Des 2023

WATS Feature Release Note
Test step analysis - preview

Major Feature Areas

Feature preview

This release is a preview version of the new Test step analysis module. It is set to replace the old Test step yield & analysis module in an upcoming release. The module if not yet feature complete. Notable missing features from the old report is chart analysis data and advanced measurement options.

Test step analysis

A modernized version of the Test step yield & analysis is now available. The module is renamed to Test step analysis, hereby called TSA, and while the usage will feel familiar to users with experience in Test step yield & analysis, several new features have been added:

- **Improve grid features:** filtering, grouping and the ability to choose which columns to view has been added.

- **More data:** With the ability to choose which columns to view, we have now added many new columns, especially for the step grid, enabling the users to view the data they deem important. Several of these columns pertain to Cp/Cpk and will in a later release also replace the Process capability analysis report.
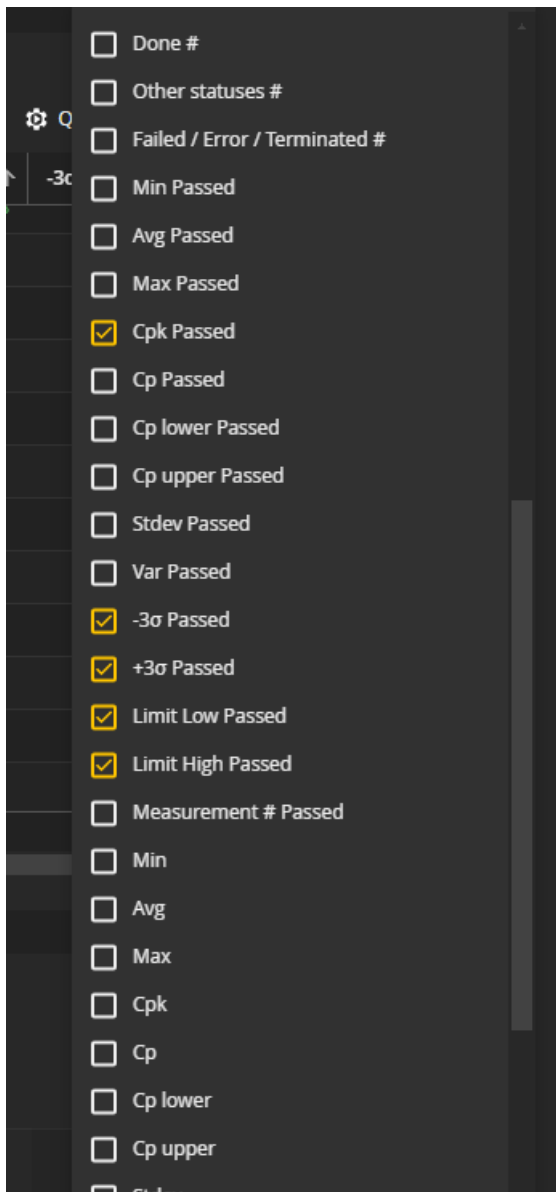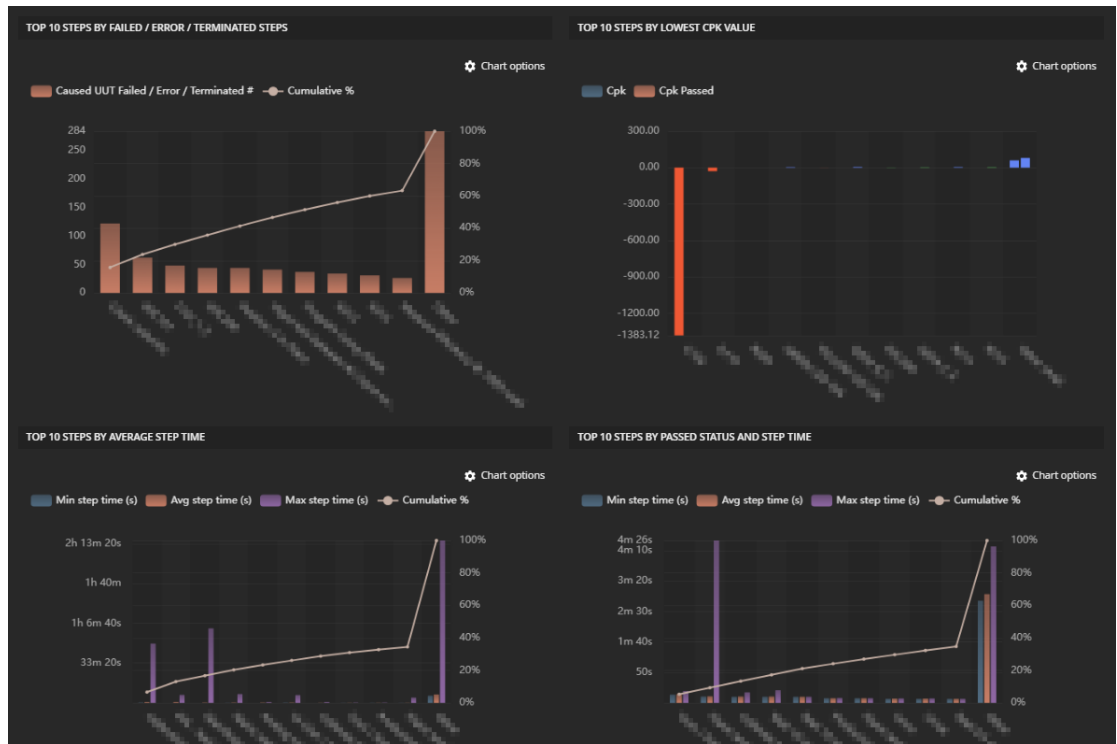
- **Suggestions:** TSA now includes AI driven suggestions powered by WATS Alvea, as we move further into development of this module, more features will be added.
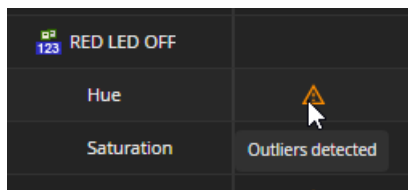
- **New data visualization:** We have added new charts in addition to those present in the old version of the report, including a chart focusing on Cpk-values.


Step details

A host of new features is planned for the new version of Step details, several which have already been implemented in the preview version. The goal of this rework is to add more functionality, while still cleaning up the user interface, as well as improving the performance of the report for larger datasets.

The following describes notable improvements and additions compared to the old Step details:

Aggregated overview: By default, Step details will now load an aggregated overview of the data, while only loading the last 1000 datapoints for this data. This ensures that the report is a lot faster to load, especially for larger datasets. Further selection of details to load can then be performed in the aggregated overview. The following image displayed the aggregated chart, and the details loaded in the second chart, as indicated by the green selection. The selection can subsequently be resized and/or moved to analyze the details of

a different slice of the data:
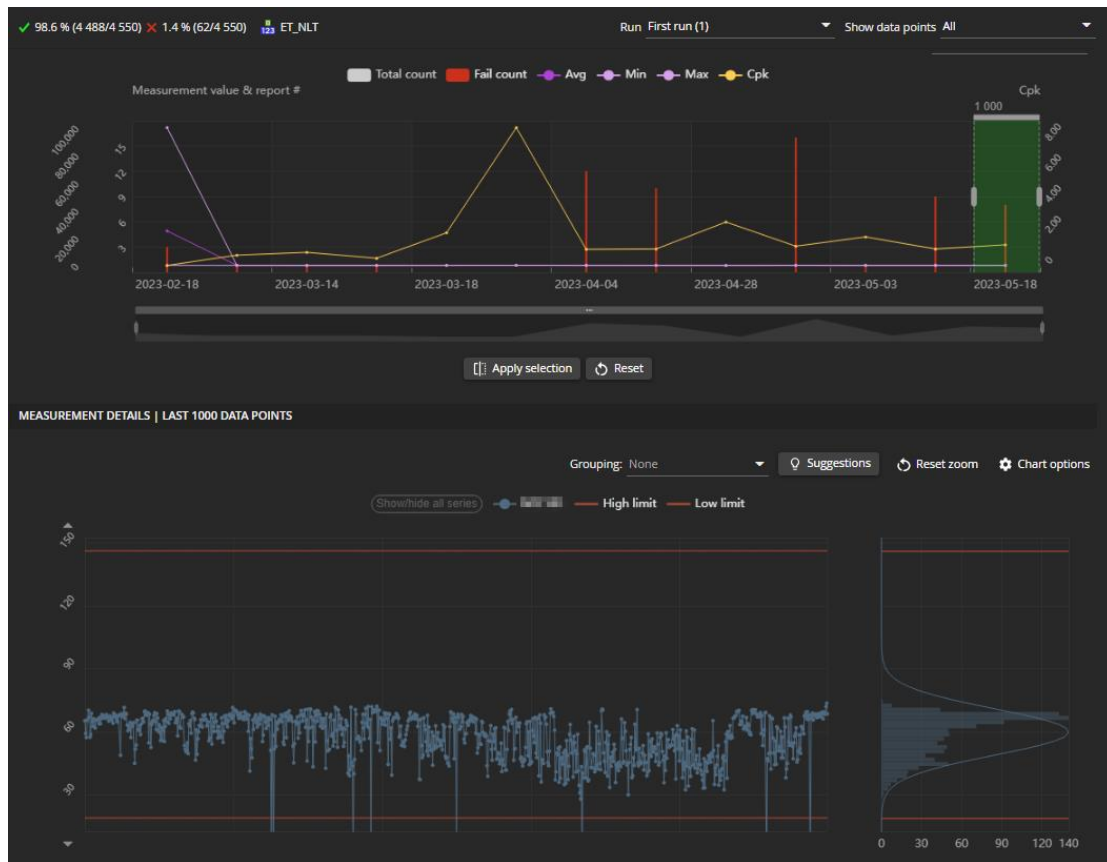
- **Improved grouping:** While the old Test step & analysis can group data, this functionality has been improved in the new version. WATS Aleva will now assist the user by optionally providing suggestions for which groups to choose. Also, groupings which would result in only a single group are now greyed out.

- **Views:** To facilitate the requirement of adding a lot of new functionality to Step details, it is now split into multiple views. The different views can be accessed from the menu bar on the left-hand side of the screen. The following gives an overview of each of the currently available views:

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  - o **Default view:** The default view of the report is designed to resemble the old Step details, even though it contains several new features, like moving range, cusum and x-bar charts.

  - o **Measurement details view:** Currently not much more than a larger version of the details chart found in the Default view, this view will be expanded with more functionality at a later release.

  - o **Measurement comparison view:** Compare two steps, adding one step to each axis of the chart to see correlation between the two.
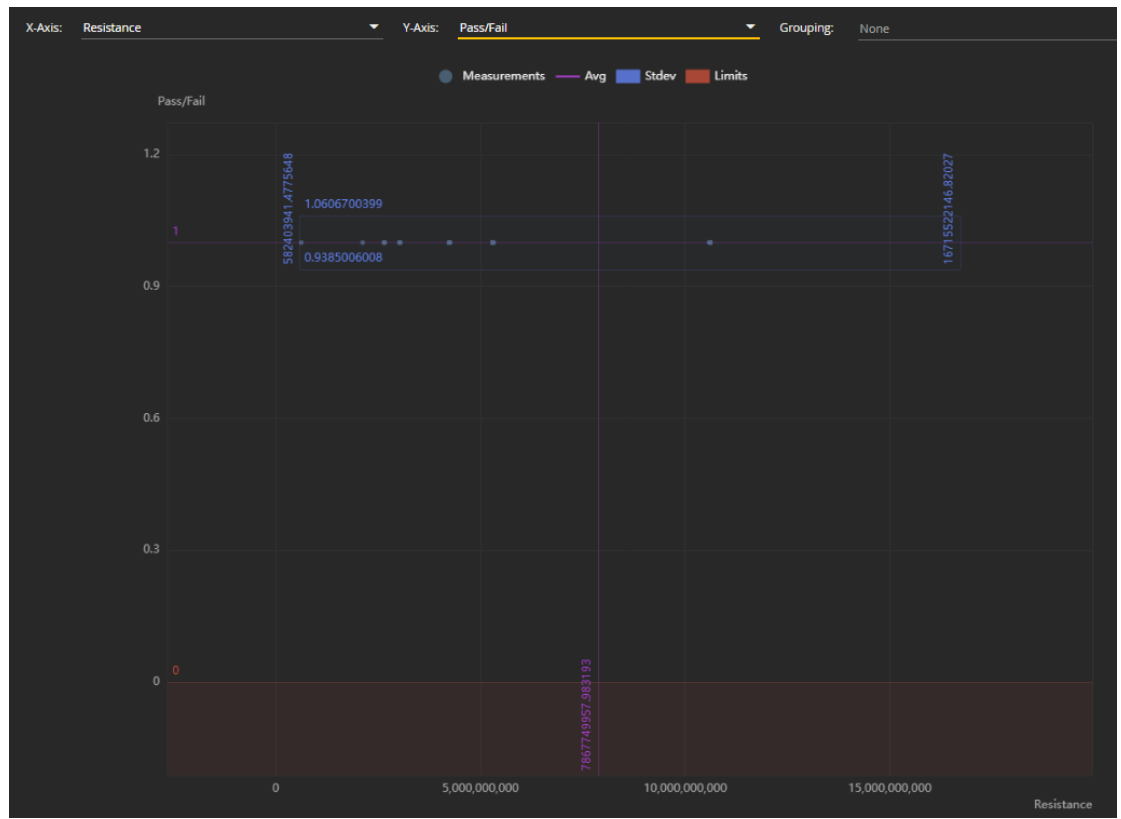
    o   **Data view:** The data view allows the user to inspect and export the underlying data of the data points currently analyzed.

- **Uniform handling of numeric and non-numeric steps:** In the previous version of Step details, numeric steps were always shown in a chart, while non-numeric steps were always shown as a table. In the new version both types of steps can be viewed either as a chart or as a table. For the data points of any step, head to the Data view. Likewise, analyzing a non-numeric step will include it in the chart in the Default

view:

- **Improved analysis on multiple steps:** In the previous version of Step details, analyzing multiple steps at the same time came with a few limitations. Series for limits, standard deviation and average were not available. Neither was the frequency chart. This has been rectified in the new version.

- **Other details chart improvements:** Several other improvements have been made to the details chart. Both total execution time and step time have been added as series. The user now also has more control over how the data is split on the axis. Data can either be split into grouping, measurements, or none of the above:
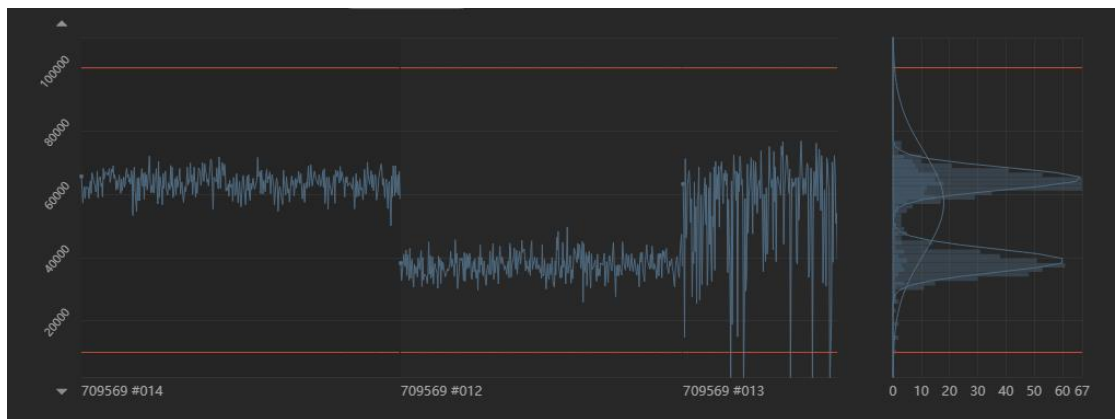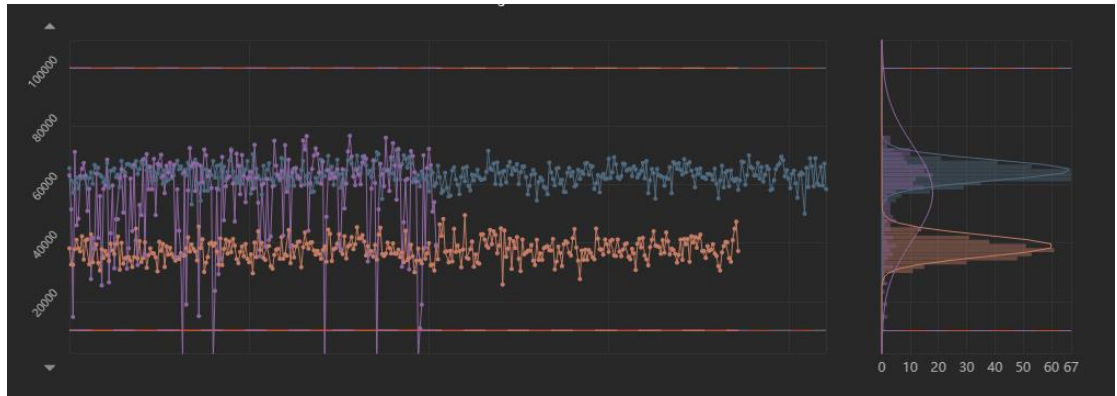
- **Improved quick selection:** While the previous Step details allowed the user to quickly select the top 10 failing steps, an improved quick selection has now been implemented, allowing to choose measurements based on status, step type and Cpk.

- **Theme support:** While the previous Step details was only really optimized for light theme, the new report brings TSA in line with the rest of WATS visually.