



TYLER BOAT CO LTD

REINFORCED PLASTIC ENGINEERS

REGISTERED OFFICE

SOVEREIGN CLOSE

TONBRIDGE - KENT - ENGLAND TN9 1RP

PHONE: TONBRIDGE 365111-9 - CABLES: TYBOATS TONBRIDGE

SHIPYARD: VICARAGE LANE, HOO

OUR REF.

YOUR REF.

DATE

Taken from The Telltale Compass - A Chapter from "The Cruise of the Kelpie: A Case Study in Ocean Voyaging" by Richard Henderson.

EASY PLEASURE - There is little doubt that many of today's mass-produced cruising sailboats are not at all ideal for extended work offshore. They may be fine for short cruises on sheltered waters, but for lengthy exposure to heavy weather in the open sea forget it; the risk is too great. On the other hand, I have never felt that one needs a heavy Colin Archer double-ender or a high freeboard motorsailer to make a passage offshore. A stock racing-cruiser can be fine without sacrifice to sailing performance, provided she is a wholesome, moderate type, well designed and strongly built.

What we were looking for when we bought our Ohlson-38, was a versatile boat, one we could safely take anywhere offshore, yet one that was fast enough for occasional racing. We wanted a handsome boat that was a smart sailer, especially to windward, and one that would be easy to handle and maintain. That's a lot to ask from any boat nowadays, but I felt that the O-38 could meet those basic requirements, and she has more than lived up to our expectations.

Features I consider essential or at least highly desirable for an offshore boat are as follows:

Strength: This is probably the foremost requirement because the boat must be able to withstand heavy weather and stay in one piece. Construction need not be tremendously heavy, but the hull must be solidly put together, rigid enough to resist flexing and panting (oil canning), and sufficiently thick to survive collisions with flotsam or sea life.

Stability: There should be sufficient keel ballast and a low enough centre of gravity of the hull to assure a high range of stability and recovery from a severe knockdown or capsize. Typical deep keel racing cruisers usually meet this requirement, but some high freeboard cruisers and motor sailer types with shallow keels, low ballast-displacement ratios, and lofty deck houses and cockpits are too vulnerable to being rolled over at sea. For me, an important requirement is the ability to lie ahull (broadside to the wind and seas under bare poles) in heavy weather, but without a decent range of stability, the risk of capsizing is too great.

Watertightness: For obvious reasons it is essential that a sinkable boat remain watertight under any conditions she could possibly encounter. This means that there should be no vulnerable deep fin or skeg that could crack or be broken off and allow flooding of the hull. I prefer a swept-back

DIRECTORS:- J. TYLER (MANAGING) H. EHRENSTROM (SWEDEN) S. LANE D. W. GREENHEAD K. G. WORKMAN
SECRETARY:- F. E. TAYLOR

BANK:- BARCLAYS BANK, 64, MOUNT PLEASANT, TUNBRIDGE WELLS, KENT.

BANK CODE: 20-98-14. ACCOUNT NUMBER 60395245

REGISTERED IN ENGLAND: NO. 681043

forefoot and keel to alleviate impact in the event the boat should happen to strike a submerged floating object head-on. There should be a small self-bailing cockpit well with large drains and the house should have small "unbreakable" windows. Of course, all openings into the hull must be capable of being closed completely and easily.

Seakindliness: This is a complex and somewhat controversial subject that cannot be discussed in a few words, but I feel strongly that extremes of hull shape and displacement should be shunned. Moderate displacement avoids the sluggishness and lack of buoyancy of extremely heavy boats while avoiding the quick motion and lack of momentum of extremely light boats. A hull shape of moderate proportions would have such characteristics as: medium overhangs for reserve buoyancy without slamming; a soft (rounded) bilge for strength, resistance to pounding, and (in combination with moderate, slow-curving body depth amidships) to improve directional stability; medium beam amidships with moderate fullness carried into the ends for good tracking, the damping of pitching, and resistance to pitch-poling, and a keel of moderate length, short enough for good helm response and low wetted area, but long enough to track well.

Rig suitability: The rig most suitable for short handed offshore work should emphasize reliability and avoid extremes in height and sail area. The masts must be sturdy and well stayed, while the sails should be sufficiently large and aerodynamically efficient for effective drive under all conditions but not so lofty or large in area as to cause tenderness or make handling difficult. An inboard rig is best from the standpoint of safety in sail handling.

By and large, the Ohlson-38 meets all of the above requirements which is remarkable when you consider the way she performs against some of the new IOR (International Offshore Rule) racing machines that I, for one, would never think about boarding for a distant short-handed ocean cruise.

Designed by the famous Swedish naval architect Einar Ohlson, the O-38 is a fibreglass boat moulded by the Tyler Boat Company in England and finished elsewhere, normally either by Alexander Robertson and Sons in Scotland or by the Ohlson Brothers in Sweden. Our boat was completed by the Swedish yard, and not surprisingly, the joiner work is superb. I have always admired the design work of Einar Ohlson, because most of his boats with which I'm familiar are versatile, aesthetically pleasing, and unusually well balanced. Perhaps the sensitivity to balance comes from the fact that Ohlson was one of the best designers of meter boats, and those craft are noted for a fine balance that changes relatively little with heel.

There are several things I like about the O-38's construction. First, it is built to rules and standards set forth by Lloyd's Register of Shipping. Of course, it is perfectly possible to have a sound boat that is not built to Lloyd's, but when high standards are followed there is greater assurance that there are no hidden flaws. Second, the hull is produced by one of the most highly respected moulders, the company that builds such impressive

craft as the Ocean-71, which for many years was the world's largest stock fibreglass yacht. I had the pleasure of visiting the Tyler Company at Tonbridge, Kent, in 1975 and was most impressed with the operation. Hulls are carefully laid up by hand with chopped strand mat and woven rovings using clear, unadulterated resin below the waterline which better assures correct resin saturation and limits the entrapment of air pockets or bubbles in the laminate. One can plainly see through the hull to spot any defects, and each layer is colour coded to aid the layup.

Another reason I like the O-38's construction is that the hull is strengthened by extensive use of foam-filled fibreglass longitudinal stringers which gives rigidity without excessive weight. The late naval architect and noted design critic, Robert Henry, once wrote: "The system of longitudinal stiffeners inside the fibreglass hull provides extra longitudinal strength, increases local stiffness, and assures that the hull will maintain its fairness. It has the disadvantage that bulkheads and interior joiner work are more difficult to fit. Most moulded auxiliaries do not include this type of hull reinforcement which could lead one to believe that it is not altogether necessary. I have often wondered how many fibreglass boats would fit into their original moulds after they have been sailed hard for four or five years. It would be a safe bet that many lightly constructed classes have changed shape enough so that they would be a far cry from a neat fit. This is a point that probably never will be proven, but if I had my choice I'd take the hull with well engineered reinforcements, as in the Ohlson 38."

In the construction of the O-38's cabin trunk and deck, there are a number of choices. The most handsome is a mahogany trunk with teak deck, but our boat is all fibreglass, which I prefer because of low maintenance, minimum leakage, and lighter weight above the topsides to provide greater stability. Actually, the boat is so good-looking and the trunk and hull so harmonious, that there is no need for a lot of wood, other than a minimum of teak trim. The deck moulding has an interior fibreglass liner which adds to the difficulty of attaching any extra through bolted fittings, but there is polyurethane foam between the laminate and liner to provide good insulation and prevent condensation. The cabin interior is very attractive with a light-weight mahogany wood ceiling. Ordinarily, I don't like a ceiling because of the difficulty of reaching the hull shell (for inspections, to reach wiring or piping, etc.) but the O-38's can be unscrewed quite easily, and there are slight cracks between the ceiling planks for ventilation and to facilitate quick removal in an emergency.

The cabin arrangement for this size boat is hard to beat. There is a splendid navigator's niche with adequate chart table near the companionway and on the opposite of the boat a U-shaped galley into which the cook can be well secured with safety belts. The galley has plenty of counter space and

lockers, a gimballed three burner stove with oven, large ice box that can easily hold a hundred pounds of ice, and a good sink near the boat's centreline which never floods during a knockdown.

There are seven bunks, two forward in a private stateroom, a quarter berth aft, and two transom berths and two pilot berths amidship in the main cabin. One of the pilot berths is a sliding type, and we only use it as a stowage area. One of the transoms slides also, which is a good feature because it converts from a comfortable seat to a berth of any desired width (narrow bunks are best in a seaway). The other transom is part of a dinette seating arrangement which surround a semi-permanent dropleaf table. Our particular boat has a bulkhead-mounted charcoal heating stove with a smoke pipe leading to the deck, and this makes a very cozy arrangement in cold weather.

The head compartment is a large standup room that can be extended across the width of the boat by opening two side-by-side doors. The head can be used either with the doors closed in the athwartship position, which blocks off the accommodation, or with the doors closed in the fore-and-aft position, which allows a clear passageway fore and aft.

Stowage space is almost unbelievable with thirty-six lockers, not counting shelves. They swallow stores to such an extent that we were finding beer, wine and other consumables for months after our boat returned from her two-and-a-half month voyage. Even so, the largest locker (under the cockpit seat) was never completely filled.

Surprisingly, after our boat was fully loaded for the trip, she did not sink below her boot-top, and her sailing performance did not suffer to any great extent. It is not always realized that in contrast to light-weight boats, medium to heavy displacement cruisers can sail almost as well when they are heavily loaded, provided the extra weight is kept low and out of the ends.

The hull shape of the C-38 is moderate and beautiful, in the traditional sense at least. It is a pre-IOR design, and unlike some of the newer racing cruisers that seem to be wrapped around IOR measurement points for optimal rating, it does not suffer from extreme beam amidships, excessive bulging tumble home (or bumps), pinched ends, or a chopped-off stern. There is a choice of sterns, one having a reversed and another having a traditional (non-reversed) transom. Our boat has the latter, and this is the type I prefer, not only for appearance, but also because the reversed stern is added on beyond the deck moulding, thereby extending the overhang a bit too far, in my opinion, and adding weight to the stern. I think the traditional transom provides a sufficient stern counter to lengthen the sailing lines, balance the bow's overhang and afford ample reserve buoyancy.

To the eye of a traditionalist, the O-38's sheer line might be a trifle flat, but I don't like a sheer that dips too low amidships, because it often results in the lee deck being awash when the boat is heeled.

The keel is not unlike certain fish fins that nature has perfected through evolution. It may not be as efficient for producing lift as the latest high-aspect ratio fin keels, but there is one debatable theory that the swept forefoot or keel slope does help in preventing water flow from the high pressure lee side to the weather side of the keel. Aerodynamicist John Norwood discussed the theory in the Amateur Yacht Research Society's "The Hydrodynamics of Lateral Resistance".

Hydrodynamics aside, however, there are other plaudits for such a keel shape. There is the safety factor (already mentioned) in the swept forefoot; the length permits good helm response with little sacrifice to directional stability; there is room in the keel for tanks and a bilge water sump, and the shape allows the ballast to be placed low for nearly the lowest centre of gravity for a given weight of ballast. A most important consideration, in my opinion, is the fact that the keel shape allows considerable leeway when there is no headway (in contrast to a long keel), and this is all but essential for lying ahull in heavy weather because otherwise the boat could trip on her keel and roll.

The rudder is surprisingly small, and it is hung on a small skeg. I don't like high-aspect-ratio skegs on seagoing boats because of the possibility of breakage, but the O-38's is shallow and very strong. There is a slight bulge or swelling of the area just forward of the skeg, which is not only helpful to hydrodynamic flow, but also provides a strong supporting base for the skeg-rudder assembly.

In recent years the O-38's rig has been modernized. As compared with the original 1968 plan, the new rig is considerably taller with a shorter main boom and inboard shrouds to allow closer trimming of headsails. Our boat, built in 1969, has the original rig but with a mast fourteen inches taller than standard and a shorter main boom that sheets to a mid-cockpit traveller. We have the outboard shrouds, but they seem to detract very little from windward ability. The aluminium spars are made by Sparlight in England, and we've had no trouble with them except for breaking the mainsail's outhaul fitting.

As for sailing performance, the O-38 excels when beating in a moderate breeze. She also runs well and is fast reaching provided she has enough heel to submerge part of her overhangs to increase waterline length. Our 27-day passage from Cape May to Faial was not fast by any means, but we were sailing short handed, and the boat was sailed very conservatively with sail reduced most nights. Furthermore, we were heavily loaded and dragging in a large solid prop, and had more than our share of heavy weather, head

winds, and calms. Our fastest day's run was 164 miles, which is not too bad for a boat that is 26.56 feet on the waterline, but under the right conditions with a full crew and racing sails, I feel sure we could break two hundred miles per day. On a six hour run last summer while surfing before large seas, Sally and I, sailing the boat alone, averaged 9.18 knots in tideless conditions, and I have a photo of the log needle pinned at twelve knots where it often remained for several seconds. Our boat is weakest in drifting conditions. She needs at least two knots or so of wind to make her move.

Racing the boat in Delta Class, the most popular class on the Chesapeake Bay, we have been fairly successful, finishing second in seasonal high points in 1974. Our second year of racing, in 1976, was not a successful, but we finished in the money more often than not and won two overnight races and our division in the Wednesday evening series competing against a few of the newer IOR boats. Given a decent breeze and a beat to windward in moderately smooth water, the O-38 can beat many of the hot IOR boats of comparable waterline length, and she can even hold some of the one-tonners under the right conditions. That's not too bad for a small ocean-going cruiser. But competitive or not, she's a joy to sail.

So far, this report on the O-38 has been mostly laudatory, but the boat is not perfect, simply because no boat is. However, her weaknesses are few. Some people seem to have a hard time steering her in following seas. Although our boat tracks well and doesn't tend to broach, she can be over-steered, especially with her Edson wheel, which requires little effort to turn. Perhaps a slightly larger rudder would help, but neither I nor my family have had much of a problem with the helm. Furthermore, the boat tracks well enough that she can be made to self-steer easily.

The famous singlehander, Clare Francis, has written that her O-38 Robertson's Golly is a bit tender, but I must say that I have found the opposite to be true. Most often our competitors are reefed or carrying small jibs while we are not. Our boat heel fairly easily until 25 or 30 degrees and then she stops and it takes a piping wind to bury her rail.

Miss Francis also complained of some leaks at the hull deck connection, and our boat had this same trouble under previous ownership, but the leaks were stopped fairly well by work done at the Hinckley yard in Maine. The deck was lifted slightly on one side, the joint was packed with a rubber-like sealer (Boatlig, I think) and then the deck was refastened to the hull flange with numerous stainless steel bolts. I asked Richard Sheehan, who runs a charter fleet of O-38s in the Virgin Islands, if any of his boats had this leakage problem, and his reply was negative.

Like many modern fibreglass boats, the O-38 has its ballast encased in the keel. This is not good if you intend to go bouncing off rocks because the glass at the bottom of the keel is vulnerable, but repair is not

difficult and the hull cannot be flooded even from a rupture so deep. For sailing in areas where the bottom is soft such as Chesapeake Bay, I'd far rather have the encased ballast because it avoids the problems associated with external ballast keel bolt leakage and corrosion and the difficulty of keeping a smooth keel surface.

We sometimes have a minor annoyance with engine vibration but I have found this is easy to control by changing the RPM, simply slowing down or speeding up a bit. The two cylinder diesel, a Volvo MD2 is only rated at 15 horsepower (European system), but it drives the boat at a good five knots, and it is marvelously economical, using only about a third of a gallon of fuel per hour. I must say that we are greatly comforted by the safety of a diesel, and it has proven to be reliable.

In the beginning, we had some difficulty tuning the mast, which is stepped through the deck. We couldn't keep it straight athwartships. After taking some careful measurements, we found the massive fibreglass step to be very slightly off centre. The fault was corrected by adding a little to one side of the tongue at the heel of the mast while cutting away a bit of the tongue on the other side. This completely solved the problem, and the mast is now straight as an arrow. We still have a minor difficulty with keeping the step dry because of rain entering halyard exits and running down the inside of the mast.

With the exception of not having a lightning ground system and having a companion way sill that could be slightly higher, there is not much more that's wrong with the O-38. In more than three years of testing our boat in every kind of condition from hard driving races to a lengthy gale at sea, I've come to the conclusion that she is an exceptional all-around boat. In the words of my cousin, a veteran sailor, who sailed his first race with us last summer: "She is the sweetest boat I have ever sailed forgiving, delicate, powerful, sure." Let us hope that the almighty rule makers will give us handicap systems that once again will encourage the production of handsome all-purpose boats that are easy to sail and a pleasure such as the Ohlson-38. - Richard Henderson.