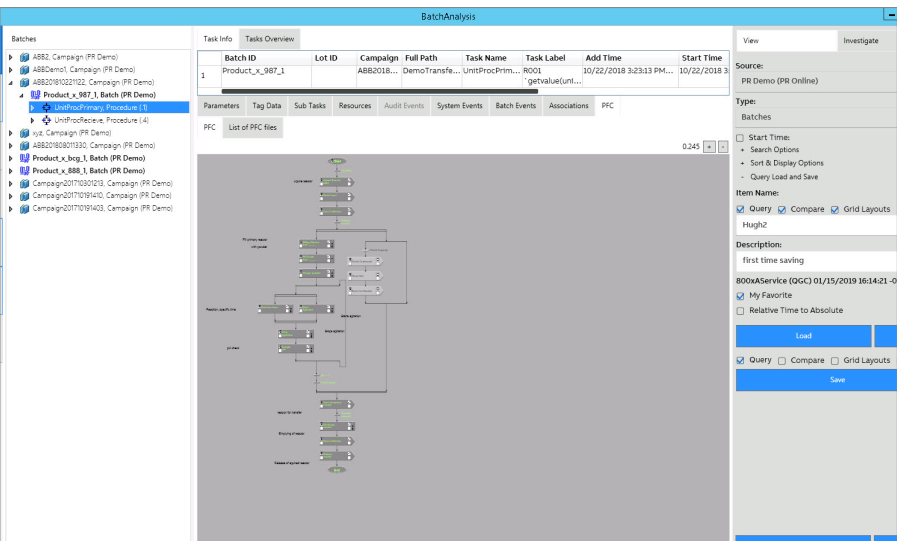


ABB Ability™ Manufacturing Operations Management

Batch Analysis Applications: Batch View, Batch Investigate and Batch Compare



Batches can provide a vast amount of data to report critical data related to quality and performance. Investigating deviations and exceptions can be a big task. Often the user has to drill down through tables of information that require database knowledge and understanding of relationships. How does one navigate batch data and see the results they need to see without being a database expert?

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01 Extended batch analysis capabilities with Batch View displaying data tree and selected unit PFC

The Batch View, Batch Investigate and Batch Compare applications provide users such as process engineers a fast and easy way to search, view, investigate and compare batch production data generated by 800xA Batch Management. Batch View and Batch Investigate provide data navigation using the flexible search engine or the familiar Procedure Function Chart (PFC). This allows the process engineer to browse their data in the same way as the recipe was executed. Batch Compare will leverage this navigation to build templates and compare data.

The Solution

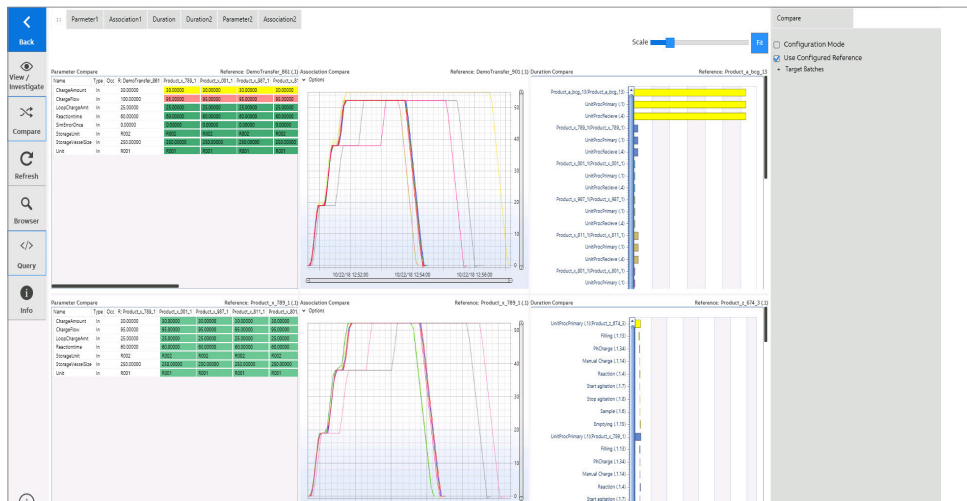
The Batch View and Batch Investigate applications remove all complexity related to database structures and relationships within batch production data. The applications combine all batch production data such as parameters, events, and trend associations into one single interface powered by the flexible search engine and easy navigation within the PFCs. Adding Batch Compare to mix allows for side-by-side comparison of your best data reference points with other batches. When enabling an ABB Ability™ Manufacturing Operations Management (MOM) common services for batch applications, batch production data will also by default be available to use in MOM Reporting and Excel Analyze applications.

The Batch View application provides the process engineer with the ability to navigate within a familiar environment. By combining the flexible search engine with the same PFC of the executed recipe, a user can navigate directly to the point of interest in their investigation and access all the available data.

The **Batch Investigate** application is an extension using the same navigation capabilities as the Batch View application that enables advanced queries for locating specific detail within all recipes. The query brings you directly to the source of the data through context-sensitive data. Batch Investigate is the perfect tool for the effective investigation of deviations and exceptions.

The **Batch Compare** application is an additional feature of Batch View and Batch investigate. The compare feature provides a method to define batch reference points and compare these points with other batches. These reference points can take on the forms of parameter, duration, and history trend associations comparisons. Points of reference can be from several different batches and be combined to form a composite template that can be saved and recalled for new or old comparisons.

Key benefits



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The Batch View, Batch Investigate and Batch Compare applications support users with:

- Easy access to batch production data with no training required to use
- Data navigation using familiar PFC displays
- All in one tool for accessing batch data such as parameters, events, PFC and trend associations viewer
- Advanced query tool for investigation of deviations and exceptions
- A combined tool that provides simple navigation to data points along with the ability to create comparison templates on the spot
- Ability to save and recall comparisons with complete data and formatting retention
- Single comparison overview for quick visual access

How does it work?

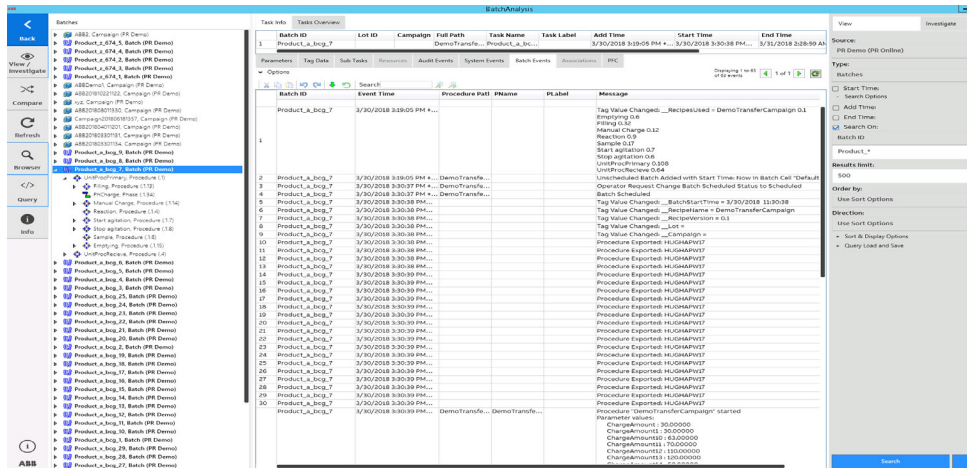
Batch View allows the user to browse through batch production data organized by time. The workflow starts with an initial search of campaigns, batches, procedures etc., within a given time scope. The user can browse the search result by either a data tree or by the PFC. Both the data tree and the PFC are context sensitive so locating the data or the place in a recipe where data was recorded is as simple as selecting a point. In addition to the PFC all other related batch data such as parameters, batch and system events, resources, tag data and trend associations are displayed for the selected point in the recipe structure.

Batch Investigate is an extension to the Batch

View application adding advanced query capabilities to locate details in any recipe. The result of the query is displayed in the flexible user interface provided by the Batch View application. This enables fast and easy navigation to other points of interest triggered by the initial query. Advanced queries support multiple levels allowing users to create very precise queries by combining query conditions. An example of an advanced query could be “Give me all batches where parameter ChargeAmount is in the range of 150-200 and the unit temperature was greater than 50”.

Batch Compare is an additional feature to Batch View and Investigate. Batch View and Investigate are used to locate data reference points. This could be a specific parameter that is a key performance indicator, process trend association, or simply a duration of batch procedure. The points can come from multiple locations from within a batch or multiple batch Id references. Once a point is located. The desired compare function (parameter, duration, association) is selected and created. This process can be repeated several times with a mix of functions that can be combined and saved as a group of tabs that form a template. Each template can have an overview page that provides a quick look at all the comparison points for that template. The templates are saved and can be recalled with their original data comparisons or view new comparisons.

MOM Common Services supports connection to



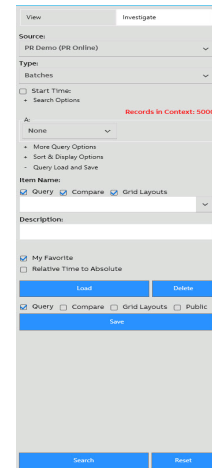
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several batch data storage. When working in the Batch View, Batch Investigate and Batch Compare Applications, the user can easily shift between different batch data storage depending on the area of interest.

Prerequisites

Batch View and Batch Investigate are native applications within ABB Ability™ Manufacturing Operations Management (MOM). With its common services and modules User Experience (UX), Reporting, Connectivity and Data Storage ABB Ability Manufacturing Operations Management 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. It is also a platform that hosts a different type of industrial productivity software applications, MOM Applications. This enables MOM users to easily expand and add new relevant industrial software applications as requirements or business objectives change.

The Batch View, Batch Investigate and Batch Compare Applications are part of the Production Intelligence Application suite for production information and analysis.



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03 Working seamlessly across all Batch applications, intuitive search capabilities

04 Batch Investigate Query dialog example