

SPX 346

Blending plants enable Selden Research to switch to automated processing for screen wash products

Two Stand alone automated blending plants designed by SPX Process Equipment (SPX PE) to optimise processing efficiency in the production of motor vehicle windscreen wash have entered service at Selden Research's Buxton plant.



The purpose designed systems bring together, alcohol, water, colourings, perfumes and surfactants in preset quantities and flowrates to service Selden's bulk filling lines or production storage tanks as required. According to Mike Scott, Process Systems Product Manager at SPX PE the requirement was for two systems offering the capabilities to produce a variety of screen washes ranging from 15% -85% alcohol (IMS) diluted with water in total production volumes up to 9000l/hr. Each system comes with a Bran + Luebbe touch screen display PLC control panel for easy recipe selection, together with specification of the flowrate and batch size requirements.

Selden Research develops and manufactures cleaning, hygiene and automotive products for both the professional and retail sectors. Products are made available under the widely recognised and respected Selden brands and private labels, and the Company also makes bespoke formulas for clients.

In designing and building the two systems, SPX PE has drawn on several of its technologies and product ranges. In order to transfer alcohol stored externally in a bulk storage area to the main processing rig, each system is fitted with a remote progressive cavity pump. At the rig, water is pumped using a Johnson Pumps centrifugal (Combibloc) unit from a local break tank through a flowmeter. Depending on the specific product, a concentrated pre-mix of surfactants, perfume and colouring dye is introduced to the rig from an IBC using a Bran + Luebbe ProCam metering pump and through an Endress + Hauser flowmeter with pulsation smoothing software.

“The alcohol and water is mixed in-line using a Bran + Luebbe Static Mixer,” says Mike Scott. “It passes through a mass flowmeter where we can measure the total flowrate and the density of the mix. From this we can derive total flows of both water and alcohol in order to see if we are meeting the required alcohol content.” The system uses PID control from the PLC to adjust automatically the relevant pump via speed control inverters.

The final operation is to create the finished product by bringing the premix and IMS/Water solution together through a static mixer. This process is closely monitored and uses PID control again to ensure that the final product is always within specification. Previously Selden created a batch of product manually, which was then transferred to a storage tank or directly to a machine. As the new SPX PE system runs in an ‘on demand’ mode or ‘by batch’, Selden reports that it frees up storage volume and manpower.