



1 HanseYachts, now said to be the world's third largest production sailing cruiser builder, has been based at Greifswald, northeast Germany, since 1990.

2 Michael Schmidt, managing director of HanseYachts.

# East goes west

HanseYachts has emerged from the communist bloc to become the world's third biggest production sail boat builder. bob greenwood reports on the German yard's rebirth and its highly efficient production lines.

Home to HanseYachts is the historic Hanseatic League city of Greifswald which, situated beside the Baltic Sea in northeast Germany, has a strong boatbuilding tradition. However, this notable German production boatbuilder is very much a child of the modern era. It sprang out of the ashes of the GDR in 1990, the year in which the former Soviet satellite state of East Germany became part of what is now the unified state of Germany.

Now, in just under twenty years it has risen to become the world's third largest builder of production sailing cruisers in volume terms after the Bénéteau group and compatriot constructor Bavaria.

In its financial year to the end of July 2008 HanseYachts achieved a turnover of €135m despite volatile trading conditions, showing a sales growth of 29 per cent on the previous year and yielding an earnings before interest and taxes of 5.8 per cent.

The founder and driving force behind HanseYachts is Michael Schmidt, a man who has been driven since childhood by a passion for sailing and who is now a racing yachtsman of repute with Admiral's Cup and Sardinia Cup line honours among his sailing medals.

Schmidt, who had learned about the production of GRP sailing cruisers while employed by C&C Yachts in Ontario, Canada, set up his own boating business in Germany



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during the 1980s. After taking over a bankrupt boatyard in Hamburg in 1980 he went into yacht repair, sales and brokerage, selling Grand Banks trawler yachts and building one-off racing yachts in Kevlar prepreg composites — which were then considered to be the height of hi-tech boatbuilding — to the designs of Judel/Vrolijk.

Ever since that time Schmidt has maintained a strong connection with the Judel/Vrolijk design team. All of the eight performance sailing cruisers from 9m-19m (31ft-62ft) under today's Hanse brand were drawn by this German studio. So, what drew him to Greifswald to set up the company that has since become the world's third largest production sailboat building business? It was a heady mixture of sentiment and sound entrepreneurial foresight.

Like many west Germans after the collapse of the communist regime to their east, Schmidt

was sympathetic towards the plight of his eastern counterparts. "During the 40 years of separation we always had interest in our eastern neighbours," he says.

#### Worthwhile detour

Quite reasonably, there was always going to be an element of enlightened self-interest to this sympathetic feeling as, after all, new wealth creation could be expected to be mutually beneficial. So when Schmidt was told of a declining state-owned boatyard that was building timber boats by the River Ryck — on which Greifswald is situated — he was sufficiently intrigued to make a detour during a business trip to Poland to take a look.

Although what he saw in Greifswald was an antiquated and under-invested business operation with low productivity and insufficient work to keep its 130-strong

3 Since 2007 European boat brands Moody and Fjord have been integrated into HanseYachts' production. 4 Fjord became a HanseYachts brand in November 2007, adding powerboats to the company's product portfolio. The Fjord 40, designed by Patrick Banfield, is the first new Fjord model under the Hanse banner. 5 Hanse's flagship model, the 630e, is moulded in foam cored prepregged epoxy e-glass.



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6 Epoxy resin e-glass prepregs are laid in a mould at HanseYachts' lamination plant close to its Greifswald headquarters. A Corecel-core epoxy sandwich laminate is standard on larger Hanse yacht models. 7 An epoxy moulded deck awaits fitting out and finishing at the assembly plant. 8 Hull and deck mouldings in balsa cored polyester are transported by travel hoist across the yard after delivery from Poland.



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workforce fully employed, he was nevertheless able to see potential there for a modern production boatbuilding plant applying western-style manufacturing and management techniques.

Discussions with local authority representatives and business managers keen to attract inward investment convinced Schmidt that here was a business opportunity that was crying out to be seized. Almost before he knew it, he found himself in a joint venture to develop the yard.

### The right attitude

From the outset Schmidt was agreeably impressed by the positive spirit co-operation of the German authorities of the former East Germany towards new business from the west.

"It wouldn't have been possible to set up a thriving boat production business, such as

**"Local officials were helpful. They sought solutions not compromises."**

HanseYachts was to become, in western Germany," he reflects. "I had tried in Hamburg and wanted to invest there, but my business wasn't important enough for the city. Trying to set up there was a nightmare. In the west it was easier for bureaucrats to say 'no' in times of reunification."

The attitude he encountered from officers of the state of Mecklenburg-Vorpommern was altogether different, however. His experience was of officials who were "helpful,

friendly and wanted to assist immediately. They looked for solutions, not western-style compromises," he says.

To suggest that everything ran sweetly, however, would be far from the truth, Schmidt admits. For one thing, the welcome shown by east Germans towards their new western compatriots began to fade after the honeymoon of unification. Before long, he says, resentment towards their opportunistic, exploitative and obviously wealthier neighbours began to show itself as employment became less secure than it had been under the old communist regime, while prices rose and the gulf in living standards east to west became all too apparent.

Like other incoming western entrepreneurs, Schmidt found himself having to make tough and sometimes unpopular business decisions to introduce efficient working practices







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9 Having been lifted into a special trolley, hull and deck mouldings are ready to enter the assembly hall, from where they will emerge after 72 hours as a complete yacht, still on this trolley. 10 Worm's-eye view of yacht assembly trolleys on Line 1 in the main assembly hall. Every four hours a completed yacht leaves the line at one end, a new set of mouldings joins the other end and all 18 trolleys are hauled simultaneously to one workstation space up the line.

and manufacturing systems to improve productivity and reduce waste, which inevitably meant job losses and retraining.

"The first 10 years were not easy," he reflects. Schmidt had expected to be able to run HanseYachts remotely, making the occasional 270km (168 miles) autobahn dash from Hamburg when needs arose, leaving day-to-day running of the business in the hands of a locally-based manager. Instead, he found that by 1996 the business was heading towards bankruptcy. To avert this he realised that he needed to step in and take direct control himself. He uprooted and moved to the east in order to be near the factory.

In spite of all these difficulties, HanseYachts was better able than most sailboat builders to surf the almost continuous wave of global boating market growth that lasted for around 15 years until the third quarter of last year when the world's credit crisis started to make its impact on recreational marine spending. Long before that, however, the new yard got off to a good start by introducing what turned out to be a highly popular first model, the Hanse 291. Instead of commissioning new designs, developing them through the prototype stage to eventual full production, Schmidt cut development cost and time at a single stroke by buying the moulds of the proven Aphrodite

29ft (9m) sailing cruiser from bankrupt Swedish builder Rex Marin.

The yacht had its public debut at the 1993 Hamburg boat show where it immediately attracted attention as a value-for-money yet competent and well-equipped yacht at a price of less than €23,000. During its five years in production the model has sold successfully in Europe, North America, Australasia and South East Asia.

### Humble beginnings

Building on the success of the Hanse 291, Schmidt used the same approach with his yard's second model. This was the Hanse 331, launched at the 1994 Hamburg show and produced using the moulds of Finnulf's 33 model sailing cruiser after the Finnish builder went into liquidation.

But even at this stage, there was never any burning desire to build a world-class sailing brand. Schmidt probably would have been

"We analysed the competition and found we could make money if we produced boats that had 'feeling.'"

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11 One-piece cast iron keels, produced by a Polish subcontractor, await attachment to yacht hulls. The high clearance of the yacht assembly trolleys means that keel fitting is done right at the beginning of the assembly process, rather than at the end as in most production yacht yards. 12 Overview of Line 1, with 18 workstations for yachts up to 13m (43ft). Having everything on the same level saves an enormous amount of time and effort.

quite content to establish a modest business that ticked over nicely so that he could do what he liked best — sailing. Germany's Baltic, he declares, "is a wonderful sailing area, but I never planned to start serious boat production here. Everything just developed when the Aphrodite moulds became available by chance."

Commercial success with the revamped and Hanse-rebranded models — including a budding export business to the Netherlands, Australia, Denmark, Finland and the UK that steadily gained momentum between 1995 and 1997 — made Schmidt start to consider strategies for building up the business. "I couldn't put a carbon date to it, but around 1997 or 1998 we began to consider going about the business at full power, with models of our own."

He had been well aware of the new generation of beamy performance cruisers that sailed well, could be sailed short-handed with the benefit of headsail furling, and that were getting good reviews.

"We analysed the competition and found that we could probably make money in this market if we could produce boats that could sail fast, handle easily and, above all, have 'feeling,'" he says.

#### Intense development

Schmidt did not have to look far to find someone to design the yachts he wanted. From that day on, every new Hanse yacht model has been drawn by his old sailing partners Judel/Vroljik. With a development process from computer-aided design to production-ready boat taking from just 10 to 14 months, the pace of development has been intense. In the nine years from 1998 to 2007 HanseYacht introduced a dozen new models and in the short time since then has renewed the range with the introductions of eight new models. The current Hanse line comprises in ascending order of size the 320, 350, 370, 400, 430, 470e, 540e and the flagship 630e.

The 'e' suffix on the three largest models denotes that the hull and deck are moulded in epoxy as standard. HanseYachts makes its own wet epoxy and e-glass prepregs, and uses these with some carbon-reinforced epoxy laminates for localised structural applications. All are laid-up in female moulds to make sandwich laminates with Gurit Corecel structural foam cores. The uncured layers are held under vacuum for 8 to 10 hours and oven cured at 65°C for 12 hours, in the case of light-coloured hulls. Dark hulls are cured for 16 hours at 75°C to avoid post-cure problems with UV light and glass mat print-through.

Hulls and decks for the epoxy models are moulded in an FRP lamination plant a short distance from the company's main factory at Greifswald which houses main assembly, joinery and finishing operations as well as CAD CAM design offices and company administration in a total covered area of 73,500m<sup>2</sup> (791,147ft<sup>2</sup>).



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13 Station 1, Line 1 — a hull moulding with strengthening grid already glued in place has its seacocks fitted. 14 A little way up the line, bulkheads, plumbing and cabling are installed. 15 Furniture is fitted. 16 At station 5 on the main assembly line, the deck, complete with fittings, is glued, screwed and laminated to the fully fitted-out hull.

The five smaller models up to the 430 are moulded in balsa cored polyester at HanseYachts' subsidiary plant 175km away near Szczecin in Poland. Customers for these yachts also have the option of stronger, lighter and more durable epoxy mouldings if they so choose.

Choice is a major selling point with HanseYachts. Customers can choose from a palette of eight hull colours along with individual stripes and graphics. In addition they can select from four different front cabin layouts, two different saloon configurations and four different aft cabin arrangements — and have them in either mahogany or cherry wood veneers.

There are also choices of carbon or aluminium spars, teak or synthetic Flexiteek decks, single or dual helms and a host of other equipment options.

#### Customisable product

"There are over 1,100 possible permutations so that we can promise that every yacht we produce is almost certain to be unique," says production manager Gregor Bredenbeck.

For a production boatbuilder that in its financial year to the end of July 2008 produced nearly 1,000 boats, such a degree of customisation is remarkable. Indeed, it's only possible thanks to the close attention to

production management detail of Bredenbeck and his production team with the backing of substantial investment in plant and equipment.

Because the old factory that Schmidt took over in the early 1990s was a throwback to the GDR era and unsuited to modern yacht production he had the entire site at Greifswald rebuilt from the ground up, a process that was completed only in 2006. The new buildings now house a vast construction hall with two assembly lines along which boats move at regular intervals from one workstation to the next. A second assembly hall for yachts of over 18m (60ft), which are more complex and









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“The galley is the focal point during furniture assembly. Everything radiates out from there.”

17 Wood trolleys with packs of laminated panels specific to individual boats in assembly wait in the workshop to be taken to the production line. 18 The highly mechanised woodwork department has seven multi-axis CNC routing, cutting and drilling machines.



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require more time to complete, is operated along less regimented lines.

In normal times (and few would dispute that the boat industry, along with just about every manufacturing activity, is experiencing an exceptional downturn) there would be a boat coming off the main assembly line, which handles models from 9m-12m (31ft-40ft) and occasionally 13m (43ft), every four hours. Larger boats — such as the Hanse 430, 470 and 540 as well as the new Moody 45 Classic and Fjord 40 (of which two marques, more later) — in peak times would come off the line at the rate of one boat every 16 hours.

In every case, hull and deck mouldings when they arrive at the factory are loaded onto specially designed trolleys where they remain until they pass out of the plant as finished

boats. These uniform trolleys have tables on which the boats sit. The tables are 3.5m (11ft) off the ground. That means that all boats are at the same working height so there's no time-wasting or clambering up and down from one level to another.

This also allows for the keels to be fitted at the very beginning of the assembly process, rather than at the end as is done by almost every other sailing cruiser builder who has the bother of hoisting the yacht into a cradle to do this. At Hanse, keel fitting is a two-man operation involving laser alignment, a reach truck and walkie-talkie communication through the hull so that the worker inside can tighten down the keel bolts with precision.

Running along the entire length of the lines are service platforms so that trolleys laden

with materials and components are brought up alongside the appropriate work station as and when they're needed.

### Teams at work

There are 18 of these stations in the longest line for the high-volume smaller boats and 11 on the second assembly line for the mid-size models. This line is split eight and three to handle boats of varying complexity and different production speed requirements. The split lines converge part way along the length of the assembly hall building where, as completed boats, they use the same exit door.

Assembly workers (there are 59 of them in the main hall) are divided into teams of three that are assigned by their supervisors to wherever they're needed in order to keep the



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21 Production time-saver—the moulding of a simple tray into the cockpit sole to take the steering quadrant, autopilot and linkages has reduced installation time for the steering mechanism from four hours to about 30 minutes. 22 Deck sub-assembly.

19 A fully assembled mahogany galley complete with appliances is ready to be taken to the assembly line. 20 Robot pick and store bar-coded veneered panels for rapid retrieval.

lines rolling at steady speeds. Although some production stages require more work than others, none is allowed to overrun its allotted time slot so bottlenecks are avoided.

As a boat comes off the line every four hours, in the case of line one, a new set of mouldings — with its inner stiffening grids already glued in place along with ducting for cable and pipe runs before it left the moulding plant — joins the line at the opposite end and the whole line of trolleys moves continuously. Progressively along the line seacocks are fitted, bulkheads laminated in place, and engines, generators plumbing and furniture installed.

As much as possible Hanse uses sub-assemblies to cut down on fitting time. The yard's woodworking shop, which is equipped with no fewer than seven CNC machines to cut, mill,

nest and even robotically manage panel storage, is entirely geared to full furniture assemblies.

"The galley is the main focal point of the interior during the furniture assembly process," says Bredenbeck. "Everything radiates out from there."

It's only when everything is in place in the interior that the deck is glued, screwed and laminated into place. With deck fixtures and fittings already attached, the deck is itself a major sub-assembly that's put together on its own assembly line elsewhere in the factory.

Like many other larger production boatbuilders HanseYachts has had to gear down its production in anticipation of a sustained fall in demand. At the end of last year the company laid off 110 workers and reduced the hours of about 70 of its remaining complement of 450 people spread throughout the main plant and its subsidiary moulding operations. It has also taken advantage of German government

emergency provision to meet up to 70 per cent of companies' wage bills on the proviso that the companies continue to meet their social payments and put time aside for additional training.

### Taking the long view

Also like most others in the industry, HanseYachts doesn't see any light on the horizon yet. "Everyone is suffering," says Ben Vaes, sales director. "We export about 80 per cent of our production, and sales in some countries have dropped by 20 per cent, or more. Only Australia seems to have held up so far. And this year's Düsseldorf boat show was our best ever," he adds.

With customers buckling under the credit crunch and taking longer to complete payment after having placed substantial deposits, the company is holding onto boats for dealers longer than usual. No boats, Vaes firmly maintains, have been built purely for stock.

Even though market worries were







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23 Red for stop, green for go—a simple traffic light system towards the end of the assembly line shows what has been finished and what is delaying progress. 24 Assembly line semaphore—the red flags indicate that something is missing in the furniture pack for a particular boat. Yellow flag tells stockroom staff that certain stock parts are still needed before the boat is ready to move onto the next workstation. 25 On the shorter assembly line, Line 2, a Moody 45 DS motorsailer takes shape. Normal time allotted for the larger boats at the fewer stations on this line is 16 hours. 26 Cold storage, an assemblage of finished HanseYachts awaits shipment to dealers. Even though they've been ordered and part paid-for, HanseYachts is holding clients' boats for longer these days as finance is taking longer to arrange. 27 Clean away—wood waste is kept to a minimum by efficient computerised nesting, but what little is left over is cleanly incinerated in this oven outside the carpentry shop.

beginning to surface before last year, Schmidt has maintained an optimistic long view. It was this confidence that led him to float HanseYachts on the Frankfurt stock exchange in March 2007, raising capital in return for releasing 35 per cent of the equity in the company. This he put to work without delay. Before the end of the month he had bought Moody, one of the UK's oldest boatbuilders and known internationally for its deck saloon sailing cruisers.

Then, by November the same year, Schmidt had also bought the moulds and rights to another famous European boat name — Fjord — a Norwegian motorboat builder in which he already had a share and which, in the 1960s and 1970s, had been one of the continent's largest series producers of GRP power cruisers.

Fjord has enabled HanseYachts to introduce powerboats to its portfolio. The company took over its existing Fjord Terne line of 7m (24ft) and 8m (28ft) classic open motorboats which it has rebranded as its Heritage range. To that it has added two

altogether different 12m (40ft) motorboats drawn by Patrick Banfield, the man behind the geometrically modern Wally Tender designs. These are offered in Fjord Open and closed cockpit Cruiser editions. Already motorboats have contributed up to 10 per cent of HanseYachts' sales.

### Big prospects

Moody has also added a new dimension to the HanseYachts offering by adding a new take on classic cruising yachts to the portfolio. The company has maintained the Moody link with UK designer Bill Dixon, who has contributed two Classic designated models, the 41 and the recently launched Classic 45 as well as the very different-looking Moody 45DS, a deck saloon cruiser which pays a modern tribute to the motorsailer concept popular in the 1970s and 1980s, but introducing exterior styling that bears more than a passing resemblance to the new Fjord 40 Cruiser.

Bound by stock exchange rules, Schmidt is not as free as he might once have been to give clues as to what his business plans are to take



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HanseYachts into the future, but as Vaes says: "Schmidt has always been good for surprises, and there will be a lot of surprises to follow. There are always opportunities after the market has bottomed out."

What seems clear, however, is that HanseYachts is looking to go larger. It has already said that the ground is being prepared for the development of a yacht in the 24m (80ft) range and Schmidt himself will not confirm or deny that more acquisitions could be on the cards.

If it does decide to go down that route, it would appear to have access to enough funds to succeed. As Vaes points out: "HanseYachts is well invested. The high flexibility of our set up at HanseYachts AG gives us the confidence to face the future."

