THE EVEN KEEL

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TECH TALK

A STRONG CASE FOR INTEGRALLY CAST LEAD BULBS

MarsKeel has been telling the Integrally Cast Bulb (ICB) story in many issues of **THE EVEN KEEL**. There are many benefits that designers may gain from this technology. The option to ICB technology, of course, is 'bolt-on' bulbs.

MarsKeel ICB designs are economical to build and maintain. The Kevlar wrap that is 'rabbited' into the joint between the cast bulb and the fin requires far less fairing material that bolt-on bulbs. The Kelar provides long term reinforcement to the joint area, where the fin and the bulb interface. The fins are often alloyed from several metals and the dissimilar coefficients of expansion, between the metals and lead bulb, may cause stress to the joint. The inherent strength of our integral casting process, and the addition of the Kevlar wrap overcomes the concern.

The joint between the 'bolt-on' bulb and the fin cannot be tightly fitted without extensive and costly matching to the two mating surfaces. Consequently, the space is filled and faired extensively. Needless to say, integrally cast lead bulbs exactly match the fin to which ther are cast. Additionally, the bolt holes on the bottom/sides of the bolt-on bulbs, require significant filling and fairing. In service, these Leels when grounded or fouled tend to lose the filling/fairing, requiring significant repair. The ICB design virtually eliminates those concerns.

Bolt-on bulbs sometimes require extra weight when class racing rules change. This problem has been solved in ICB designs. ICB Keels like the FARR 52 are constructed with a 'pocket' void(s) in the lead bulb casting that is foam filled and glassed over. If extra weight is needed , the pocket is opened and ballast is added.

ICB Keel designs allow the leading and/or the trailing edges of the keel to be driven further aft, often increasing stability and speed.

For these reasons many designers are choosing to use **MarsKeel** integrally cast lead bulbs in new project construction. ICB technology appears to be equally usefull to the performance sailor and the weekend cruiser.

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