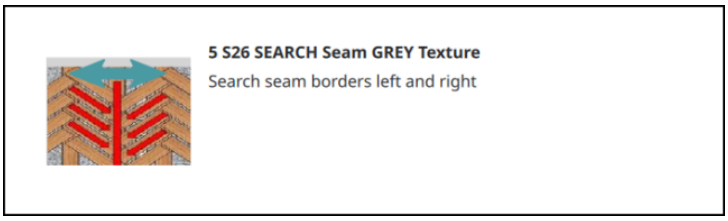
5 - S26 SEARCH Seam GREY Texture

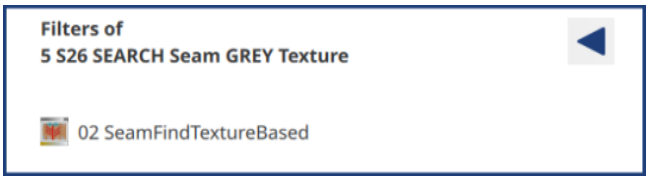
Description

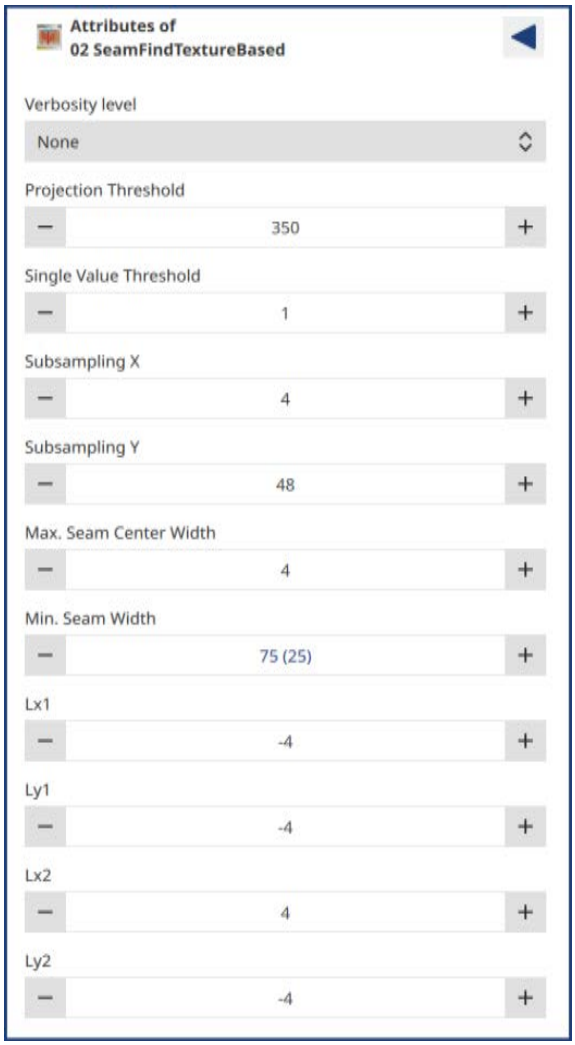
Search seam borders left and right by checking the texture of the surface.

Icon



Parameters





Parameter	Comment
Verbosity level	Selection of verbosity level. Larger verbosity levels offer more overlay information.
Projection Threshold	The quality function is vertically summed over the analysis range (vertical projection). The sum has to be bigger than the indicated threshold, otherwise the value for the column is set to zero (= there is for sure no seam end).
Single Value Threshold	The quality function has to be bigger than the indicated threshold, otherwise the value is set to zero.
Subsampling X	On the whole grey scale range there are calculations done on small rectangles (16 pixels wide and 64 pixels high). For each of this small rectangle is checked if the texture is a possible part for a left or right seam end. The calculated quality function returns a value that is getting bigger if internally a clear “fish shape” texture is found. Horizontally every dx pixels (= Subsampling X) and vertically every dy pixels (= Subsampling Y) such a rectangle is calculated. Small values for dx and dy require a long calculation time but give a high quality of the calculation. Without any knowledge choose dy = 4 x dx The **measurement accuracy of the seam position** is in best case +/- dx

	pixels which is **+/- dx * 10µm** on the blank surface. If the fish shape texture is visible only on small parts of the seam the value for dy should not be chosen too big. [Pixel]
Subsampling Y	On the whole grey scale range there are calculations done on small rectangles (16 pixels wide and 64 pixels high). For each of this small rectangle is checked if the texture is a possible part for a left or right seam end. The calculated quality function returns a value that is getting bigger if internally a clear “fish shape” texture is found. Horizontally every dx pixels (= Subsampling X) and vertically every dy pixels (= Subsampling Y) such a rectangle is calculated. Small values for dx and dy require a long calculation time but give a high quality of the calculation. Without any knowledge choose dy = 4 x dx The **measurement accuracy of the seam position** is in best case +/- dx pixels which is **+/- dx * 10µm** on the blank surface. If the fish shape texture is visible only on small parts of the seam the value for dy should not be chosen too big. [Pixel]
Max. Seam Center Width	The summed quality function (projection) may have small values also on the seam if the fish shape texture is covered with soot. In this case, to find not only a part of the seam, the algorithm allows horizontal interrupts of width Dm * dx pixels (= Max. Seamcenter width) to continue the search after a break. Typically with **too small values** only the left or right half of the seam will be found. **Too big values** will make the found seam too wide because scratched or dirty areas besides the seam are also taken as seam parts. [Pixel]
Min. Seam Width	Minimum necessary seam width. [Pixel]
Lx1	Parameter to define the angle of the texture part for the left seam side. Always **negative**! [Pixel]
Ly1	Parameter to define the angle of the texture part for the left seam side. • Positive value = Structure of left seam side goes to the top left corner • Negative value = Structure of left seam side goes to the bottom left corner [Pixel]
Lx2	Parameter to define the angle of the texture part for the right seam side. Always **positive**! [Pixel]
Ly2	Parameter to define the angle of the texture part for the right seam side. • Positive value = Structure of right seam side goes to the top right corner • Negative value = Structure of right seam side goes to the bottom right corner [Pixel]

Measured values for plotter

Subgraphs interface

IN bridges		OUT bridges	
image	Img ROI grey	**image**	ROI preSeam
value	ROI grey X ROI grey Y ROI grey W ROI grey H ROI grey valid	**value**	ROI preSeam X ROI preSeam Y ROI preSeam W ROI preSeam H ROI preSeam valid Seam pos left Seam pos right

Graph block diagram