



- 1. All measurements and dimensions are in millimetres unless noted otherwise.
- 2. The Zero Point is the intersection of the Datum Waterline (marked "dwl") and the forefoot.
- 3. The centreline is marked " C/line ".
- 4. Offsets are measured about centreline.
- Heights are measured above or below (marked "-") the dwl.
- 6. Positions are measured forward and aft (marked "-") of the Zero Point. 7. Frame and Floor positions are given to centre of webs.
- 8. Bulkhead positions are given to centre of bulkhead plating.
- 9. Tube diameters refer to outside diameter (followed by wall thickness) unless otherwise noted.
- 10. Keel cast from virgin lead with 2% to 4% antimony added.
- 11. Keel is bored for 16 off Ø20 bolts with Ø45 counterbores 30mm deep for hex heads.
- 12. Volume of keel is approx 1.091m<sup>3</sup> (= 12,385 kg).
- 13. Dimensions given here and in Table of Offsets are final size of lead keel after cooling. An allowance for shrinkage must be made when making keel pattern. Consult foundry for
- their preferred allowance. Or otherwise use 1 in 96 or 1.042%. So multiply each dimension by 1.042 to arrive at appropriate pattern dimension.
- 14. Check shape and sizes of underside of steel keel envelope to see how they match with lead keel dimensions.
- 15. Take pattern of keel bolt tapped holes from keel envelope and use to bore off lead keel. Do NOT bore from drawing.

Lead Ballast Keel

Drawing: 1118 x 305 - 44" x 12

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