

Kevin Milne at Mars Metal

BY ANDY ADAMS



how business owner Kevin Milne has been able to remain successful.

We can sum it up in two words: innovation and passion.

Kevin could have seen Mars Metal as a builder of lead sailboat keels and responded to the industry downturn by laying off staff and maybe closing a building or worse. Instead, he saw Mars Metal as a fabricator, not just of lead but of other materials, well able to apply company talents to other totally different business areas as in the spirit of innovation, to be partners and problem solvers for its clients.

MarsKeel is now a small part of the Mars Metal business. In a remarkably short time, taking their knowledge and skills in working with metal and particularly lead, the company has created a new division called MarsShield, developing innovative new products to improve safety for people who are x-ray technicians. They found a number of other uses for lead, but perhaps one of the most interesting one is a custom job for the United States government. The government is working with Kevin and Mars Metal to create an enormous lead-shielded building where government agents can x-ray an entire transport truck at high levels looking for contraband.

Kevin and his people dig in and learn about new business areas, going to shows and exhibitions, talking to people and searching out problems to solve. While other companies in the marine industry find their business way down, life has probably never been better at Mars Metal.

And the best part of the story is that the marine side of the business is far from being in the doldrums. The volumes not may not be there like it was in the early days for production boats, but the innovation and the passion that Kevin Milne brings to his business has

SOMETIMES when we go out and do a story, it's like reading just the introduction and maybe half the book; we are often left wondering how the story will end.

In April 2008 when we first visited Kevin Milne at Mars Metal in Burlington, Ontario, we wanted to find out how a Canadian company that operated in the very specialized field of lead sailboat keels was able to succeed both at home and in the export market, given that the value of the Canadian dollar had swung by over 30% at a time when the cost of lead had also increased, greatly adding to the challenges of remaining competitive in the industry.

At that time, the company was facing

huge challenges. How would they cope? What would they have to do to adapt?

First, the story has not ended. Mars Metal is alive and well. That came as a pleasant surprise, especially considering the precipitous global downturn in boat-building since 2008. They just aren't building as many new boats now. When we originally visited Mars Metal, its MarsKeel division had built up a booming business manufacturing lead keels for sailboats, but it was a specialized and narrow field.

Recently, we heard that Mars Metal was continuing to do well, so we thought we should follow up and see how the story has evolved and to learn

guided the company to some very important, high profile projects.

When Kevin starts talking about the boats they have done, he picks up speed quickly and just dances through a list of one significant builder after another and one famous racing boat after another.

There may not be a lot of work, but Kevin and MarsKeel is getting a lot of the best jobs. The most important innovation and probably the one bringing in the greatest notoriety is the recently created MarsKeel Design Group with Dave Fornaro and Steve Burke. Fornaro has had a long involvement with the Farr designs. As a group, they excel at projects for high performance yachts and boats with features like lifting keels.

Together, the MarsKeel Design Group went to METS in Amsterdam, the largest marine trade show in the world, for the first time. They attracted a lot of attention in the European markets and now attend METS every year along with other European shows.

The company is doing the keels for the very hot J 111 boats and has had the Catalina business since the company relocated from California to Florida.

Not that distance is an issue. MarsKeel continues to supply keels to the Southern Wind Shipyard in South Africa and has recently done the keel for their newest SW 94SL Cruiser Racer. It's an amazing design and far more than a mere lead keel. But, before we get to the full story there, let's grab some important background on Kevin and the company.

His father Philip Milne, a metallurgist, took his lead casting expertise, honed through his time at The Canada Metal Company and his own self-employment ventures and he struck out on his own. Kevin joined his father in 1979 forming Mars Metal in their home community of Burlington, Ontario.

The location was excellent – they were surrounded by boatbuilders in those days. They started doing the keels for C&C Yachts' Redline 30s from their 2,000 sq. ft. facility. It was just Kevin and his dad at first. They worked with Rob Ball and the C&C design team, but there were lots of other builders nearby. They built keels for CS Yachts, Ajax,

Whitby Yachts, Mirage and Elite from Montreal, as well as for Erich Bruckmann's boats and Dirk Kneulman's Ontario Yachts.

The business was booming with 80% to 90% coming from lead keels but people were treating the keel as a part of low sophistication. That was where Kevin and MarsKeel started to move ahead.

While other companies could also

assemble a mould and pour molten lead, then ship it out, Mars started finishing their keels, removing the flashings from the rough casting, smoothing it, painting and finishing it so that Mars Metal became a one-stop shop for the builders.

The value-added approach attracted both more business and earned higher prices.

Builders could work with Kevin and



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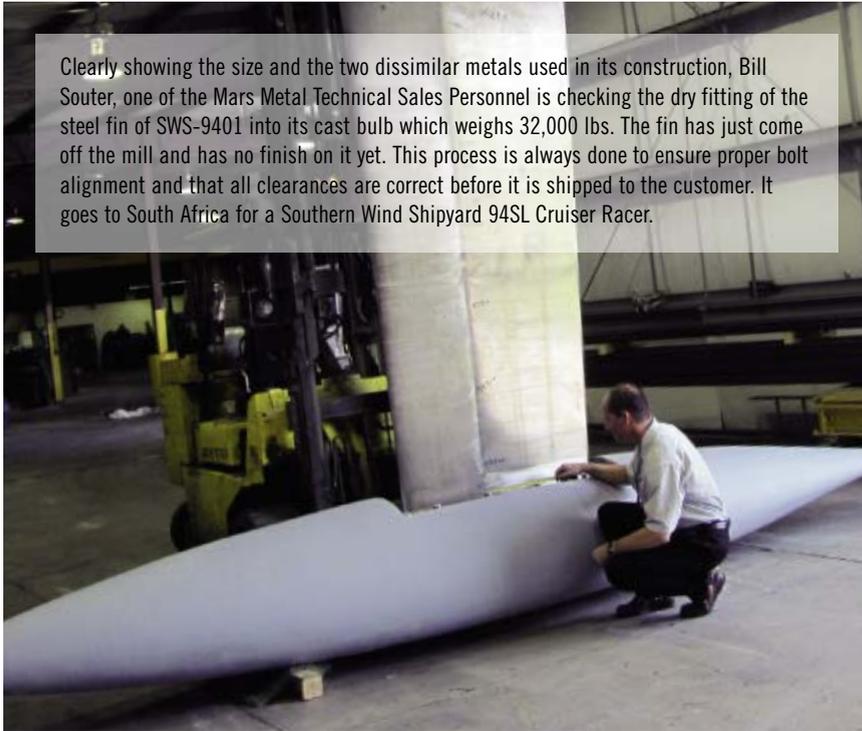
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Clearly showing the size and the two dissimilar metals used in its construction, Bill Souter, one of the Mars Metal Technical Sales Personnel is checking the dry fitting of the steel fin of SWS-9401 into its cast bulb which weighs 32,000 lbs. The fin has just come off the mill and has no finish on it yet. This process is always done to ensure proper bolt alignment and that all clearances are correct before it is shipped to the customer. It goes to South Africa for a Southern Wind Shipyard 94SL Cruiser Racer.



go from the drawing board to a finished product that was ready to install; there were no environmental issues around working with lead for the boatbuilder to worry about. This innovative approach set Mars apart.

Continuing the process, Mars started doing epoxy barrier coating, fairing and at the same time, refining their manufacturing skills in metal casting.

Another innovation that attracted production builders was what MarsKeel called their “Ceramicast Lifetime Tooling System”. Builders could get 60 or 70 keels from these ceramic moulds, saving money while getting an excellent and more accurate part. This allowed offering OEM quality replacement parts as well, should a keel get damaged.

The ceramic tools suited production casting but for the ultimate in density and accuracy, Kevin and his team created a chemically set casting sand process called “Accusand” for one-off custom keel castings.

Another innovation was doing a vertical pour resulting in a more dimensionally accurate part and with “Accusand” one that was very smooth and not porous.

They went up in lead quality deliver-

ing greater hardness for strength in complex high-performance designs. The special one-off casting became very important in doing America’s Cup boats where the keel designs were top secret. Mars would make a one-off keel and then the mould would be destroyed and the “Accusand” recycled.

As we talked about these design and production refinements and the many thoroughbred yachts that have MarsKeel keels, it became very apparent that the innovation was driven by Kevin Milne’s passion for the business, his own business, the boats and especially the designers.

Kevin seems to wake up each morning hoping for a new challenge. His relationship with Reichel Pugh Yacht Design and the Southern Wind Shipyard is a great example. A keel for a 94-footer is always a major deal but the final engineering was generated for MarsKeel Technology through the MarsKeel Design Group and associates. This keel is a “dis-similar metal” 3-D machined fin with a custom cast 32,000 lbs. lead “T”-bulb. So, it has complete CNC machining of all its parts for a high degree of precision. The fin is made of special, high-strength steel that is a formed hol-

low fabricated fin section that is seam-welded; the entire fin section is CNC-machined to a thousandth of an inch tolerance.

They achieved three things in this project: a stronger fin, machined to ultimate tolerances and a lower centre of gravity that drops the righting moment to improve sailing performance.

Another innovation Kevin described was the “ICB” or “Integral Cast Bulb”. Few can match the MarsKeel skills to pour the lead around an internal steel structure that delivers greater strength.

Rod Johnston at J Boat has pushed the envelope further working with the MarsKeel Design Group on a very high-end keel made of nickel, aluminum and bronze for his new 60’.

To meet the needs of other high-end customers they now can do all the testing required to gain Lloyd’s Certification. Kevin covered so many boats and achievements during our interview that it’s hard to list everything. What is really the most important thing though is how the passion never seems to dissipate and the innovations never stop coming.

We asked Kevin (from his long list of accomplishments) what he felt the top three achievements were.

For sure, he listed the keel for “Scherazad” as number one. This was a single pour to create a keel that was 42’ long and weighed 153,000 lbs. It was the largest in North American history.

The second was their re-fit of KZ7, an older 12 Meter America’s Cup boat and one of several MarsKeel had been associated with. The refit of KZ7 was for a match race against KZ3. This high-profile competition included such figures as Gary Jobson and Ted Turner.

Kevin’s third top accomplishment was actually three - the three different keels they had made for SWS in South Africa because these three different styles use every aspect of the MarsKeel technologies.

While the market has changed dramatically, Kevin Milne and his team have driven Mars Metal and MarsKeel to stay ahead of the changes and continue to attract important designers and their clients from around the world. ■