

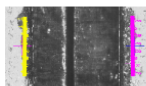
2 – S39 SEARCH Ablation borders Gradient

■ 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












2 S39 SEARCH Ablation borders Gradient
Search outer ablation borders left and right

■ Parameters

Filters of
2 S39 SEARCH Ablation borders Gradient



-  02.1 Height of Stripe
-  03 Median val stripe
-  04 Mean val stripe
-  05 Gradient
-  06 Mean val Grad L
-  07 Mean val Grad R
-  08 SelectPeaks
-  09 Eliminate pos Outliers
-  10 Pos seam borders X

Attributes of

02.1 Height of Stripe

Number

40,000 (60,000)

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

Attributes of

03 Median val stripe

Verbosity level

None

Filter length

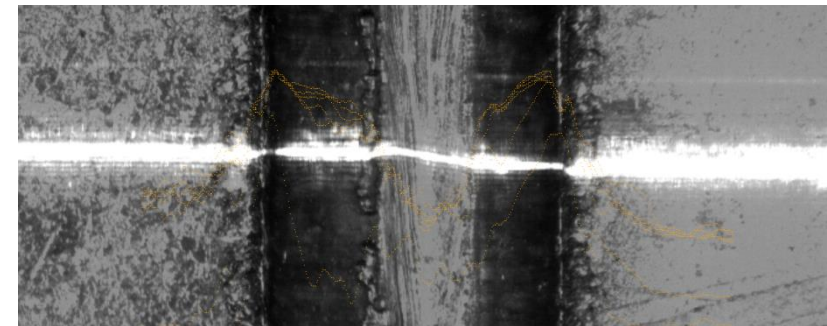
30

N 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.






Attributes of
04 Mean val stripe

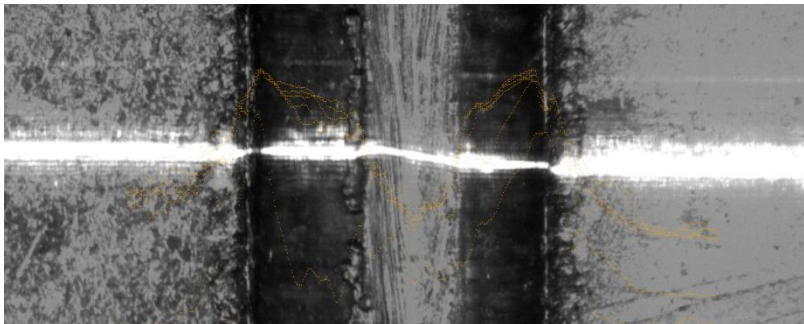
Verbosity level
 None



Filter length N Pixel
 — 25 +

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.




**Attributes of
05 Gradient**




Verbosity level
 None

Filter radius off seam N pixel
 — 5 +

Filter radius on seam N pixel
 — 10 (5) +

Gradient type N pixel
 Dark seam

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: <ul style="list-style-type: none"> • 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




**Attributes of
06 Mean val Grad L**



Verbosity level
 None

Filter length N Pixel
 — 10 +


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]





Attributes of
07 Mean val Grad R


Verbosity level
 None
 

Filter length
 N Pixel



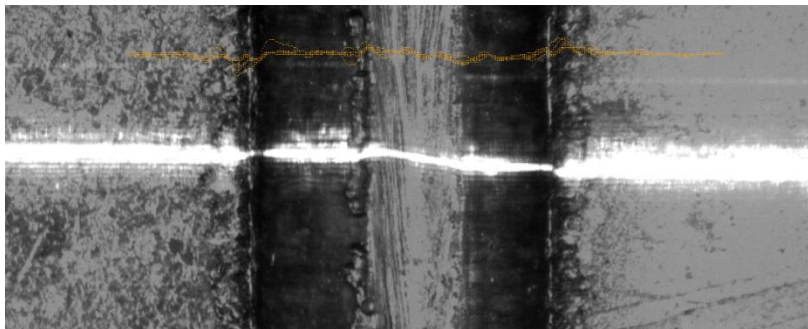
10



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.



**Attributes of
08 SelectPeaks**

Verbosity level
 None

Default seam width N pixel
 — 370 (300) +

Left gradient threshold Intensity
 — 23 (30) +

Right gradient threshold Intensity
 — 23 (30) +

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.

**Attributes of
09 Eliminate pos Outliers**

Verbosity level
 None

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



Attributes of
 10 Pos seam borders X

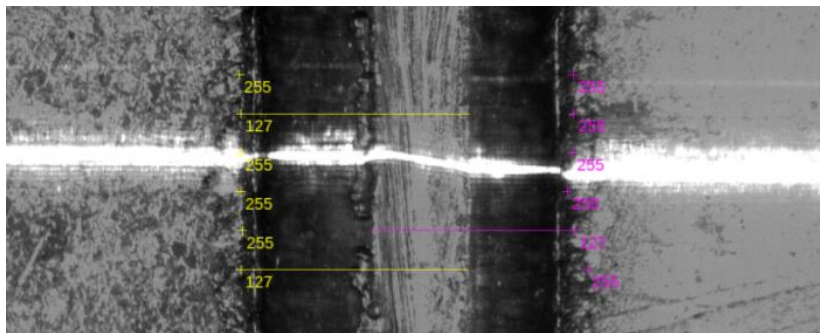
Verbosity level
 None

Parameter	Comment
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

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■ 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		

■

