



## MJM 29z DESIGNER COMMENTS

by Doug Zurn

Every boat launching I attend is filled with emotion and the launching of the **NEW 29z** was no exception. Imagine a yacht designer's worst nightmare: the boat gets launched and has an unsightly list, doesn't float on her lines or doesn't perform up to expectations. I heard of one Naval Architect who backed his car into a parking space and left it running in the event a quick get-away was needed. Well I have to say, while feeling apprehensive, I didn't think an emergency escape would be necessary.

We had the usual onlookers asking questions about flotation and performance, and complementing the look of the newest **MJM** product. **MJM**'s Bob Johnstone was present; John Knowles of East Coast Yacht Sales, the New England dealer; and Volvo engine technicians. All were there to witness the first launch and initial sea trials. Boston Boatworks was a beehive. Mark Lindsay was hurriedly pushing his team to wrap things up as the boat rested on a trailer in the assembly pit, waiting to be pulled out for the launch. The place was energized!

A gray, drizzly day on Boston Harbor didn't dampen the spirit of the crew as the tractor began to pull the boat from the building. Only problem was, there wasn't room to get her out. A new **MJM 34z**, #45 bound for the Caribbean and Hull #2 of the **29z** were placed in such a fashion that the operator of the tractor had to rotate the boat about 10 degrees to squeeze out between the others. This is when I walked the other direction. The crews that handle boats around boats yards are very capable but I still can't look.

Once out, the boat made her short trip on the travel lift to the launch site held by only two straps until lowered and, YES! floating "on her lines" ... of course. That's one concern behind us, I thought. Quickly descending the ladder to climb aboard the small tender that would carry us over to the boat, I knew we had a winner.

### HOW IT HAPPENED

It comes as no surprise that with computer advancements come improvements in engineering, design, and production efficiency. The **NEW MJM 29z** is a case in point. Conceived only ten months ago, the combined talents of **MJM Yachts**, **Boston Boatworks** and **Zurn Yacht Design** managed to create an exquisite design in very short order.

Drawing on the success of the **MJM 34z**, the **NEW MJM 29z** has exceeded our expectations for performance, space and comfort. Like the **34z**, we began with a hull laminated with epoxy resins and E-glass fabrics built to stringent ISO offshore standards. This laminate, coupled with the variable warp bottom, provides the stiffest panel available in this class boat.

The bottom is designed with 17 degrees deadrise aft. As the bottom moves forward it transitions to a moderate "V" of 19 degrees at the Center of Gravity (CG) and to a deep "V" of 38 degrees where slamming loads are the greatest. This is what enables the **29z** to plane quickly and still be a soft ride in all but the worst sea states, while still maintaining the highest fuel economy ratings in her class. To divert water swiftly away from the hull & crew, two lifting strakes and generous chines are located on the bottom running surface. These provide lift and lateral stability for predictable straight line running or tight cornering.

Using the right materials for the right job is important when optimizing a design. We engineered the **29z** with four structural components (Hull, Grid, Liner and Deck) all built of high-strength Epoxy or Vinylester Laminates. Combined with two-part methacrylate adhesives, they constitute a monocoque structure to combat any sea. Designed in 3-dimension software, each piece or components was carved on a five-axis router for precision fit. Also designed in 3-D and carved on three axis routers were the interior bulkheads, cabinets, soles and countertops. The result of these efforts was evident in how well the boat went together. As an added windfall, we were able to pinpoint exact centers of all the components of the boat for the purpose of generating and reviewing our weight study to ensure the 29z would float and perform as we intended.

The choice of propulsion was clear if we were to capitalize on what we had learned from the easily driven **34z**. A duo-prop (counter rotating) stern drive provides the best solution for ease of maneuverability, beach-ability, and most important, efficiency. Getting back to my opening comments, today I/O's are generations beyond the original drives that were first introduced in 1959. Advancements in Design, Engineering, and Material Specifications now produce drives that are easily maintained and solidly built. We achieve a 6% increase in performance and efficiency with the use of I/O's and Outboards over conventional drives.

The deck and interior layout were optimized to Bob Johnstone's concept of a good looking, easy to operate, 29-footer that offered a cockpit for socializing. The "Human Factor", commonly known as Ergonomics, is the key ingredient that most influenced our decisions. Although limited by ISO Standards to just ten passengers, the **MJM 29z** proves you can have handsome styling and comfortable seating for as many as thirteen in such a small package. There are also berths for five if adventures take you overnight. Versatility is also a key ingredient with three different deck configurations on three different engine options.

## THE RESULTS

After taking on fuel and water, the boat settled in just where we had expected. I anxiously awaited (while appearing calm and collected) an invitation by Bob to participate in her maiden sea-trials. I was delighted when asked to accompany Mark Lindsay, John Knowles and a crew of three mechanics. That's a total of six big guys with an accumulated weight of around 1200 lbs. A bit more than I wished. None-the-less, we pressed on and made our way out into Boston Harbor.

Mark was at the helm and the first word out of his mouth was "WOW"! He could not believe the way the boat handled. Whether turning or backing, the boat went precisely where he wanted. We sped up through various RPMS at the request of our Volvo representatives. Mark was again in awe at the visibility over the bow. We can credit Bob for that one; he insisted we knock down the height of the forward end of the cabin by an inch or so during the tooling process. Thanks Bob.

As we sped down Boston's waterfront we exceeded our cruising speed of 28 knots, topping out just under 33 knots; but not before Mark decided to drive into ferry boat wake. "What wake?" was the comment. The **MJM 29z** effortlessly split the seas and continued on her way. Not satisfied with just one attempt, Mark threw the helm hard to port and chased that wave to see how the boat handled in quartering waves. As hard as he tried he could not bury the bow and produce that undesirable bow steering scenario. Instead she tracked beautifully on what ever path Mark chose.

I eventually pried Mark off the helm. Personally, I like to go fast; and when I'm not going fast I'm usually pulling up to a mooring or dock, so good maneuverability at slow speed is also a must. I put the boat through her paces. Hard back downs were straight and true, and spinning the boat within her boat length was simple, even without the use of the bow thruster. At top speeds she was a true performer; agile and quick to respond. I wanted to shout for joy!

All in all it was a most gratifying day. Back to the docks for a quick haul and some finishing touches before heading to Ft. Lauderdale for her debut. I hope the crew at BBW gets a chance to spend some time aboard hull number 2. They deserve it. It's their care and energy that turned hundreds of parts and pieces into a work of art. Well-done **MJM** and **BBW**!

