

**BUILDERS
ROUND UP** **5**

J.C.L. Marine Ltd.



trend setters

The first Moonraker heralded a new concept in express cruiser design. When Lotus chief Colin Chapman took over the group in 1971 he installed John Kelly, left, who has successfully streamlined production methods at Brundall. Tom Cox reports.

ALTHOUGH the earlier Moonraker 30 had indicated the style, it was when Robert Tucker designed the 36ft boat for Messrs Bell and Buxton that the area of appeal visible today in the Moonraker series was first established. Boats by the same builders had been produced at Brundall since the mid Sixties, the Group being formed in 1968, and the introduction of the new Moonraker indicated an entirely different approach to the medium size express cruiser market.

When the group was taken over by Lotus chief Colin Chapman in 1971 the appeal of rakish looks combined with a swish interior, built-in goodies and competitive pricing, much in line with a formula for car marketing, was continued. Some modification has been made to the hull and performance has been improved, but the basic ingredients are still apparent.

The Moonraker Softrider 36 Series E is built in the same factory space as the first of its kind but production has now been streamlined under the supervision of John Kelly, the manufacturing director, so that more and better boats are coming off the line to meet the demand. There is another link here with modern car making, for that is where John Kelly spent his time before joining Moonraker, his rationalization of production has included less boats in the course of production to give more efficient working and this has resulted in more fully finished craft being available. Current production is seven per month.

Quality control is rigid throughout construction to meet the demands of conformity to Lloyd's Rules. Moonraker were the first production manufacturers of motor cruisers to conform to the standards of the new Lloyd's Register Building Certificate. This is proof of standards of construction equivalent to the classification 100A1 at Lloyd's and has the additional advantage that periodic survey is not required.

Independent supervision of quality control and inspection within the responsibility of the manufacturers is undertaken by J.C.L. Ltd, an associate company in the group who work to the requirements of the Society's surveyors making physical checks and keeping a complete dossier of work and acceptance reports for each vessel. The factory is of course open to Lloyd's surveyors at all times so that they make direct inspection of work in progress.

The construction of each boat acquires the necessary approval by means of first, a Hull Release Note. next, the issue of a Hull Construction Certificate, then a Machinery Installation Certificate and finally the issue of the Lloyd's Register Building Certificate. The extent of control may be instanced by quoting the sequence for hull moulding; all work is dated to ensure continuity.

The hull is spray moulded on a brushed gel coat with a recorded check for mould cleanliness. Shop temperature is kept at about 70 degrees Fahrenheit and humidity in the range 52-65 per cent. The lay-up schedule is: 1oz mat hand layer on gel coat; 4oz resin-glass spray deposition; 4oz keel mat; 4oz spray, 6oz heel mat; 4oz; spray below chines, 6oz heel mat; 4oz spray; 6oz keel mat.

There is intermediate consolidation of the laminate. This schedule gives approximate thicknesses of 3/4in in the bottom, 5/8in on the topsides and 3/8in at the gunwhale. The engine beds are built separately from the hull with 3/4in marine plywood completely encapsulated in grp laminate; the finished assembly is then bonded into the hull before it is removed from the mould. On removal the hull is weighed and tapped out along the chines etc for voids. An electric meter is used to measure the laminate thickness and hardness is also checked using an impressor. The results in the various locations are recorded on a hull diagram.

The superstructure is a grp-balsa sandwich in the principal areas using 3/4in end grain wood; other thicknesses are 5/16 to 3/8 according to location. The 200-gallon fuel tanks are also laminated separately from the hull and pressure tested before installation.

Construction after the moulding shop is arranged in four major stages:

Jig 1. Install tanks, engines and all hull fittings.

Jig 2. All other fittings put in and connected. Prefabricated joinery installed. Superstructure fitted to the hull, riveted and connection matted over.

Jig 3. Fitment of flybridge if specified, windows etc and all interior trim.

Jig 4. Final finish, carpets etc.

Accompanying these major stages and the prior mould shop work there are 18 quality control inspections culminating in sea trials and a final inspection report after any deficiencies have been made good.

At the time of our visit about 360 Moonraker 36 boats had been produced and they are selling increasingly abroad. The Moonraker is available with either Perkins or Ford Tempest diesels, the standard units being two Perkins 6.354 of 115 shp each. Twin Perkins T6.354 of 175 shp each or Tempest 180 bhp units are the alternatives. Speeds are in the region 18-26 mph according to engine installation.

Accommodation in the standard boat is 5-7 berths. The Sportsman model has a large open cockpit instead of an after cabin and loses two berths. The flying bridge is optional but appears to be almost de rigeur for the type. The latest model, Series E, has a larger sundeck and improved access to the wheelhouse. Engine accessibility and sound insulation have also been improved.

Notwithstanding the appeal of having every boat built to Lloyd's standards the company is by no means wedded to the Better mousetrap conception of marketing and they actively promote sales with a keen eye on a specific customer area which includes a large number of first time owners as well as converts. One sees again an automotive influence with an inference to equate the desire of ownership with that which demands a Lotus or a Jaguar, the successful business man, who may or may not be a yachtsman but is fairly far removed from tarred hemp and fractious machinery. Someone who expects his boat to perform on demand with the same lack of effort as he may employ to drive his car accompanied by stereo and portraying leisure afloat in some style, and now, with the comforting thought that Lloyd's have guaranteed his investment.

Apparently the incentives to become the owner of a Moonraker are being similarly appreciated abroad. The ideal is made more easily attainable for the foreign buyer through his present advantage in currency. Before the end of 1974 Moonraker reported that almost 50 per cent of their production was being exported.