Data Collection

Define and execute data collection plans

Overview

During manufacturing operations, there is a large amount of data that is generated. This data is very valuable, and it's required for the purposes of quality, traceability, monitoring, control, root-cause analysis, and continuous improvement. As an integral part of the Manufacturing Execution System (MES), all collected data is highly contextualized, thus enabling all sorts of correlations.

Data Collection allows predefined data collections to take place at certain processing points (e.g.: at Track-In or Track-Out) using context resolution. It also supports the capture of data at any time using an ad-hoc data collection. Data can be collected manually or automatically via automation.

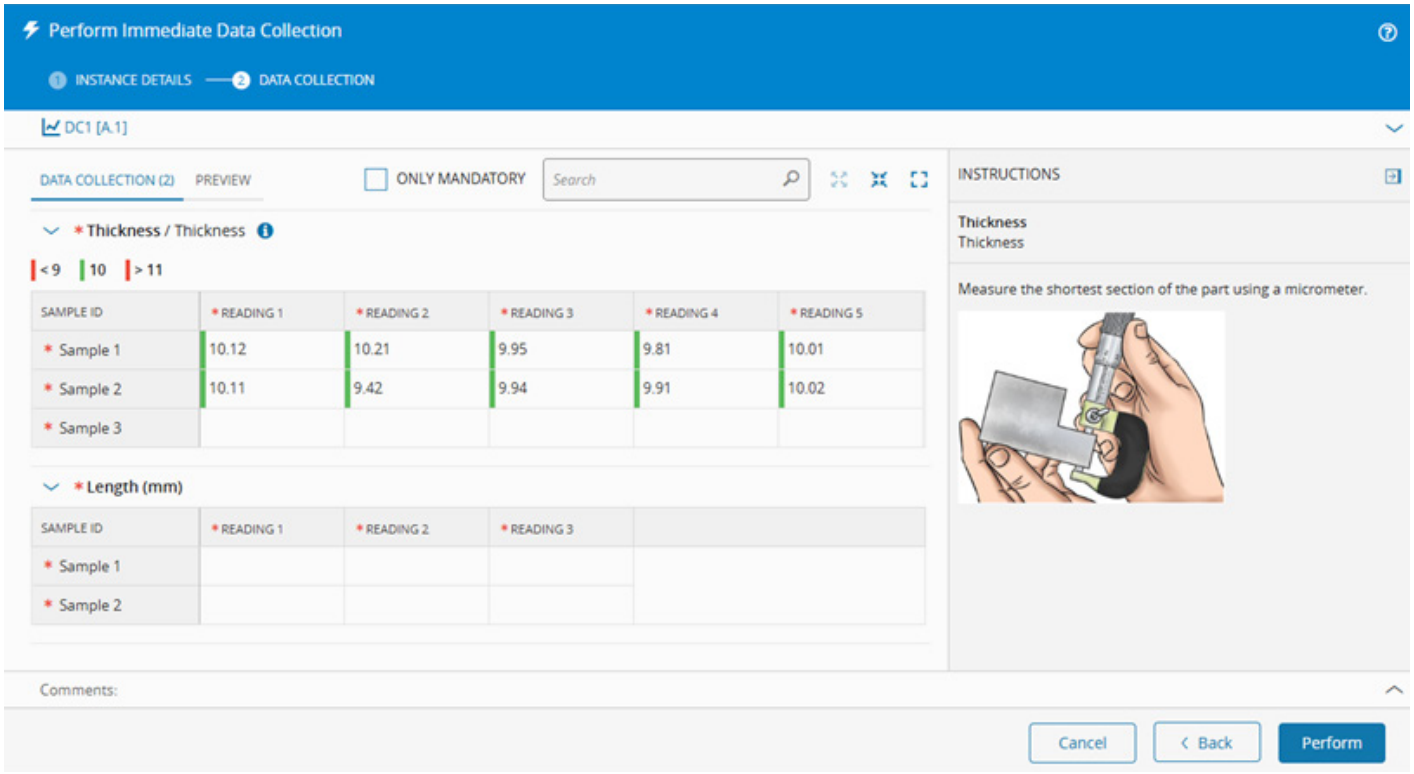

Figure 1 Data Collection example

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Key Features

- Support for qualitative and quantitative parameters, with validation tables and ranges for the acceptable data values.
- Support for to capture data over a long period of time (long running) or in one snapshot (immediate).
- Support for optional and mandatory parameters, with flexible number of samples and readings.
- Support for calculated parameters based on system functions such as sum and averages as well as user defined dynamic expressions.
- Support for flexible data collection limits with different validation ranges and different parameter limits.
- Support for manual and automatic data collection.
- Integrated with Material Tracking, Resource Tracking, Maintenance Management and SPC.
- Integration with Exception Management, with the capability of opening a Protocol Instance automatically in case that there is a limit violation.

Benefits

- Increased operational efficiency
- Reduction in the opportunity for errors
- Improved process control
- Faster speed of learning
- Enabler for root-cause analysis, data analysis and continuous improvement

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