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BURNETT YACHT DESIGN

YACHT DESIGN AND NAVAL ARCHITECTURE

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IN ASSOCIATION WITH

Nigel Irens Design

STOCK 30' CUTTER (ZINNIA), DESIGN NOTES

General

This design results from a collaboration between Nigel Irens and Ed Burnett who have been working together on a number of projects since July 1996. This constructive partnership combines Nigel's vision with Ed's technical training and draws on their joint experience in the widest possible range of boats.

The first boat built to the design was launched in the summer of 1998. Named "ZINNIA" she completed an Atlantic circuit in 1999/2000. Two further boats have now been completed and are sailing on the south coast of England. All three have differing layouts, the most recent boat launched is the first with the revised structural arrangement (Structure B). There are six more boats in build to this design in various parts of the World.

Hull Form

By modern standards, this is a heavy displacement hull. This offers benefits for cruising yachts of relatively small size and if coupled with sufficient sail area does not have to lead to unexciting performance.

The midship section is fairly slack, with a relatively narrow waterline. This approach may lead toward relatively lower form stability however power to carry sail is retained with a weight conscious rig and high ballast ratio. We feel this makes a more seakindly hull and also helps keep wetted surface down. Leaning the stem forward from the more traditional plumb profile makes the bow more of a logical conclusion to the rest of the hull with the section shape we favour.

Construction

We specify wood epoxy construction although traditional timber or other methods would not be out of the question.

Structure A uses 11 ring frames to support the planking and gives complete freedom with internal layouts as no bulkheads or other interior members are required for structural integrity. This is the arrangement used on ZINNIA.

Structure B uses 3 ring frames and the main bulkheads of Layout C to support the planking. As elements of the interior are relied upon for structure there is less scope for modification of the layout when using this option. It is however a less time consuming structure to build and if Layout C or some near equivalent is suitable this option will reduce the building cost of the hull.

Sail Plan

The basic rig is a fairly standard gaff cutter as we see it, the working sail is pretty generous relative to the displacement, offering good light airs performance. The yard topsail is easily stowed on deck, removing its weight and windage from the top of the rig. The staysail is the dominant sail forward, this is facilitated by keeping the mast well back and also by the raked stem, this makes the jib smaller and easier to handle.

The pole masted option is unstayed above the jib halyard, saving weight and windage aloft but providing an easy and quick means of handling the topsail without a yard.

A bermudian rig option is also available. This provides a similar sail area to the gaff rig, and retains the traditional proportions and sail area distribution that are in keeping with a boat of this type.

Deck Layout

The cabin trunk is straight sided and only as wide as it has to be to provide standing headroom where one is likely to stand. This helps to provide spacious side decks with ample room for laying out deck gear and easy passage to and from the mast. The large foredeck gives ample room for handling the headsails and ground tackle. A high toe rail and chunky rail cap will provide good footing for those on deck and lessen the impact of guardrails if these are fitted. Some builders of these boats are choosing to fit a full bulwark which is attractive and secure but represents a significant amount of work.

The cockpit seats are set below the level of the deck to provide protection and enhance the feeling of being in the boat rather than sitting on top of it. Self tailing winches are specified for headsail sheets, with the running backstays being set up on highfield levers or tackles as desired.

Interior Layout

Layout A offers full size berths for three, with a fourth berth available in the focs'le if required. Layout C has four full size berths at the expense of a slightly smaller galley.

In both cases the galley is simple but should be quite sufficient, the chart table opposite providing extra worktop space more often than not. In layout A, an open wet locker is positioned aft of the galley, convenient for those going out on deck or coming below.

The saloon has plenty of stowage for small items, as well as dressers at the forward end over the feet of the bunks. The "trotter boxes" under these dressers give a convenient stowage for bedding during the day.

There is ample scope for individual owners and builders to add their own personal touch to either layout. It would be a simple matter to fit a small heating stove (such as s Taylors diesel fired type), this will help extend the sailing season and dry the interior out on more murky summer days.

The forepeak provides a spacious toilet area, as well as stowage for warps and sails etc.