

Ballasting model boats

All modellers realise they have to ballast their boat to come to the waterline and immerse the propellor. How do you measure how much ballast is needed? Easy- just put your bare hull on the bathroom scales and weigh it. Then put it in the bath and fill it with water until it reaches the required waterline, remove and weigh again and you have the final weight of the model, subtract the weight of the kit or parts etc and you have the weight of ballast needed. Now, does it matter where you put the ballast weight, lead, batteries or whatever? Yes it does.

Firstly, it should be as low down in the hull as possible and certainly below the waterline as otherwise you get "model wobble", it heels in turns and continues rocking when disturbed. The model should be as "stiff" as possible to look real on the water. Also, if you put all the ballast amidships it will behave differently than if you weight the ends and space it wide across the beam. If you put the ballast in the bow and stern, because of the weight, it will prevent the bow and stern rising and falling as much or as quickly as if it is rotating about a weighted centre. This makes the boat push through waves and ripples like the real thing rather than pitching up and down. If you put the weight at the extreme beam, ie at the turn of the bilges, it stops the model rolling as much and slows the roll. It is obviously easier for the ship to roll around a central keel placed weight than have to lift up and down the weights in the turn of the bilges as it tries to roll. I hope I have not bored you with physics, but anyone familiar with levers, weights and moments will understand. Imagine holding a 5 ft pole in your hands with a 10 pound weight at its centre, it is easy to rock the pole from side to side. Now put a 5 pound weight at each end ie. dumbbell style, and repeat- it is much harder and slower to waggle the pole.

Overall possibly the worst place for a lump of ballast weight is central amidships leaving the model to pitch and roll like a toy rather than a real ship. If you have, say four pounds of ballast, put a pound in the bow, one in the stern and two pounds amidships as widely apart as possible- "stop model Wobble"!

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