

# Paramarine Tutorial 1

In this tutorial we will generate a hullform for a tanker using the Intellihull method. After the completion of the hull we will check the shape of it by constructing the lines drawing. This is the plan showing the three views of a vessel (profile or buttocks, body plan, half-breadth or waterline plan). The next stage will be to modify the initial hull

## Generate the hull

1. Open a notepad file to copy error messages
2. Insert a concept placeholder
3. Under this insert a geometry placeholder and name it hull
4. Set an origin point: insert - Geometry Definitions – point
5. Under the hull insert Hull Generation – **prelim\_sizing**
6. Select ship type – oil tanker
7. Give the input capacity under the input\_data folder
8. Read the dimensions generated
9. Under the hull placeholder insert Hull Generation – **Intellihul\_curve\_set\_initiator**
10. Select ship type: tanker
11. Create the bulb: Under the hull placeholder insert Hull Generation – **Intellihul\_bulb\_shape\_initiator**
12. Set bulb type to tanker
13. Link the datum x with the LBP value from curve initiator
14. Link the values of L, B with those under the dimensions folder of the prelim\_sizing
15. Under the hull insert – Hull Generation – **Intellihull**
16. Double click on bulb shape and use as object the outputs of the bulb\_shape\_initiator
17. Double click on input curves and use as object the outputs of the curve\_set\_initiator
18. This has produced the port half of the hull
19. Click on the Fit display case button
20. Under the hull insert – Surface Modelling – **hull\_surfaces2**
21. Double click on port\_hull\_surface and set intellihul.hull\_surface as the object
22. Click on Show display case button
23. Insert solid modeling - **solid\_body**
24. Right click on hull solid choose operations and then from \_bounds
25. Point to hull\_surf2 bounds
26. Check the hull shape: right click on the hull solid, go to Drawing mode and select Gaussian Curvature

## **Generate the ship lines**

1. Insert – hull generation – hull\_generator\_chopper
2. Go to surface geometry – insert – bound\_pointer\_object – select port hull
3. Double click on the chopper and choose for example “sections”
4. Go to chopping points and select “a-b for next”
5. Choose by increment, by number etc.
6. Go to result to see the sections

## **Refine the hull shape**

1. Go to curve set initiator – right click on output and copy – right click on the parent geometry placeholder “hull” and click on paste special – click ok on paste as copy of
2. Rename it “new outputs” – expand the lines and start changing the points accordingly. Note that the initiator doesn’t let you do that.
3. Example: enlarge the transom: expand the transom – press Ctrl key and select cp 2-16 – go to operations and select translate – in the y coordinate type 3m
4. To apply these changes to the actual hull, go to Intellihull – double click on the input\_curves and select as object the new\_outputs
5. Change also the parallel\_sec\_aft
6. To make preprogrammed changes go to Intellihull – right click on demands – insert – name the object i.e. LCB – expand the object and click on LCB – then give a value to the variable distance.
7. Before that go to Intellihull – hydrostatic\_data and check the original data on LCB
8. Add more demands
9. After demands are applied, look at “dimensional data”. Note that for each dimension, there will be several values – the topmost is the most recent, will all demands applied. The bottommost is the originally generated intellihull with no demands. Intermediate values are the ship dimensions after successive application of the demands. “history\_latest\_first” shows which dimension corresponds to which demand set.

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