

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.

The screenshot displays a data collection interface for Lot-01. The main area is titled 'Thickness' and contains a table with columns 'THICKNESS' and 'SAMPLE 1'. The table has two rows: 'Sample 1' with a value of 5.2, and 'Edge' with a value of 5.2. Below the table, there is a 'Comments:' field. To the right of the table, there is a numeric keypad with buttons for digits 0-9, a decimal point, a plus/minus sign, and a 'C' (clear) button. Above the keypad, there are color-coded buttons for values 0, 5, 10, 15, and 20. At the bottom right, there are 'Post' and 'Cancel' buttons.

Figure 1 Data Collection screen example

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 parameter groups and calculated parameters.
- 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

Dispatch and Track-In Material

RESOURCE
DATA COLLECTION

MDLOT-2020001 (Queued) / MOSRM8HP (MOSRM8HQ Product) / Inspection / 100 Units

DATA COLLECTION

WIDTH (MM)

SAMPLE 1

* Tensile Strength (Pascals)	> * Sample 1	* Reading 1	104 mm
* Width (mm)	>	* Reading 2	106 mm
* Length (mm)	>	* Reading 3	105 mm

Width > Sample 1 > Reading 3

90 100 105

105 mm

7 8 9 C

4 5 6 Del

1 2 3 OK

+/- 0 .

Last entered value: Width > Sample 1 > Reading 3 > 105 mm

Comments

Cancel < Back Track-In

Figure 2 Data Collection integration with track-in