

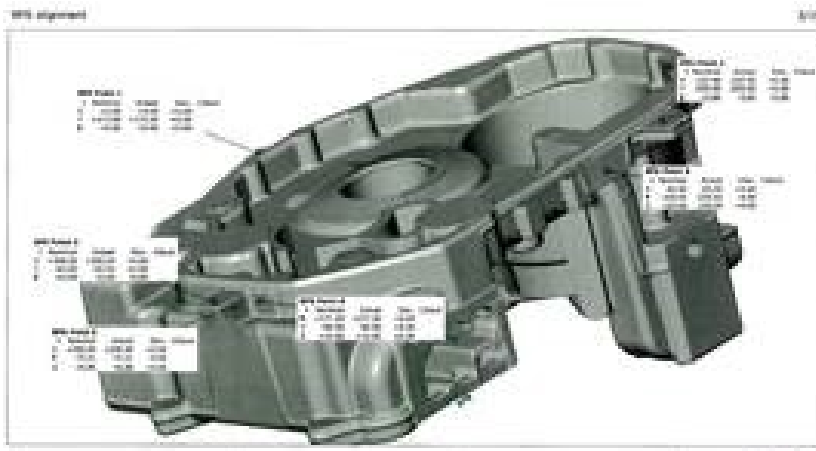
## General evaluation specifications for measurements against CAD:

- All component geometries must be evaluated.
- The tolerance class according to 2D drawing must be shown in the reports coversheet.
- In the case of inaccessible geometries (= channels / undercuts), e.g. to reveal and measure the respective subareas by cutting the part and measure the sections.
- Sum up all relevant scanning information on cover sheet of the report. e.g. part number, drawing revision level of the CAD data file, casting date of examined parts, number of cavity, tolerance of specification according to 2D drawing, type of orientation, date of examination etc.

## Prüfbericht vom 28.03.2018

|                          |                         |
|--------------------------|-------------------------|
| <b>Teilebezeichnung:</b> | <b>Retardergehaeuse</b> |
| <b>Sachnummer:</b>       | <b>67 1150 25</b>       |
| <b>Datenstand:</b>       | <b>07.04.09</b>         |
| <b>Arbeitsgang:</b>      | <b>EMPB</b>             |
| <b>Einheit:</b>          | <b>mm</b>               |
| <b>Toleranzfeld:</b>     | <b>+/- 1.3</b>          |
| <b>Ausrichtung:</b>      | <b>RP Seite 2</b>       |
| <b>Prüfer:</b>           | <b>...</b>              |

- The orientation must be documented in the report

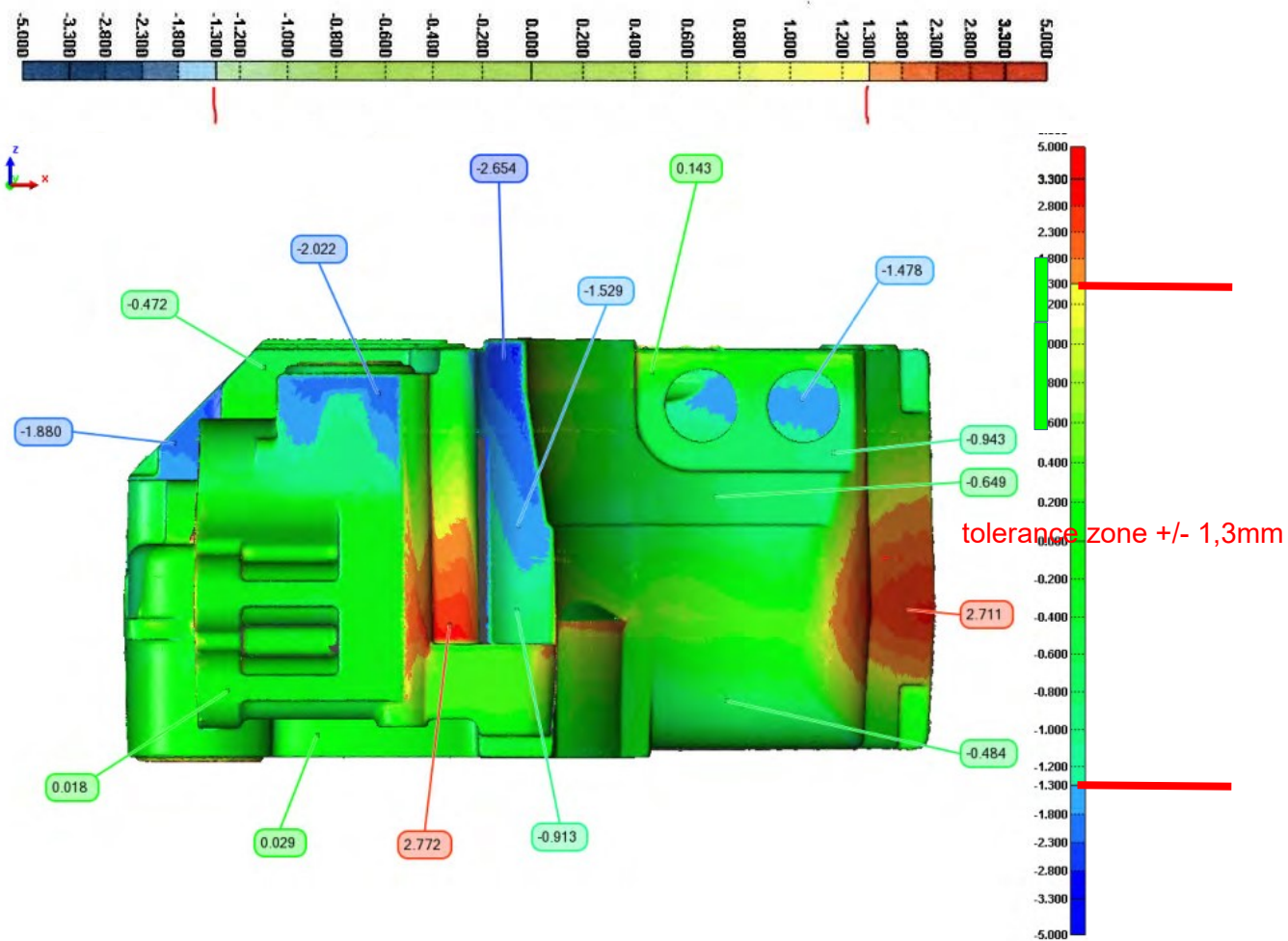


→ in case of defined clamping points in the RT drawing => alignment as per drawing

→ in case of NO defined clamping points in the RT drawing => Best Fit

- The color transitions between “within and out of the acceptable tolerance zone” for the +/- zone must have a clear "cut" (no continuous transition color).
- Distinguishable green shade are requested for “within the tolerance zone” min 3x **red shades** for “+“Deviation” and min 3x **blue shades** for “-“deviation must be applied.
- Based on the 3D scan data spot measurement -so called “flags”- have to be applied reasonably over the entire surface of the part.
- Extreme deviation must be identified and evaluated by spot measurement, so called “flags”.

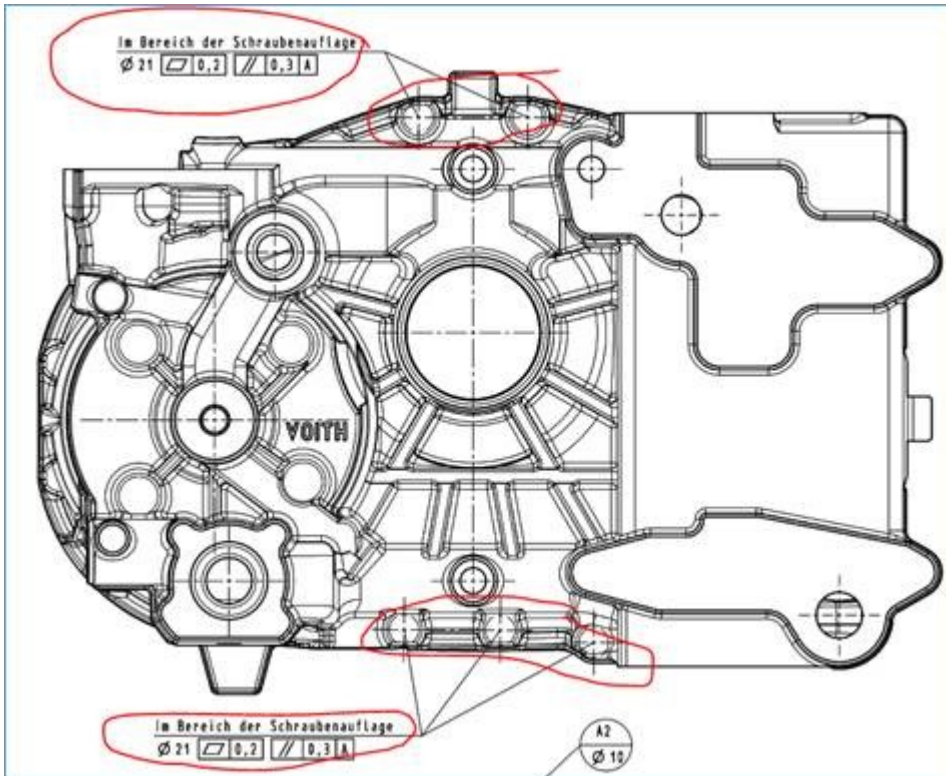
Example:



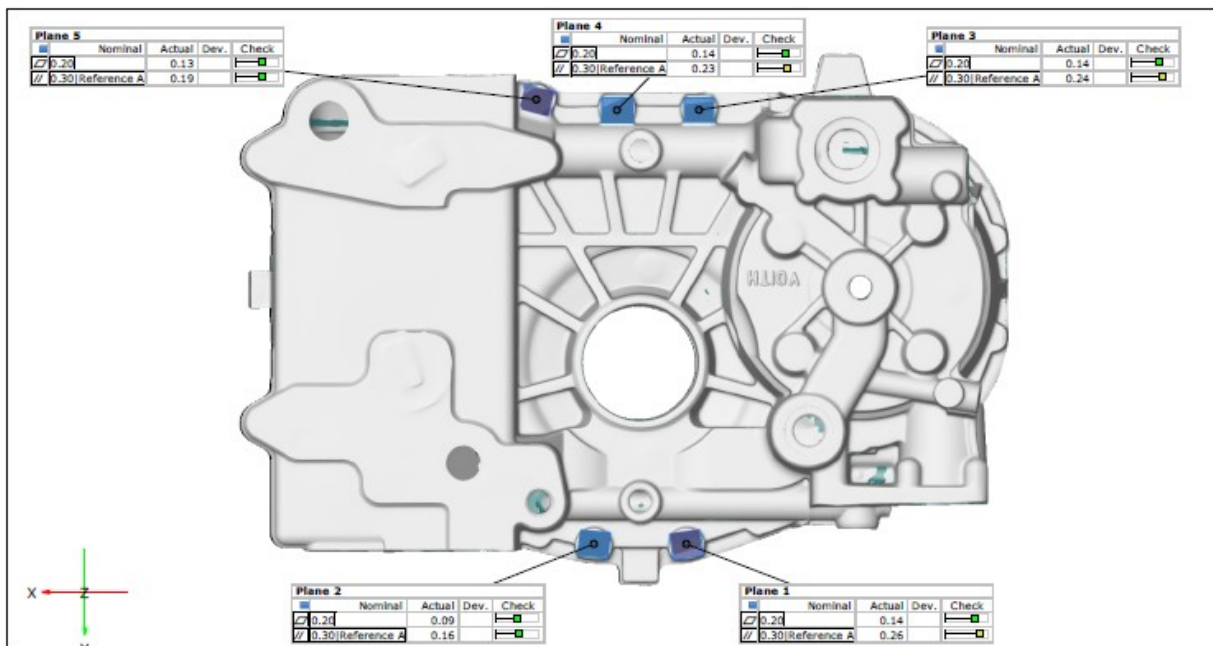
In case of unclear results in the evaluation, we reserve the right to request the raw data of the scan (e.g. as ".stl"- or ".ginspect"-file).  
The exchange of bigger data file can be done via mail or with data exchange systems.

**Evaluation criteria for special areas:**

If areas are indicated in the drawing for which a separate / restricted tolerance applies, then this must be evaluated separately in the measurement.



Flatness



**Wall thicknesses:**

In case of drawing requirement the wall thickness has to be analyzed.

Example for requirement



By 3d scan

Wall thickness analysis can be done by saw cuts using analog measurement (+ documentation in the test report + photo documentation) or digital 3D measurement (+ measurement report).

Wall thickness analysis by 3D scan:

- "All" component geometries must be evaluated
- The scale of the evaluation must also show all values below the minimum tolerance

Example of a 3D wall thickness analysis

