

Stormbird's design principles

“Stormbird was designed using the principles of Harrison Butler’s Metacentric Analysis. I did the calculations for Pop. A model was made and we towed it heeled and it behaved as expected without rounding up. We used that principle on all the sailboats we designed. Including the three big boats I designed for Thackwray yachts “– Harry Jorgensen August 2021

Harrison Butler was "a strong believer in the 'metacentric shelf formula' to achieve good balance and handling under sail. The theory held that as a yacht heels under sail, its balance will depend on the immersed form of the hull, with different sections exerting varying degrees of buoyancy and aft sections possibly being more buoyant than forward sections. Metacentric shelf analysis plots the shifts in the varying buoyancies as a net value to windward or leeward and serves as a guide to achieving equal buoyancy in the dissimilar ends of a design. The work can now be done by computer, but when it was applied by the brain, hand and eye of Dr. Harrison Butler it produced famously sweet-handling boats, in the age of heavy weather helm.”

https://en.wikipedia.org/wiki/Thomas_Harrison_Butler