WOLFSON UNIT FOR MARINE TECHNOLOGY & INDUSTRIAL AERODYNAMICS

Technical Note

By:MSDate6th January 2016

Subject: How to import a Maxsurf multihull design into HST

1. Programs used or referred to in this Note

Maxsurf16.0 Pro 64-bitHydrolink16.0 64-bitHST Release 202.01.16.1DXF to LFH28.05.15.1

2. Initial Maxsurf design

The multihull used for this tutorial is a 45 metre catamaran design with a bulbous bow, see Figure 1.



3. Routes into HST

The recommended route is via Wolfson's DXF to LFH converter, and is described below. The Hydrolink conversion module distributed with Maxsurf was also tested, but it appears that it cannot handle multihulls.

4. Hullform conversion

- 1. Run MaxSurf and open your design.
- 2. Go to Display>Design grid. Ensure these options are turned off:
 - Zero point
 - Frame of reference
 - Design grid
- 3. Lock all surfaces via the Lock All option: Surfaces>Locking>Lock All
- 4. Display>Half
- 5. Export as 3d DXF using the settings given in Figure 2 below





Data Export		
Export to File:		
Format: 2D IGES 3D IGES 2D DXF 3D DXF 3DMF Vrml	Scale: 1:2 1:3 1:4 1:5 1:10 1:15 1:25 1:50	Geometry Type: Polylines Polylines with arcs Radius <= 0.200 m NURBS curves 3D Faces 3D Meshes NURBS surfaces Precision:
Text Format: Mac (CR) Dos (CR/LF) Unix (LF)	1: 1.000 Scales	6 decimal places Remove redundant points OK Cancel

6. Run the DXF to LFH converter and import the dxf file generated above. This will bring up the Import DXF dialog of Figure 3.

Figure	3

mport DXF		×
File Infos		
Filename take1.dxf AutoCad Version MaxSurf D>	<f< td=""><td></td></f<>	
Drawing Extents		
Min X 0	MaxX 0	
Min Y 0	MaxY 0	
MinZ 0	MaxZ 0	
Import Line Types	Curves	
Polylines	Polylines	126
Arcs	Arcs	0
Two Point Lines	Two Point Lines	0
Splines	Splines	0
Options Curves To Import		t
📝 Guess Mapping	Total	0
V Absolute Y offset	Import	Cancel

7. Tick the Polylines check box to import all polylines, then press the Import button.



- 8. Delete all curves marked as Long ie Longitudinals. These are not required by HST.
- 9. The curves may be manipulated at this stage, this can be done via the Tools menu. For example, the 126 polylines of this example required stitching (Tools>Stitch All Curves) ,a command that joins adjacent curves. Please see the 'Manipulating Curves' help page of the DXF to LFH online help for further information on this.
- 10. Export as LFH via File > Save > LFH.
- 11. Run HST and import the LFH file created above. This will bring up a File Conversion dialog where parameters such as Deletion Factor, Scale etc can be set. Please refer to the HST online help for further information on this dialog. Click OK.
- 12. One element will be created, and will contain all the imported curves. Such a hull definition may need additional manipulation if the hull form is complex; for example a bulbous bow requires an additional element and break sections. These should be generated manually, please see the Hull and Compartment Definition Guide in the HST online help.

