

# AutoCLAD v2.0

 MULTI-AXIS LASER POWDER FUSION VISION SYSTEM SOFTWARE

## ENHANCE PRODUCTIVITY AND UsABILITY

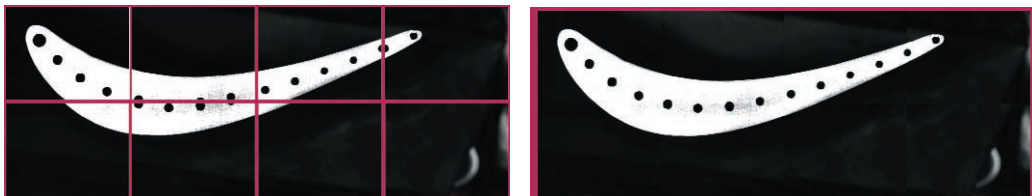
The release of AutoCLAD v2.0 is in response to customer's need for greater flexibility with larger industrial gas turbine components and increased productivity when automating weld processes for unusual gas turbine components. AutoCLAD v2.0 can be used to automate welding of blades, vanes, shrouds, seals, Z-notches, and many other components.



## NEW FEATURES

### BITMAP STITCHING

Allows AutoCLAD to acquire multiple adjacent image frames and combine them together into one single frame or when higher pixel resolution is required.



*2 by 4 frame-stitched image (reduced size) – taken with a 50mm lens. The length of the object is approx.. 6" (152mm).*

### IMAGE ZOOM & PAN

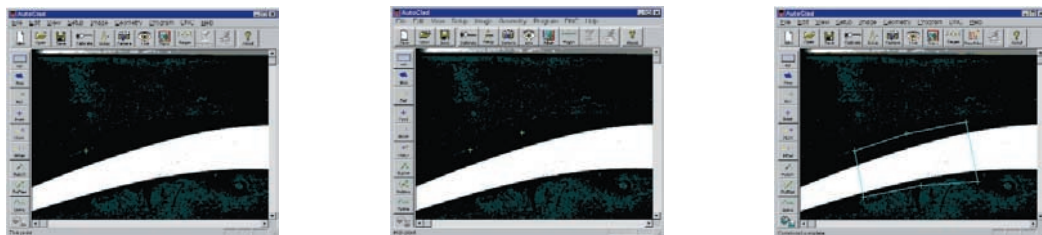
Added to facilitate working with frame-stitched images that may potentially be much larger than the display size.



*Zoom scale factor can be from 10 to 1000 percent of the actual image size.*

### POLYGON AREA OF INTEREST

Essentially a "connect-the-dots" feature, enables the user to select points around a component, and the software connects those points automatically.



WWW.HUFFMANCORP.COM  
1-888-HUFFMAN

# AutoCLAD v2.0

MULTI-AXIS LASER POWDER FUSION VISION SYSTEM SOFTWARE

## [ FEATURES ]

### Bitmap Stitching

AutoCLAD acquires a frame, then by knowing the relationship between pixel and machine units from calibration, moves the part over and acquires one or more adjoining frames. These frames are seamed together into a larger virtual frame that can be used just like before. All of the standard geometry elements, such as centroids, extreme points, edge detectors, points and splines can be added to create paths.

### Image Pan and Zoom

This feature was added to facilitate working with frame-stitched images which may potentially be much larger than the display size. Standard Windows<sup>®</sup> scroll bars are used for the panning control. These panning scroll bars let the user view different sections of the part in the virtual image. A new dockable dialog bar has been provided to implement the zoom function. The zoom scale factor can be changed anywhere from 10 to 1000 percent of the actual image size.

### Polygon Area of Interest

This new Area of Interest is a closed polygon comprised of control points and connecting line segments. This feature is useful for following unusually contoured parts or where there is little brightness difference between the part and the background. It can also be creatively used to segment areas on the part.

### Rotary Row Column

Similar parts arrayed in a circle about a rotational axis can be processed in one setup. Depending on the type of components and surfaces to be welded, this feature can significantly enhance productivity by enabling the user to palletize multiple parts in a rectangular (rows & columns) or polar (circular) array.

### Process Lighting in PAR File

Unique process lighting values can be stored in each individual part parameter file. Significant time can be saved by this feature, because the user no longer has to reset the lighting values when parts are changed out.

### Remote Processing

Image processing can be initiated by an Excel spreadsheet or other DDE-compatible application remotely through the controller's database. Especially useful for data collection and for integrating other applications such as post-processors.

### Macro Reference Point

Translates a position on the image into machine coordinates, which are then transferred to the controller's database. The point data can be retrieved or stored in an Excel spreadsheet or other DDE-compatible application.

### Line Segments and Line Connectors

This CAD-like feature creates line segments and lines connected between points or other entities within the vision system.

### Intersection Point

Another CAD-like feature that creates actual or projected intersection points of line segments. This aids in finding corners or projecting target points off of a part.

*Windows is a registered trademark of Microsoft Corporation in the U.S. and other countries used under license.*



#### CORPORATE HEADQUARTERS

1050 HUFFMAN WAY • CLOVER, SC 29710 • USA  
TEL: 803-222-4561 • FAX: 803-222-7599  
TOLL-FREE: 888-HUFFMAN  
WEB: WWW.HUFFMANCORP.COM