

Da Vinci Smart Manufacturing

BRD S06.08 Reports Quality Summary

Version	Created/Modified by	Description	Date
1.0	Leopoldo Rivera Sahana Badal	S06.08 First draft	6/06/2025

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This document outlines the detailed specifications for the **Production** Report module. The module enables users to configure, generate, manage, and share reports that analyze

Production results across furnaces. This supports decision-making, efficiency tracking, and auditing through dynamic filters, KPI selection, and export capabilities.

1. Overview

The Report module consists of:

- Report Configuration Interface (Setup View)
- Report Output View (Generated Report)
- Variant Management System (for saved configurations)
- Export and Print functionalities

2. Report Configuration Interface (Setup View)

2.1 Variant Name Selection

- A dropdown labeled **“Variant Name”** is provided at the top.
 - User selects the Variant ID from a single select dropdown
 - Mandatory - No
 - Default value - No
 - Field Type - Single Select Dropdown Values: All Variants saved (Public and Private). **Dropdown Structure:**
 - **My Variants**
 - Private
 - Public (shared icon)
 - **Public Variants** (created by others)
 - Validation - No
 - **Permissions:**
 - Only the creator can edit, delete, or update their variant.
 - Other users can view or clone public variants.
- Upon selecting a variant, previously saved filters and KPI selections are auto-populated.

2.2 Report Filters (Mandatory fields marked with *)

Filter	Type	Description
Furnace ID*	Multi-select dropdown	Lists all active furnaces assigned to user or organization.

Date Range*	Calendar picker	From and To date selectors.
Material ID*	Multi-select dropdown	WIPs corresponding to the Furnace
Quality	Multi-select dropdown	Quality of WIP material

Filter Behaviour:

- Default values are empty; required fields must be selected to proceed.
- All Filter drop downs should be sorted alphabetically / numerically

2.3 KPI Selection

- KPI checkboxes/toggles are listed for selection.
- Backend provides the available KPIs per report.
- KPIs are not mandatory and report can be generated without selecting any.
- KPI Permissions Logic
 - **Selectable KPIs:** A user can only **select** KPIs for which their role has explicit **permission**.
 - **Visible but Disabled:** KPIs outside the user's permission scope will still be **visible** in the interface but will appear **disabled** (e.g., grayed out) and **cannot be selected**.
- **Max 3 KPIs can be selected.**
 - If a user selects more than 3, an inline validation appears: *"You can select up to 3 KPIs only."*
- Each KPI has a **default chart type** (bar, line, pie, etc.) configured by backend.
- In the **generated report screen**, users can change the chart type per KPI using a dropdown.

2.4 Action Buttons

Button	Function
Generate Report	Validates inputs and transitions to Report Output View.

Reset	Clears all filters and KPI selections to default state.
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3. Report Output View

Upon clicking **Generate Report**, the system transitions to a new screen with the following sections:

3.1 Filters Summary Section

- Displays all selected filters and metadata.

Fields include:

1. Variant Name (default: *Untitled* until saved)
 - a. Min - 1 and Max - 30 characters, alphanumeric, Only '-' and '_' is allowed, Single space is allowed in between the words, No leading spaces allowed.
 - b. **Edit Icon** (✎): Appears for saved variants created by the user.
 - c. Enables inline editing of Variant Name and Access Modifier (Private/Public).
 - d. A **Save** button confirms updates.
2. Furnace ID
3. Date Range (From - To)
4. Material ID
5. **Executed On** – *Displayed only in print view; not saved in variant.*
6. **Executed By** – *Displayed only in print view; not saved in variant.*

3.2 KPI Visualization Section

- KPIs selected are shown in graphical format.

Features:

- KPIs can be **removed** via a close (×) button on hover.
- KPIs can be **reordered** via drag-and-drop.
- KPI metadata and units are displayed.
- Users can **change the chart type per KPI** via dropdown (Gauge, Bar Chart, Line Chart and Pie Chart).

3.3 Report Data (Tabular Format)

- Data displayed based on filters and granularity.
- It will have the following columns
 - Date
 - Furnace ID
 - Material ID
 - Quality
 - Total Value (%)

Table Features:

- Configurable columns via “Add Columns” menu
- Sorting and rearranging columns via drag-and-drop
- Pagination for large datasets
- Export to Excel (XLSX) File Name “MMDDYY_QualitySummaryReport”

Report

Nora James

Date	Material ID	Furnace ID	Total On Grade/Off grade/Target (%)
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80
1/1/2025	MBO1_Serrabal	1	10/10/80

Showing 10 of 80

<

1

2

3

...

8

>

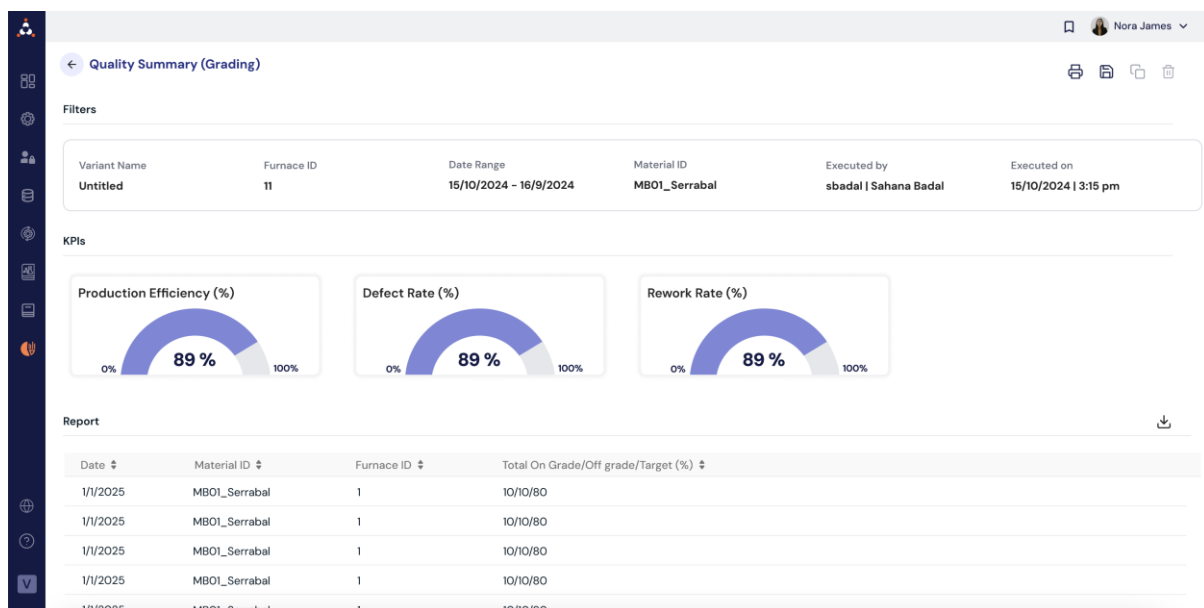
Rows Per Page: 10

User Notes

Enter your notes

3.4 Notes Section

- Free-text input area for user insights. All (Including special characters), 100 characters
- Not saved with variant — intended for print inclusion only.



3.5 Navigation – Back to Configuration

- A **Back** button appears in the report view.
- Clicking it returns the user to the **Setup View**, retaining all previous filter and KPI selections.
- Ensures seamless editing without re-entering data.

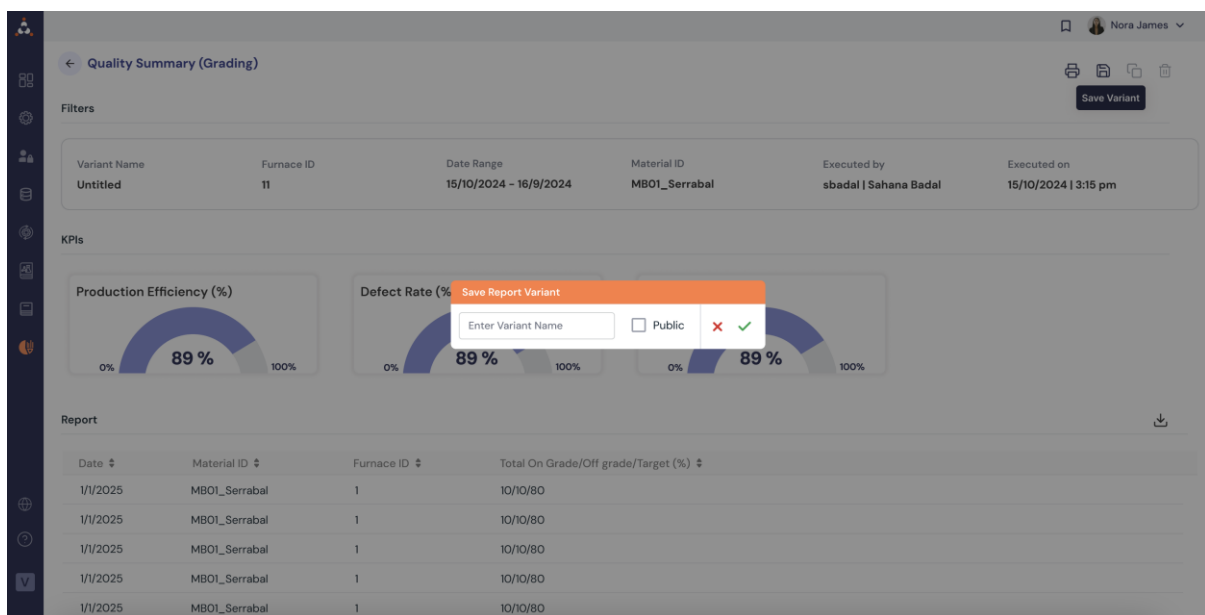
4. Report Actions

4.1 Print

- Exports the entire report as PDF.
- User selects sections to include:
 - Filter section
 - Notes section
 - Specific pages of data

4.2 Save Variant

- Saves current report configuration.
- Required fields:
 - Report Name
 - Access Modifier (Private/Public)
- Only the creator can edit or delete saved variants.

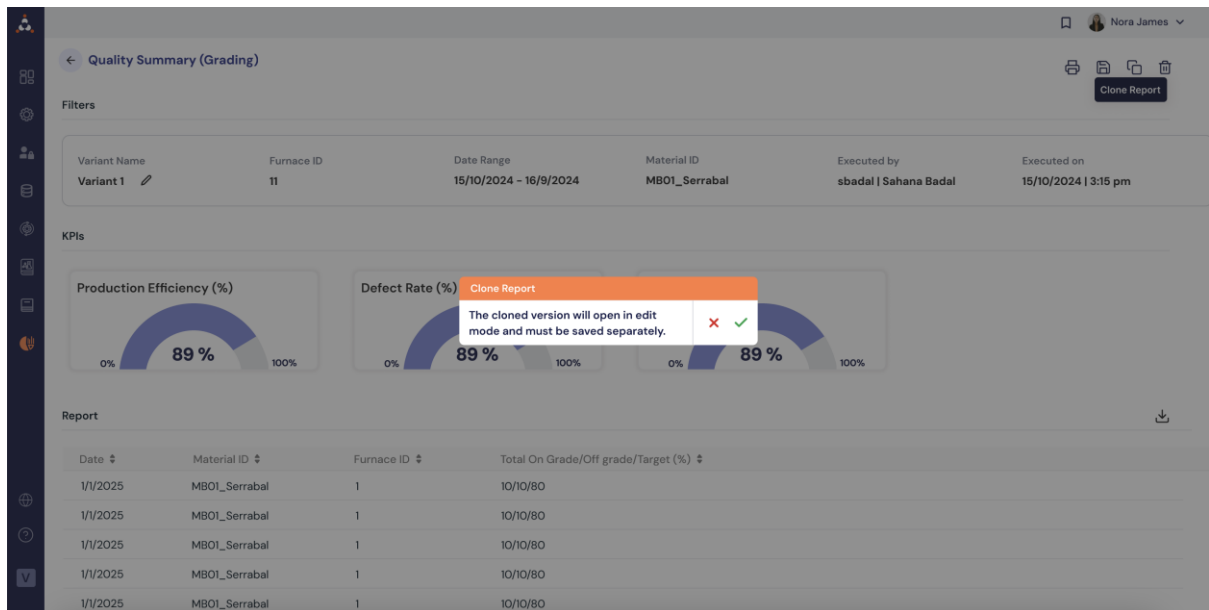


4.3 Clone Variant

- Clones any saved variant (private or public).
- **Confirmation message appears:**

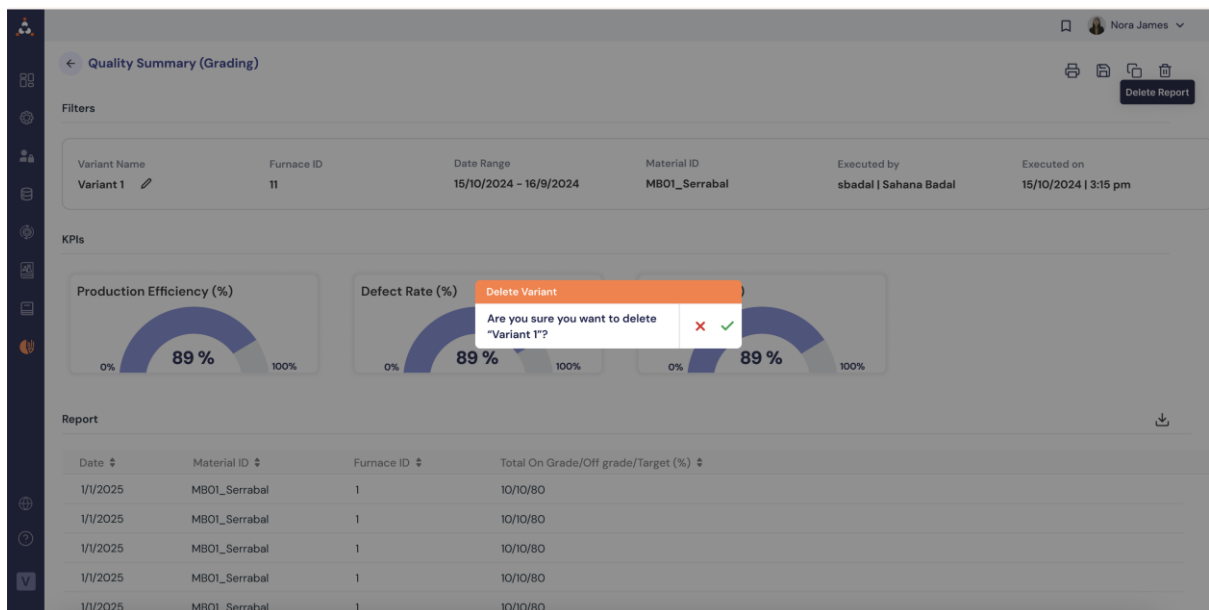
“Are you sure you want to clone this variant? The cloned version will open in edit mode and must be saved separately.”

- Opens the cloned configuration in edit mode with name defaulted to *Untitled*.



4.4 Delete Variant

- Available for user-created variants.
- Delete via dropdown or trash icon with confirmation prompt.
 - “Are you sure you want to delete this variant “Variant Name”?”



5. Edge Cases & Validations

Scenario	Expected Behaviour
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Required filter missing	Prompt user to complete all mandatory fields
Deleting a variant in use	Show confirmation and warn about unsaved changes when traversing to another module
Selecting public variant	Load values in read-only mode unless cloned
No KPIs selected	Section remains empty; no validation error
Selecting > 3 KPIs	Show inline warning and prevent further selections