Paramarine Tutorial 8

Design for Production

The design for Production module is used to analyze the design definition and produce a breakdown of parts for construction based on a build strategy and various production parameters. The module collates information from other design modules of the software combining information that can be used to develop a production definition of the ship. Primarily this is information from the structural definition module as well as block, equipment and system information from the Early Stage Design Module. Once the design definition has been analyzed, the production data is formatted in a hierarchy of production blocks, sub assemblies and individual parts. Associated with each stage is construction information on junctions representing joins, welds or cut outs.

1. Click on the fixed_data folder and select insert – select the dfp_placeholder and name it design for production
2. Right click on the design for production folder and select insert – insert the object production_unit_definition under the dfp folder and name it
3. Expand the new object – expand the min and max xyz and give values slightly larger than the overall dimensions of the ship, so that it is all included in the same block
4. We can subdivide this block into smaller sub-blocks
5. Click on the production_envelope – go to operations – select subdivide – in the pop up dialogue box select one of the transverse bulkheads that have been defined in a previous stage as the division bound
6. You can subdivide the original building block to several sub assemblies
7. Right click on the design for production folder and select insert – insert the object sub_assembly_generator under the dfp folder and name it
8. Expand it – double click the production_envelope – link it with the production envelope defined in the previous step
9. Double click the enhanced_structural _definition - link it with the enhanced_structural _definition that was created in the structures part
10. Right click on the design for production folder and select insert – insert the object sub_assembly_checker under the dfp folder and name it
11. Expand it – link it with the production_sub_assembly defined earlier
12. Right click on the design for production folder and select insert – insert the object production_parameters under the dfp folder and name it
13. Expand it – you can give values for the dimensions of plates, stiffeners etc. You can also add more parameters by right clicking plates for example, and selecting insert
14. Leave the default values
15. Right click on the design for production folder and select insert – insert the object production_unit_calculator under the dfp folder and name it
16. Expand it – link the sub_assembly_checker, the production_unit_specifier, the block_definition and the production parameters with the ones defined in previous stages
17. The production_unit_calculator generates the production database of materials and labor required to construct the design

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