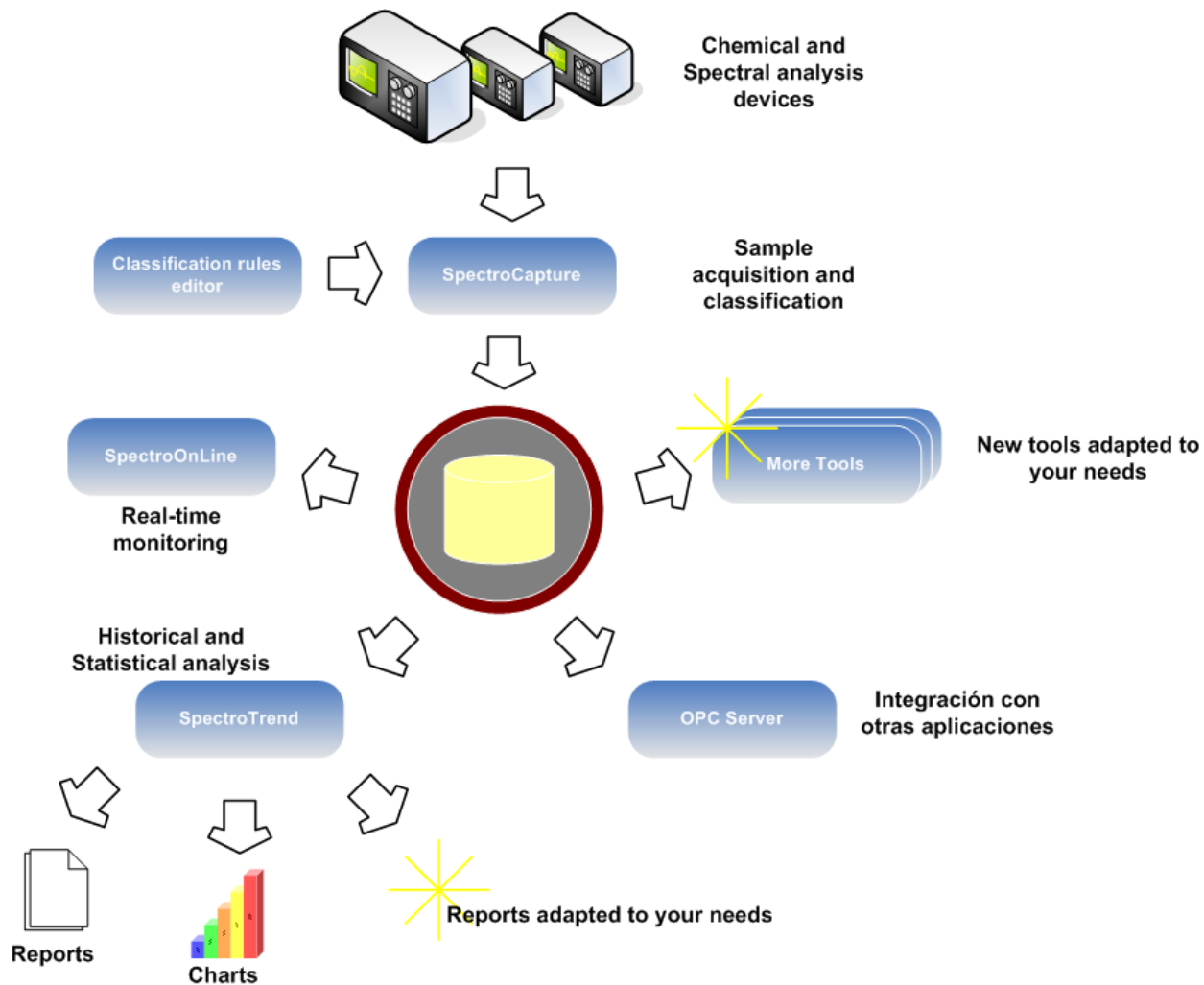
SpectroCapture is the module that works in connection with your chemical or spectral analysis device, obtaining the composition of each analyzed sample. Utilizing classification rules that you can configure, SpectroCapture determines how to classify each sample, and then stores it in a central database.

SpectroOnLine is the module that enables real-time monitoring of the analysis information in a distributed way, that is to say, throughout the whole plant. As soon as a sample enters the central database, every SpectroOnLine workstation receives and displays the information, detailing composition, classification and further data from each

sample. In this way your staff will immediately know the characteristics and quality of each sample in order to act and correct quickly the production process, which means important savings, and higher quality.

From any workstation with the SpectroTrend module installed, you will be able to obtain historical and statistical information reports about the analyzed samples and this means you will be able to control and improve both quality and production processes. Using this analysis tool, you will obtain information regarding the distribution of the classifications (amount of samples of each different type), production quality (contrasting the expected classification with the actual classification) according to the sample composition (average, minimum, maximum and standard deviation for each component). Also, evolution graphs of samples' composition and several other reports. This module can be extended to satisfy you most specific information requirements.

Lastly, the OPC Server module exports the sample composition and classification data using OPC industrial communication standard to allow other industrial and management applications to access the data from your analyzers and the sample classification data.



Picture 2- SpectroQuest's flexible architecture

Features

Using Qualisys® SpectroQuest, you will be able to:

- Monitor in real-time samples' composition and classification, anywhere within the plant, precociously detecting and correcting quality problems avoiding massive losses.
- Obtain historical and statistical reports that will help understand not only the evolution and current situation of the production but also the composition of the materials and to what extent are you complying with your production objectives (expected quality against real quality). This enables you to make cleverer decisions to augment quality resulting in client satisfaction and assuring your competitiveness in the marketplace.
- Automatically classify samples using rules configured by yourself and tailored to your industrial plant.
- Acquire data from any analyzer, especially from spectrometers, and make it available for other applications to use it using widely-known standard protocols.
- Maintain a historical register of the characteristics and quality of your production that can be queried at any time.

Market tested

SpectroQuest has been used for more than five years in steel production industries that use ARL spectrometers (los numerosos van aca, tomalos de la página). The incorporation of this system has resulted not only in a considerable augment of the steel quality, but also in the prevention of major losses due to low-quality steel, and client satisfaction. The data analysis tools enabled to analyze the production history and make more precise planning and estimation for future periods. Our team has highly qualified engineers, especially experienced in the steelworks industry.