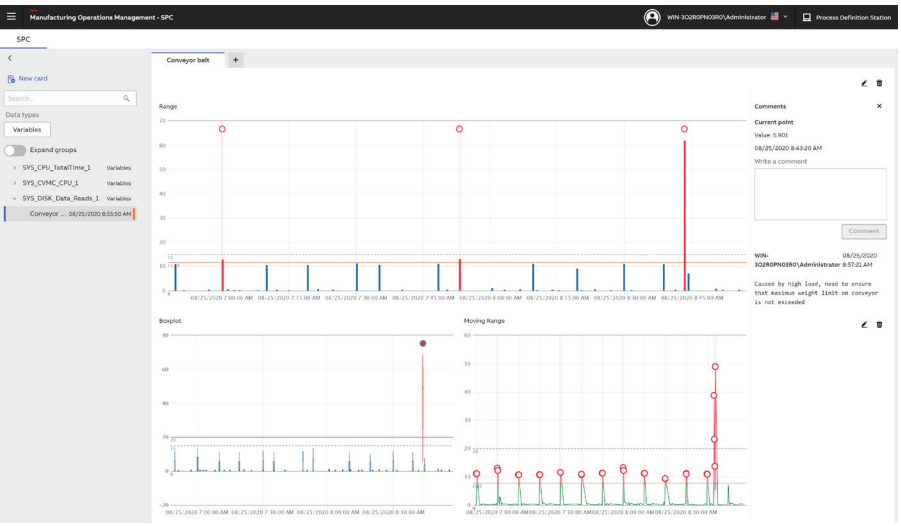
DATA SHEET

ABB Ability™ Manufacturing Operations Management
Statistical Process Control



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SPC application with control card status notifications on the left and two control charts visualizations

Statistical Process Control (SPC) is a quality method to supervise if a process is in state of control and whether it can produce units within given tolerances. The SPC application enables the user to define and monitor control cards. These control cards include visual diagrams that can track shop floor processes in real-time and help to continually improve the process and operational excellence.

SPC uses the plant data to for quality analysis and improvements that support to prevent problems from occurring.

The control cards consist of up to three control charts, also known as Shewhart charts or process-behavior charts. The control charts are the actual statistical process control methods performing the SPC calculation and visualization. Typically, control charts are used for data in the form of product or process measurements that are obtained in real-time during production.

The key features of SPC application include:

- SPC calculations for both process related time series data as well as transactional production data
- Comprehensive set of SPC control charts functions
- Up to three control charts calculations and visualization per defined control card
- Easy to monitor status indications for control card deviations

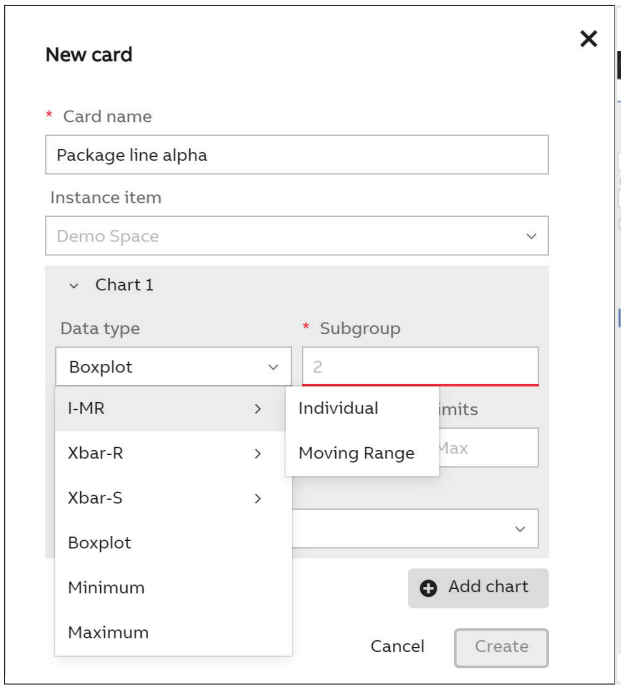
The Solution

The SPC application enables users to configure and monitor control cards. Control cards are associated either with process measurements such as history signals or product measurements typically related to quality, as defined as part of manufacturing execution model. Each control card supports up to three SPC control chart calculations and visualization. For each control chart the user can define number of data point per sub groups, specification (deviation tolerance) limits and chart type.

Key Benefits of the SPC App

The SPC App supports users with:

- Reducing variability and waste through early detection and prevention of problems, rather than the correction of problems after they have occurred
- Reduced need for finished product to be reworked or scrapped
- Instantly react to variation in the process
- Discover process anomalies and enable systematic improvements.



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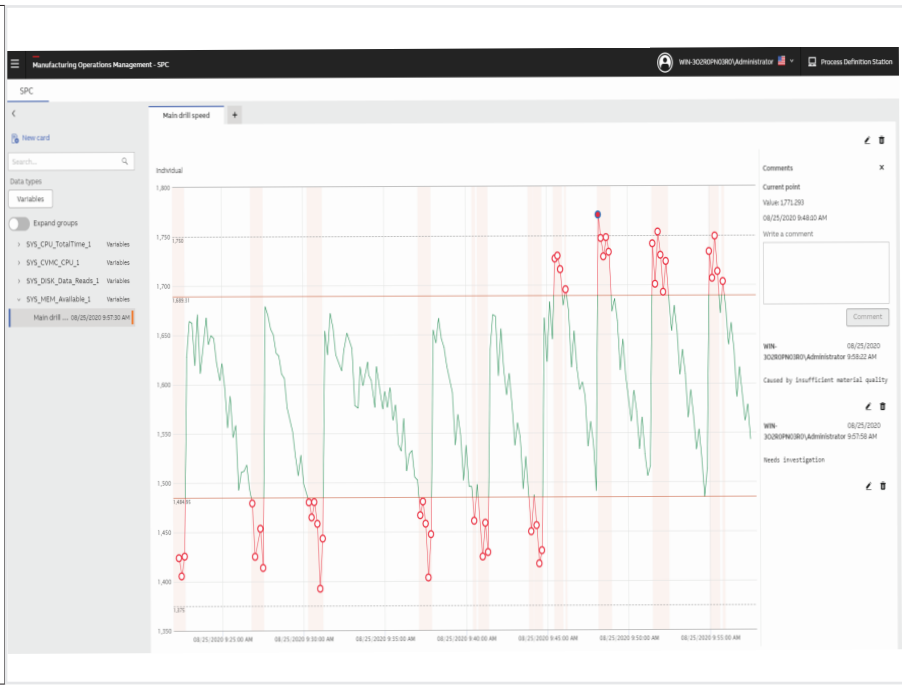

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03

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02 Create new Control card dialog with selection of available control chart calculations

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03 SPC Single_Comment

How does it work?

The configured control cards are available in the control card list pane. Each control card will display current status to notify the user when deviations are detected in any control card as defined by the control chart calculations. Once a deviation is detected the user can select the control card and further review details in each control chart.

Users can assign comments to data points in the control charts. Typically used to comment data points deviating from defined tolerance limits. Several comments can be made by different users for each data point. Data points with comments are high lighted in the control charts.

Pre-requisites

SPC is a native application within ABB Ability™ Manufacturing Operations Management (MOM). With its common services and four modules User Experience (UX), Reporting, Connectivity and Data Storage, MOM is an ISA-95 Level 3 plant data access and information system which ties any plant data from disparate data sources into one single information infrastructure. MOM is also a platform that hosts different type of industrial productivity software applications, MOM Appliacations. This enables MOM users to easy expand and add new relevant industrial software applications as requirements or business objectives change.

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