

COMPARATIVE STUDY OF SHIP DESIGN SOFTWARE - III

TECHNICAL FEATURES	AUTOSHIP	MAXSURF	REMARKS/IMPLICATIONS
1. Approval from major Class. Societies such as; a. ABS b. DNV c. LRS d. BV e. IRS f. GL e. NKK f. RINA	NO YES YES NO NO YES YES NO	NO NO NO NO NO NO NO NO	Maxsurf does not deem it important that their software should be approved by Class. Autoship claims to be approved form the Class societies mentioned here.
2. Parametric hull form generation based on Length, Breadth, and Depth, draft, LCB, etc...	YES	YES	Maxsurf has extensive library of predefined hull forms for this purpose. Autoship has a built-in foil library
3. Generate hull form by line distortion approach from table of offsets or CAD file. (Fairing)	YES	YES	Maxsurf control points are easier to use for smaller vessels. Autoship prefers to rely more on command based interface.
4. Fairing of hull lines to full scale	YES	YES	
5. Generate table of offsets from the lines developed.	YES	YES	Maxsurf can copy to and from <i>MS Excel</i> files. Autoship can save as an <i>RTF</i> or maybe be even as <i>CSV</i> file.
6. Merge bulbous bow and appendages with hull.	YES	YES	
7. Import & Export; to & from AutoCAD	YES	YES	Both can import & export <i>dxf</i> format
8. Interface with major FEM packages	NO	YES	Maxsurf can interface with NASTRAN, STRAND, and ALGOR etc Autoship will offer this service to us as subcontract
9. Create structural design based on rules and regulation of Class. Society.	YES	NO	Maxsurf does not offer this at the moment, but may incorporate LRS rules in future. Autostructure is supposed to work as per class rules but does not state this categorically.
10. Construction Module to fix compartments, structural members and equipments to check accessibility.	YES	NO	Ship Constructor may be used to supplement Maxsurf
11. Export structural data to CNC cutting machines.	YES	NO	Ship Constructor may be used to supplement Maxsurf Production Manager will be required to do this for

COMPARATIVE STUDY OF SHIP DESIGN SOFTWARE - III

TECHNICAL FEATURES	AUTOHYDRO	HYDROMAX	Autoship REMARKS/IMPLICATIONS
12. Hydrostatic particulars from the lines for even keel as well as inclined plane.	YES	YES	
13. Bonjean Curves (areas, moments)	YES	NO	Maxsurf indicates that Bonjean curves are no longer used due to being superseded by more modern calculations. Autoship mentions that the data may be generated by series of waterlines not directly by Bonjean curves.
14. End and Side launching calculations for straight as well as cambered ways	NO	YES	
15. Cross Curves of stability	YES	YES	
16. Capacity Computations	YES	YES	
17. Hull/Structural weight and CG calcs	YES	YES	Workshop module will be required to do this via Maxsurf Autoplate & Autostructure will be required to do this via Autoship
18. Section modulus, Shear Force & Bending Moment computations of the Hull Girder.	YES	YES	Section Maker will be required to calculate hull girder section modulus in Maxsurf . Autohydro cannot perform section modulus or moment of inertia calculations.
19. Floodable Length Calculations	YES	YES	
20. Ship resistance using Guldhammer and Harvald, Holtrop & Mennen Method and other regression methods	YES	YES	Hullspeed can use all the methods except for Guldhammer and Harvald. Autopower can perform these calculations.
21. Propeller design using methodical series data, including Troost B series, Gawn series, Kaplan series and Newton-Radar series.	NO	NO	Maxsurf recommends Navcad for this purpose
22. Prepare Intact & Damage Stability Booklet	YES	YES	
22. Sounding & Ullage tables	YES	YES	
23. Freeboard Computations	YES	YES	
24. Tonnage Computations/Plan	NO	YES	Hydromax values can be copied to excel to do these calculations Autohydro can perform these calculations except for Gross and Net tonnage via 1968 conventions.

COMPARATIVE STUDY OF SHIP DESIGN SOFTWARE - III

TECHNICAL FEATURES	AUTOHYDRO	HYDROMAX	REMARKS/IMPLICATIONS
25. Create complete Stability Booklet without need to collate external data.	NO	NO	Neither Autoship nor Maxsurf can create a self contained stability booklet without substantial external interface. Maxsurf is however more suitable for this task.
26. Predefined template of stability booklets of various vessel types along with the capability to create our own	NO	NO	Maxsurf contains a single report template for this purpose. Version 12 will allow creation of custom templates for this purpose; to be released first quarter of 2006.
27. Predefined Stability Criteria for diff. vessel types and Class rules along with the capability to define our own	NO	YES	
28. Import <i>dxf</i> or <i>IGES</i> files	NO	YES	Maxsurf can convert both file types into appropriate formats for Hydromax Autohydro will have <i>dxf</i> import in the next version.
29. Probabilistic Damage calculations as per SOLAS requirements (Chapter II-1)	YES	NO	
30. Display key plan indicating equilibrium condition of vessel after damage for each case of tank flooding.	YES	YES	Maxsurf and Autoship can both deliver these plans but not all the views that we need.
31. Import lines plan in AutoCAD	NO	YES	Next version of Autohydro will offer <i>dxf</i> import, until then ASC will produce <i>GF</i> files from our <i>dxf</i> files.
32. Import Table of offsets from Excel, <i>GF</i> or text file.	YES	YES	

COMPARATIVE STUDY OF SHIP DESIGN SOFTWARE - III

COST OF EACH	ASC	FORMSYS	REMARKS/IMPLICATIONS
1 X Autoship Pro 8.3.3			
1 X Autohydro Pro 6.02			
Autoship Pro 8 upgrades to 31/12/2006			
Autohydro Pro 8 upgrades to 31/12/06			
Shipping Charges			
Total			
If purchase within 30 days a 15% discount is granted			
Terms			
(4) equal installments over (4) months			
With discount			
1 X Maxsurf Pro			
1 X Hydromax			
Network CPD			
Sub total			
Discount of 40 % if one stage payment			
Shipping Charges			
Total			
Discount of 20% if four stage payment			
Total			
Price includes free tech support and upgrades for one year.			
Prefit			

COMPARATIVE STUDY OF SHIP DESIGN SOFTWARE - III

COMMERCIAL/TRAINING SPECS.	ASC	FORMSYS	REMARKS/IMPLICATIONS
Training time			
Training cost			
Total Cost (Approx)			
PC Configuration			