

## CASE STUDY

# MANUFACTURING MODERN WILLIAM FIFE CLASSICS

**Fairlie Yachts evokes William Fife's age  
of luxury with WEST SYSTEM® epoxy**



### Products Used

- WEST SYSTEM 105 Epoxy Resin®
- WEST SYSTEM hardeners
- WEST SYSTEM biaxial cloth

### Application Areas

- Bonding
- Strip-planking
- Laminating
- Vacuum infusion

### Customer

Fairlie Yachts



**||** We've had offers from many other epoxy providers over the years but we use WEST SYSTEM epoxy and we always will. It's a product that helps us minimise risks during the build process and achieve the extremely high quality standards our customers expect and deserve."

Duncan Walker, Managing Director,  
Fairlie Yachts



Photograph courtesy of Waterline Media

**To build its range of exclusive classic yachts, Fairlie Yachts uses only the finest materials, including WEST SYSTEM epoxy. In conjunction with modern construction techniques, WEST SYSTEM epoxy helps Fairlie Yachts maximise hull strength, durability and resistance to torsional loads. WEST SYSTEM epoxy also helps the company achieve a flawless finish for all components to meet customers' exacting quality standards.**

## Challenge

In the late 19th century, William Fife yachts were the pinnacle of class and luxury; desired by many, but accessible to only a select few. Today, the golden age of yachting lives on with Fairlie Yachts, which creates classic yachts based on William Fife designs, using modern epoxy construction techniques.

The current range of yachts, which includes the Fairlie 55, Fairlie 66, Fairlie 77 and Fairlie 110, epitomises this mixture of classic design and modern construction. With state-of-the-art underwater structures and rigs, yachts in the Fairlie Yachts range are as easy to handle as modern yachts and are equally suited to both racing and cruising.

To delight discerning customers, Fairlie Yachts needs to use the best materials and achieve a flawless finish on each and every build. Duncan Walker, Managing Director at Fairlie Yachts, says, "When we're building a new boat for a customer, the stakes are extremely high in terms of our investment in time, energy and materials, so we can't afford for anything at all to go wrong. We need materials that provide the excellent quality and exquisite finish customers expect, from suppliers we trust."

**///** The strength and durability of all the yachts in the Fairlie Yachts range is legendary and WEST SYSTEM epoxy plays a part in that.”

Duncan Walker, Managing Director, Fairlie Yachts

## Solution

Fairlie Yachts uses WEST SYSTEM 105 Epoxy Resin® and WEST SYSTEM hardeners to build all the yachts in its classic range. Specifically, WEST SYSTEM epoxy is used for virtually all wood-to-wood bonds, as well as for strip-planking and hull laminating.

To build hulls for all yachts in its range, Fairlie Yachts uses laminated mahogany backbone and frames bonded with WEST SYSTEM epoxy. The structures are then strip-planked with a layer of Douglas fir and two layers of mahogany veneers, laid at 45 degrees, with an additional layer fore and aft – also using WEST SYSTEM epoxy.

The strip-planked hulls of all yachts in the Fairlie Yachts range are laminated with 300g/m<sup>2</sup> biaxial cloth impregnated with WEST SYSTEM epoxy. “To laminate strip-planked hulls, we wet out biaxial cloth with WEST SYSTEM epoxy and lay it on the hull,” says Duncan. “We then apply a vacuum bag over the hull and use a pressure differential to achieve flawless consolidation every time.”

Above the waterline, Fairlie Yachts applies the same minute attention to detail as it does below. Decks are built from a layer of marine plywood grooved on the underside and laid with 12mm thick swept teak decking. A modern high-end rig and high-quality deck fittings give the yachts an appropriately luxurious finish, with modern underwater structures attached to optimise handling.



Photograph courtesy of Fairlie Yachts

Longitudinal strip planking bonded with WEST SYSTEM epoxy allows Fairlie yachts to build efficient, strong and durable hulls

## Benefits

### Excellent results on every build

The consistency and quality of WEST SYSTEM marine-grade epoxy helps Fairlie Yachts to achieve the best results for every build.

“We’ve had offers from many other epoxy providers over the years but we use WEST SYSTEM epoxy and we always will,” says Duncan. “It’s a product that helps us minimise risks during the build process and achieve the extremely high quality standards our customers expect and deserve.”

### An exquisite finish

With WEST SYSTEM epoxy and modern construction techniques, Fairlie Yachts is able to achieve an exquisite finish for all components on every build.

“WEST SYSTEM epoxy helps us deliver the super-high-quality finish our customers demand,” says Duncan. “With flawless consolidation on the hull, we can make varnishing and painting easier and achieve the best possible results,” he adds. “We also use WEST SYSTEM epoxy and vacuum bagging to shape and form ply-teak components where wood clamps would leave an unwanted mark, helping us deliver an even better finish for our customers.”

### Resistance to torsional loads

The strip-planking technique, in conjunction with WEST SYSTEM epoxy, helps Fairlie Yachts build extremely strong, durable hulls.

“With multiple wood veneers and WEST SYSTEM epoxy, we can build hulls that are extremely resistant to torsional loads, which means that our yachts will never twist on their axes, even in the worst weather conditions,” says Duncan. “The strength and durability of all the yachts in the Fairlie Yachts range is legendary and WEST SYSTEM epoxy plays a part in that.”



Photograph courtesy of Fairlie Yachts

Laminated and fabricated frames create an immensely strong transverse structure and complement a stunning interior fit out



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Duncan Walker, Managing Director, Fairlie Yachts

## Success in partnership

Over the years, Fairlie Yachts has built a strong business partnership with West System International (WSI), which manufactures WEST SYSTEM epoxy in Europe.

“West System International is located very close to our yard, so we can always get extra product quickly if we need it,” says Duncan. “Even better is the fact that WSI experts help us solve problems whenever they arise – they will always go the extra mile to help us succeed. There’s a wealth of epoxy and product knowledge available to us and it’s just a phone call away.”

## Many yachts, one epoxy

By using WEST SYSTEM products on all its builds, Fairlie Yachts can follow a single, repeatable process and achieve excellent results. “We’re always looking forward to the next new build,” says Duncan. “Whatever we work on next, WEST SYSTEM epoxy will have a key role to play in the build process and in making the new owner happy.”

To find out more about Fairlie Yachts, visit [www.fairlieyachts.com](http://www.fairlieyachts.com)



Photograph courtesy of Waterline Media

Exquisite construction, final finishing, fittings and craftsmanship are clearly evident at Fairlie Yachts

Challenge	Solution	Benefits
<ul style="list-style-type: none"> <li>Meeting customers’ high quality expectations</li> <li>Maximising strength, durability and performance</li> <li>Minimising risk during the build process</li> </ul>	<ul style="list-style-type: none"> <li>Fairlie Yachts uses WEST SYSTEM 105 Epoxy Resin® and WEST SYSTEM hardeners on all builds</li> <li>Wood-to-wood bonding with WEST SYSTEM epoxy</li> <li>Strip-planking with wood veneers and WEST SYSTEM epoxy</li> <li>Glass lamination with WEST SYSTEM epoxy utilising vacuum consolidation for a flawless finish</li> </ul>	<ul style="list-style-type: none"> <li>An exquisite finish for customers</li> <li>High resistance to torsional loads</li> <li>Excellent support from West System International (WSI)</li> <li>Repeatable process and excellent results for every yacht in the Fairlie Yachts range</li> </ul>



## West System International products

**WEST  
SYSTEM®**



### The WEST SYSTEM® range

After nearly five decades of continuous innovation, WEST SYSTEM epoxy is still recognised as one of the best general-purpose marine grade epoxies in the world. It is formulated to ensure ease of use and we also offer the best technical support to all our customers. The range, originally developed for boatbuilding, boasts superior strength and moisture resistance which makes WEST SYSTEM epoxy the number one choice for marine repair and maintenance.

**PRO-SET®**



### The PRO-SET® range

PRO-SET products are used for building high-performance, lightweight composite structures that can withstand the harshest environments. Designed for use in wet lay-up procedures involving woven and multi-axial glass, aramid, carbon-fibre and hybrid fabrics, our PRO-SET resin-hardener combinations have been formulated specifically for laminating, infusion, tooling and assembly. The range has been recently reformulated and expanded to better meet the demands of modern composite manufacturing.



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West System International is a division of Wessex Resins and Adhesives. It has been working in close partnership with Gougeon Brothers, Inc., the formulators of WEST SYSTEM® and PRO-SET® epoxies, for more than 30 years. WEST SYSTEM and PRO-SET epoxies are manufactured under licence in the UK. WSI has an extensive international distribution network throughout Europe, Africa and the Far East.