

USCS
ULJANIK SHIPBUILDING
COMPUTER SYSTEMS

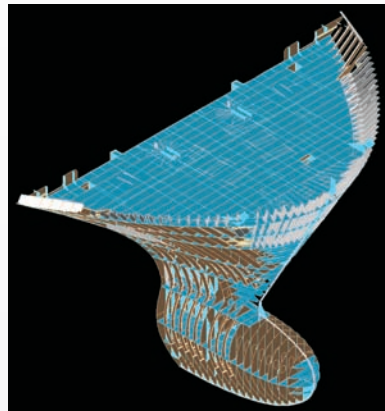
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To find out more about the TRIDENT system please visit www.uscs.hr/products.htm

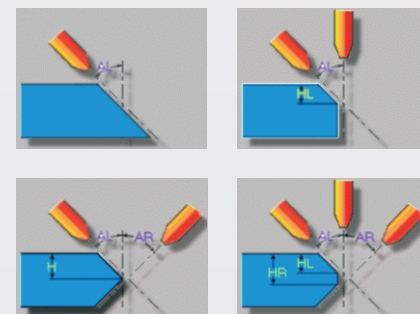
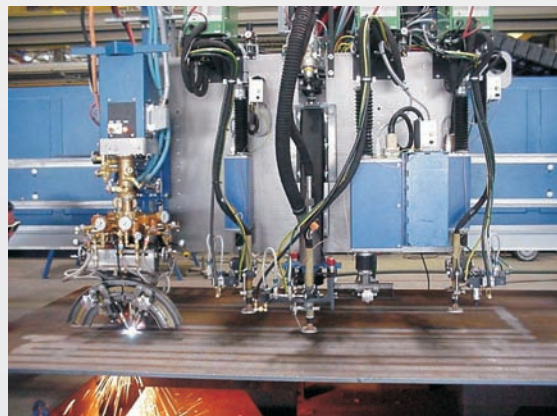


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Our strengths

- 20 years of experience in shipbuilding industry
- Specialized for shipbuilding purposes
- Processing for numerous machine types (Plasma, Oxy, ink-jet labeling, panel line, welding robot) and brands (ESAB, MESSER, SOITAB, IMAJE...).
- Rapid support for user questions, customization and new feature requests
- Constant development and improvement of the product



Labeling system

- Precise part-associative insert of texts with object snapping
- Modify/move/rotate/align/delete
- 50 different smart text variables with auto-completion and update of part, plate, file, cutting statistics and other properties that can be inserted virtually anywhere.
- Preview of actual size of labels with validity check for cutting-machines with signing gantry
- Different customizable size and content for nesting and drawings

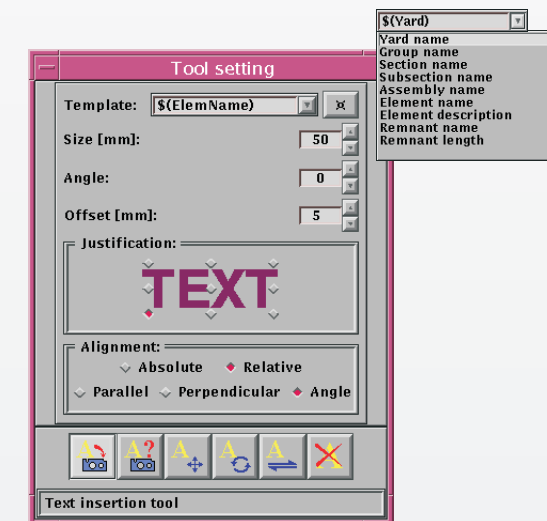


Fig.15 Text insert tool / Various templates

Program management

- Nesting/Drawing editor
- Unlimited Undo/Redo
- Unlimited View Undo/Redo
- Parts search
- Un-nested parts management
- Real-time part statistics
- Magnifier for rapid check of details on large plates/parts.
- Text view management (on/off/short)
- Measure tools for user control of dimensions (lengths, distances, radius, angles...)
- Customizable working environment

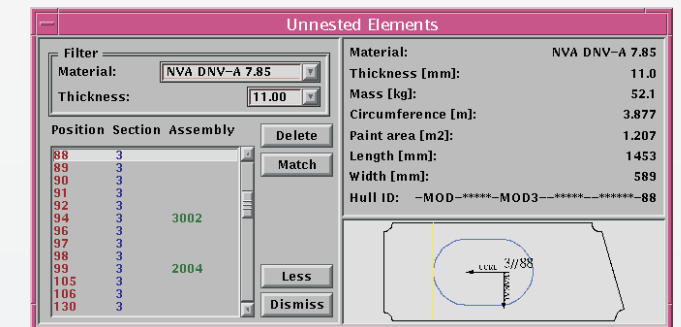


Fig.16 Un-nested parts management

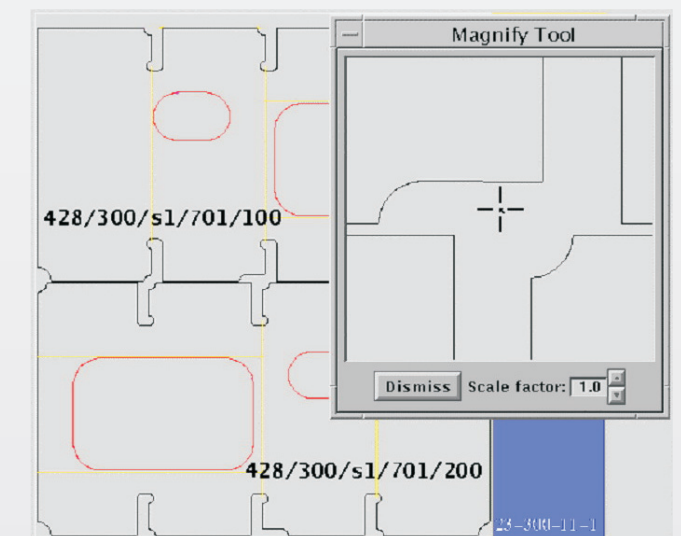


Fig.17 Magnifier

CNC data creation and processing

- Plate by plate manual or automatic processing of selected plates
- Machine choice (by plate or one common machine for all plates)
- Script language postprocessor for powerful and rapid customization of CNC processing / machine settings for each customer.
- Cutting simulation preview for validation purposes.
- Automatic validation of nesting quality: part overlaps, out of plate parts, label size & position and more

Nesting drawings

- Automatic creation and update of plate drawings on different customizable drawing templates
- Drawing templates for common, unique (per-plate) and title page drawings.
- Drawing tools for additional drawing detailing (lines, rectangles, arcs, circles, texts)
- Move, rotate and edit graphics
- Create common labels for many parts with the same label in different ways
- Create, save, import symbols for detailing speed-up and standardization
- Create detailed description of complicated and/or small parts
- Create linear (horizontal, vertical, parallel), circular (radius, diameter) and angular dimensions on the drawing
- Print drawings or export PDF drawings

Import

- Order specification plate list (exported from MARS®)
- XML definition of parts with advanced non-graphical properties (thickness, material, quality, ship orientation/side of part, marking (side, part/profile label, weld parameters)
- DXF definition of parts and nested plates
- ESSI file definition of nested plates
- Advanced/automatic/customizable labeling and filtering of parts during import

Export

- CNC files (ESSI, ISO, ink-jet labeling, welding robots...)
- DXF (parts/plates)
- Nesting reports
- Drawings (PostScript, PDF)
- MARS® interface reports.

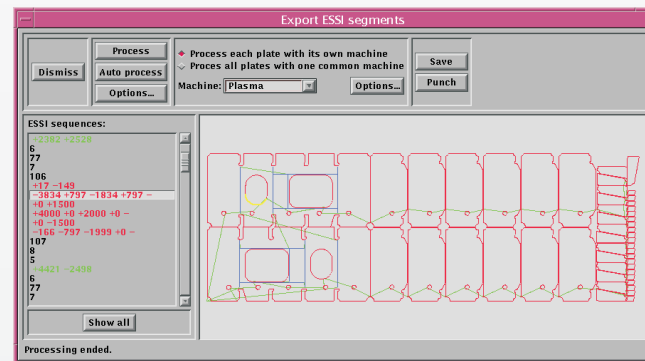


Fig.12 Export ESSI dialog box

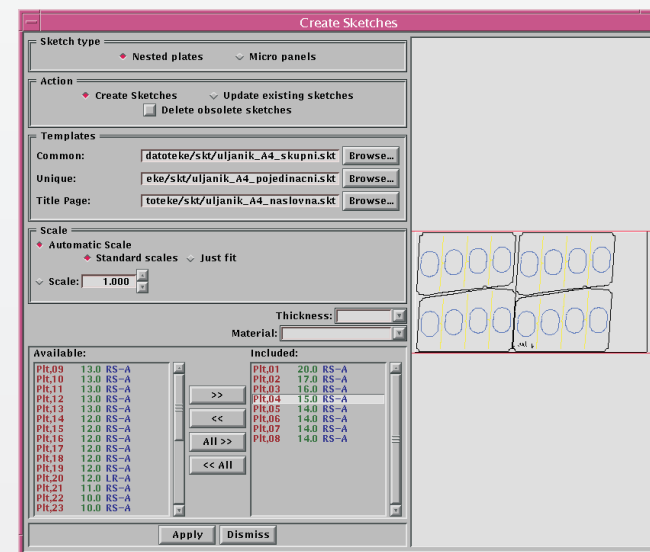


Fig.13 Nesting drawing creation dialog box

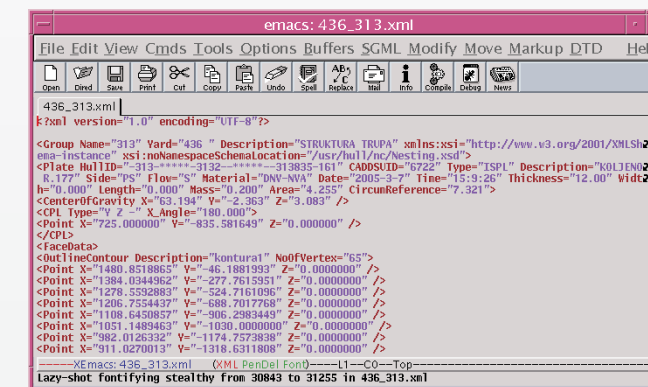


Fig.1 XML file structure

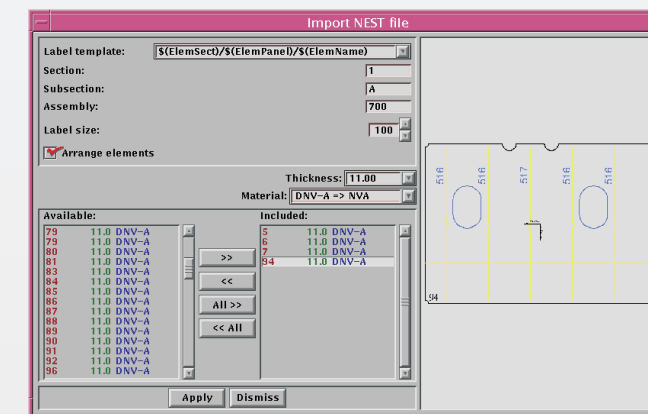


Fig.2 Import XML dialog box

Plate mark	Length [mm]	Width [mm]	Thick. [mm]	Cr. point area [m2]	Gross weight [t]	Material	Order specification	Plate machine pcs.	Machine name	Est. time [h:m:ss]
PLC.01	8000	1800	16.0	28.800	1.809	SI	32	1	Nesser-disk	00:18:12
Plate 1: 501	Rapid mov.[m] = 11.1 Marking[m] = 48.3 Cutting[m] = 19.2 Burnings = 2 Waste[m] = 3.2									
Net point area [m2]	= 27.875; Net weight [t] = 1.751									
Passes: No.:	1 Heads No.:									
1 Plates: 1p										
PLC.02	8000	2000	16.0	32.000	2.010	SI	33	1	Nesser-disk	00:18:54
Plate 1: 201	Rapid mov.[m] = 12.0 Marking[m] = 51.3 Cutting[m] = 19.6 Burnings = 2 Waste[m] = 3.1									
Net point area [m2]	= 31.007; Net weight [t] = 1.947									
Passes: No.:	1 Heads No.:									
1 Plates: 1p										

Fig.3 Nesting report

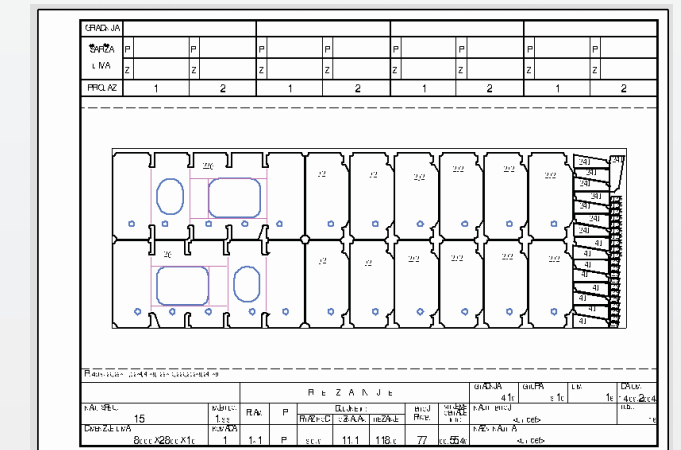


Fig.4 Nesting drawing

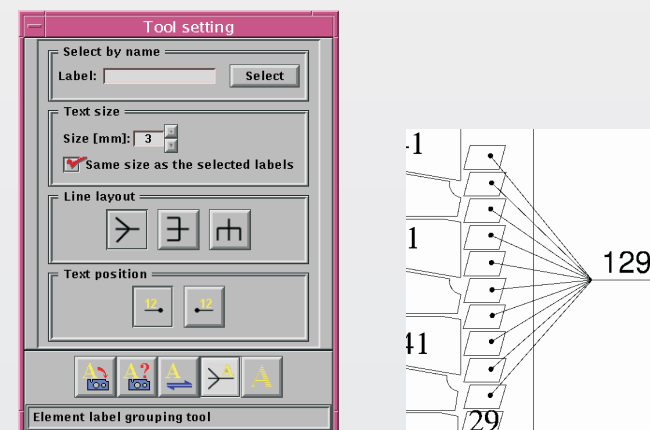


Fig.14 Label group tool / grouped labels

Part management

- Edit ID, section, subsection, assembly, thickness and material
- True mirroring (markings and bevels are also mirrored)
- Thermal shrinkage compensation (enlarges the parts to reach accurate dimensions after welding of profiles or parts on marking traces)
- Bevels editing/creation (various types and parameters)
- Corner loops creation
- Contour offsets for assembly add-ons or ceramic sheet welding
- Definition of no-cut segments on contours
- Convert holes to markings
- Customizable graphical appearance of part geometry (contours, holes, markings, bevels, labels)

Plate management

- Clone, edit, erase, relabel, advanced multi-criteria sort
- Cutting passes definition (number of plates per pass, parallel/mirrored cutting property for each plate)
- Assign different cutting machines to the same plate (each machine can have its own passes definition)
- Torch addressing definition for simultaneous multi-torch cutting

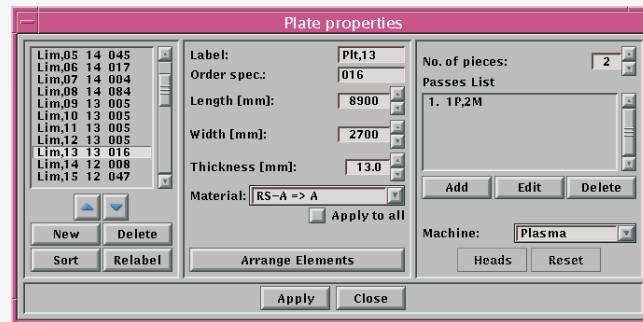


Fig.7 Plate properties dialog box

Manual/automatic interactive nesting

- Move, rotate, copy, delete, align parts on plate with drag & drop system and customizable part selection (single, window in/cross/out)
- Automatic nesting of all parts (regardless of contour complexity) on selected plate with plate edge and part edge defined offsets and nesting in parts holes

Cutting technology

- Manual part label editing for multi-plate nesting
- Part linking for automatic part label definition on multi-plate nesting
- Define bridges (linear, arc, raw).
- Define common cuts.
- Automatic remnants definition, labeling and report
- Define lead-ins and lead-outs (linear, semi-circular and 1/4 circular)
- Automatic and/or manual cutting path optimization and order with torch and part safety algorithms
- Torch compensation change (Left/Right) with bevel parameters preservation and automatic update of lead-in and lead-out positions
- Toggle no-process contours/labels
- Support for sand-blasted markings
- Three-axis cutting

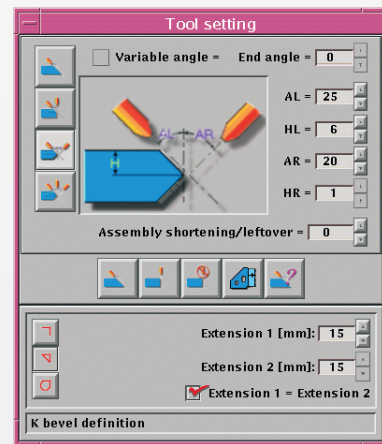


Fig.5 Edge modification tool

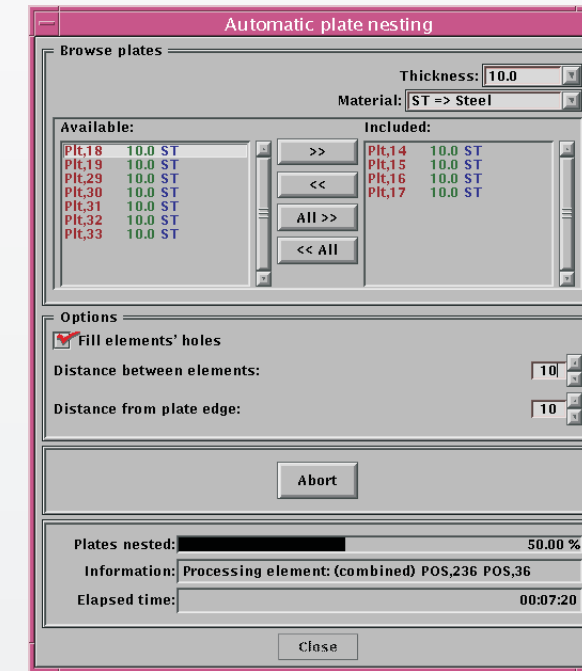


Fig.8 Automatic nesting dialog box

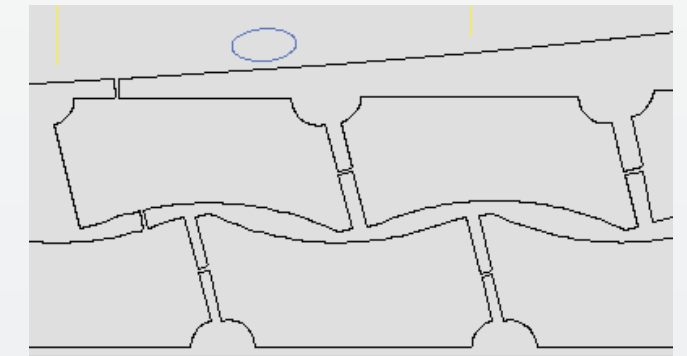


Fig.10 Bridges

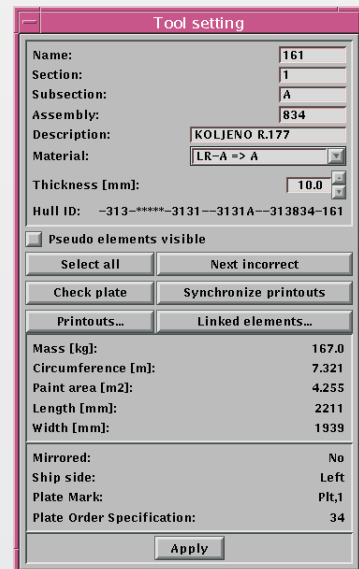


Fig.6 Part attribute tool

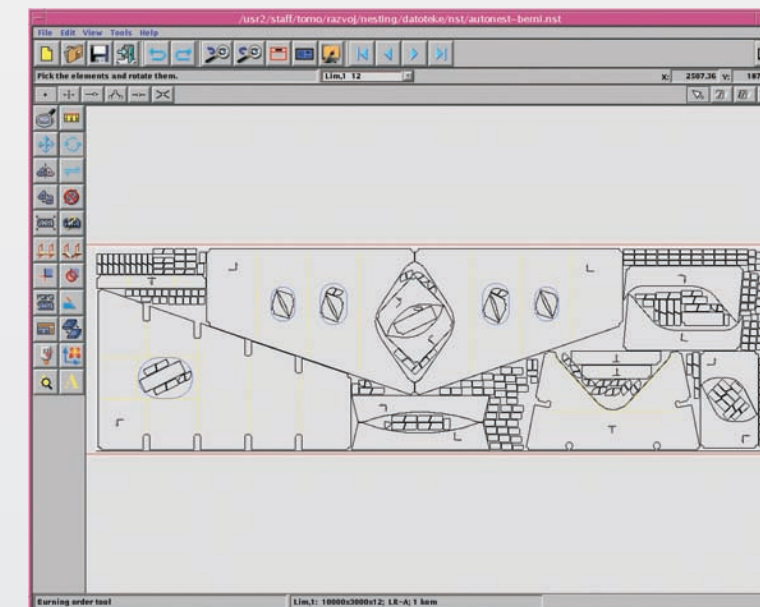


Fig.9 Automatic nesting result



Fig.11 Lead in/Lead out tool