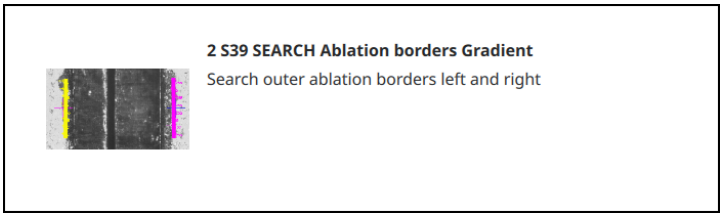
2 – S39 SEARCH Ablation borders Gradient

Description

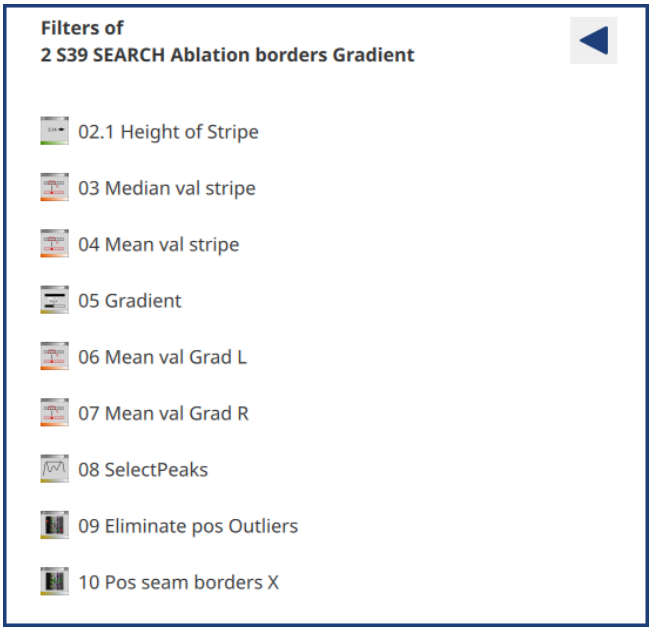
Searches the left/right border of the ablation zone inside a given rectangle out of the grey intensity image. The ablation zone is normally visible as a dark vertical band on the blanks.

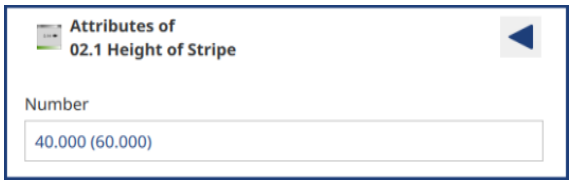
The rectangle of the ROI (**R**egion **O**f **I**nterest) is cut in small horizontal stripes. In each stripe a left and right ablation border position is searched. The average over all positions gives the final position for the left and for the right border position.

Icon

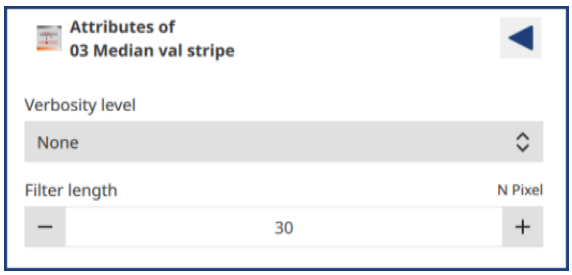


Parameters



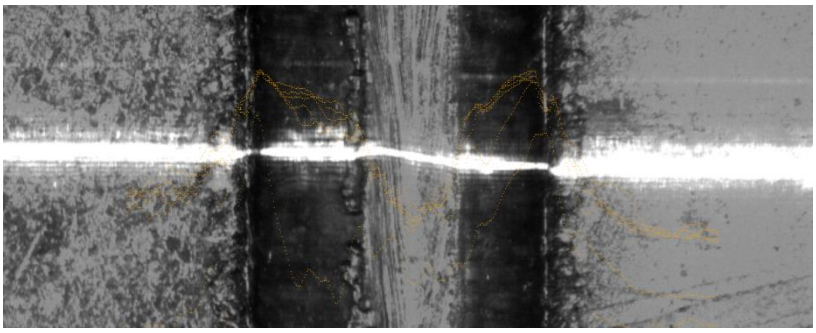


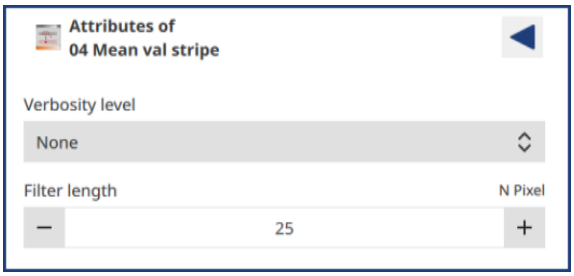
Parameter	Comment
Number	Height of each stripe in the ROI where to search for left/right side ablation border position. [Pixel]



Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Filter length	The noisier the brightness is, the higher this parameter must be selected (1 - 100). This smoothens the brightness in every stripe before further processing, using a **Median** filter. [Pixel]

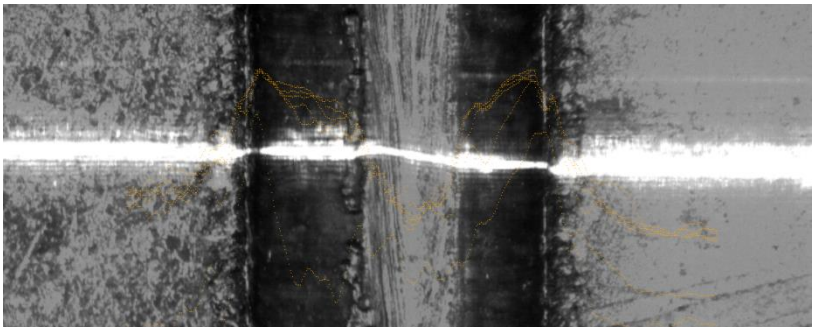
Verbosity example:
The orange lines represent the intensity shape in each stripe of the ROI with the upper ablation ROI border as “intensity zero” reference.

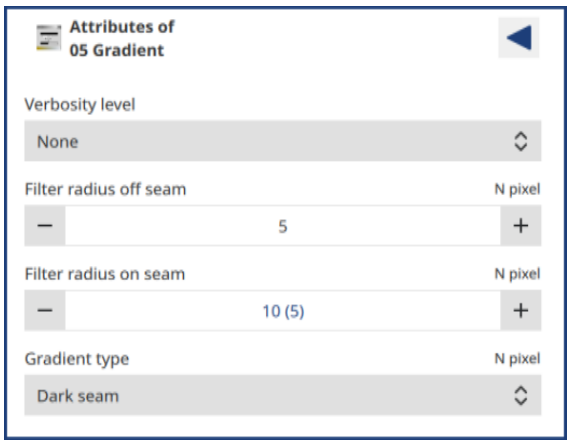




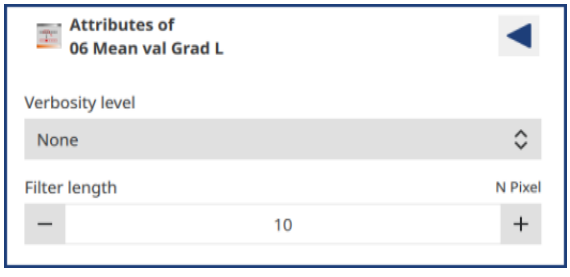
Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Filter length	The noisier the brightness is, the higher this parameter must be selected (1 - 100). This smoothens the brightness in every stripe before further processing, using a **Mean** filter. [Pixel]

Verbosity example:
The orange lines represent the intensity shape in each stripe of the ROI with the upper ablation ROI border as “intensity zero” reference.

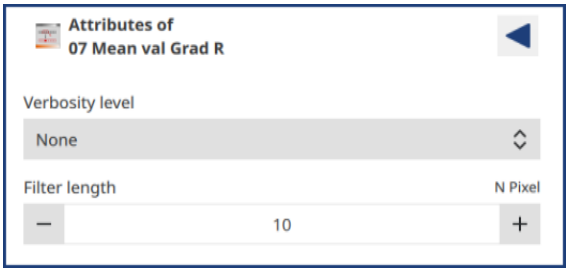




Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Filter radius off seam	The noisier the brightness is, the higher this parameter must be selected (1 - 100). This smoothens the brightness in every stripe before further processing. Value is for the stripe part **outside** the seam. [Pixel]
Filter radius on seam	The noisier the brightness is, the higher this parameter must be selected (1 - 100). This smoothens the brightness in every stripe before further processing. Value is for the stripe part **inside** the seam. [Pixel]
Gradient type	How to check gradients at seam border: • **Absolute** = don't care if the seam intensity is higher or smaller than the blanks intensity • **Dark seam** = the intensity in the seam is expected to be smaller than the intensity outside on the blanks • **Bright seam** = the intensity in the seam is expected to be bigger than the intensity outside on the blanks

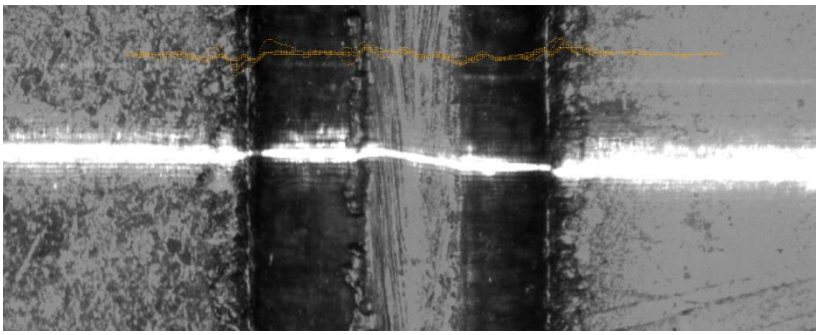


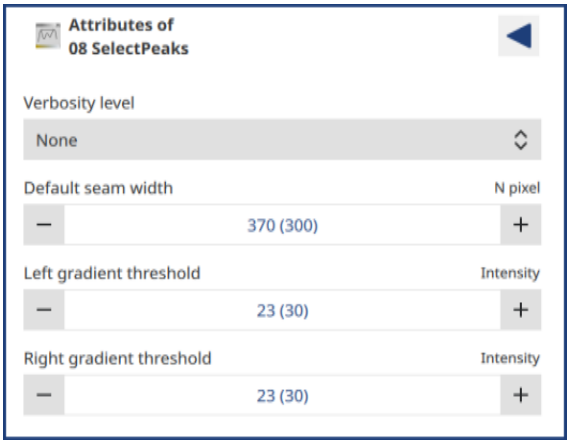
Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Filter length	Filter length for the left side gradients in each stripe, to be averaged on. [Pixel]



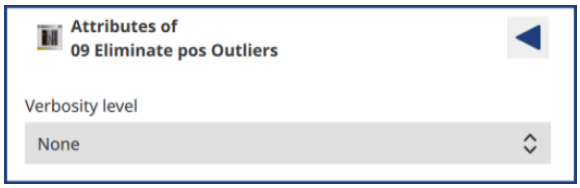
Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Filter length	Filter length for the right side gradients in each stripe, to be averaged on. [Pixel]

Verbosity example:
The orange lines represent the intensity changes (gradients) in each stripe of the ROI with the upper ablation ROI border as “Gradient zero” reference.





Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Default seam width	Nominal seam width (in pixels). Guideline for the seam detection. [Pixel]
Left gradient threshold	Minimum brightness gradient in one stripe that is taken and, in order to detect the seam rim, must be surpassed. Separately for the left side.
Right gradient threshold	Minimum brightness gradient in one stripe that is taken and, in order to detect the seam rim, must be surpassed. Separately for the right side.



Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.

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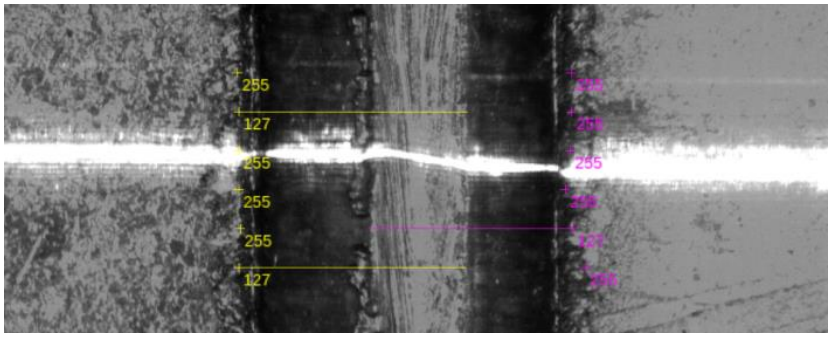
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.

Verbosity example:
Yellow crosses mark the found left ablation border position in every stripe of the ROI. Yellow lines mark found points that were changed/eliminated.
Magenta crosses mark the found right ablation border position in every stripe of the ROI. Magenta lines mark found points that were changed/eliminated.



- **Measured values for plotter**

- **Subgraphs interface**

IN bridges **OUT bridges**

image	Img ROI ablation	**value**	Ablation out X left Ablation out X right
value	ROI ablation Y ROI ablation H		

Graph block diagram