1. Here is an example of the process I used to design my $58^{\prime}$ vessel. This is a side view and shows a piece of steel .5 " thick which is plasma cut in the shape shown. It is actually made up of several pieces of steel plate welded together. The overall length is exactly $696^{\prime \prime}$ or $58^{\prime}$. The forward edge of this plate is called the bow stem.


2 This view shows the center longitudinal (and bow stem) again, with the addition of the frames on 36" centers.

3. shown here are both sides of the anchor roller structure (in red), which are 6 " apart, and solidly welded to the center longitudinal or bow stem.

4. Deck plating (gray color) is added behind station 1 as roof to accommodate the needed head room in the below deck sleeping quarters.

5. hull plating and forward bulwarks are wrapped around the frames and solidly welded into the bow roller and bow stem creating a buoyant envelope that is still $58^{\prime}$ long.

## Conclusion:

The methods and practices of design and construction are industry standard. All builders of vessels over 5 net tonnes must receive and fill out a builders certificate which is submitted to the Admeasurements office of the USCG as part of the process to apply for vessel Documentation, which states the length, breadth and height as well as gross tons and net tons of the vessel.

Vessel length is stated below
"the horizontal distance of the hull between the foremost part of the stem and the aftermost part of the stern, excluding fittings and attachments" Page 19 TITLE 46-SHIPPING § 2101 paragraph B which is the same dimension as the LOD (length of deck) measurement and represents the buoyant envelope of the vessel.


