

# Extraordinary Ehingen

Liebherr's Ehingen factory is probably the world's most modern mobile crane production centre.

**Tim Whiteman** reports

**M**assive expansion has just been completed at Liebherr's mobile crane factory. The company can now build a staggering 1400 cranes a year at the factory in Southern Germany. Whether management will actually want to build that many cranes straight away is an interesting question, but sales figures for the last six or seven years have shown a steady increase so the signs are right.

The new production hall is 372 metres long and 100 metres wide. It covers a

assembly line during which the pre-assembled boom is finally added.

Running alongside the assembly lines are "pre-assembly" points where items such as winches, sliding outrigger posts and other mechanical assemblies are prepared and supplied to the final assembly line. Cabs for the crane and the chassis are also assembled alongside and mounted in a single unit.

"Just in time" supply is used throughout the process and means that there are no huge storage areas of components and parts. Instead, more than 80 trucks deliver to the plant everyday to ensure that it never runs low on axles, engines, transmissions and



**Final assembly of carriers**

other vital components. The design of the plant allows these to be delivered to the precise section of the assembly line that needs them: "the principle is for production material to reach the assem-

## Sales growth

Sales of new cranes have grown steadily in the last five years

Yr	Turnover in millions	New units + used
1996	DM930 (£310)	528 + 475
1997	DM1224 (£410)	720 + 560
1998	DM1315 (£440)	835 + 560
1999	DM 1448 (£483)	920 + 460
2000	DM1532 (£510)	1020 + 500

total of 44,000 square metres and has two production lines that run side-by-side through the length of the building. Slewing platforms are built on one of these lines while the vehicle chassis are built on the other. Production cycles are synchronised so that the slewing platform and the chassis arrive together at the area in which they are joined before moving down the last third of the



**The new hall is visible at the top of the picture**

# FACTORY REPORT

**Ulrich Hamme:**  
"Long term product development planning and vital"



## Technological advances

"Between 1990 and 2000 Liebherr Ehingen either developed or extensively revised 29 crane models. Today our sales programme consists of 13 all-terrain cranes and 5 crawler cranes" says Ulrich Hamme, head of Liebherr's engineering and development team processes. He adds that "last year 70 per cent of our new crane turnover was achieved with models that have only been on the market since 1997".

Asked what some of the highlights of technological development have been in recent years he singles out the following:

- Boom and telescoping action (Liebherr's telematic system)
- Data bus technology (Liebherr's system bus)
- The use of very high-strength fine-grain structural steels up to S 1100 QL quality, and
- Improvements in driveline technology, including the AS-tronic transmission system (a combination of Liebherr and ZF technology known as Li-As drive)

The latest enhancement, the Li-As drive, was introduced on the LTM 1100/2 and consists of a Liebherr diesel engine combined with an automated-shift gearbox from ZF. The system is claimed to give a distinct improvement in economy, environmental acceptability and driver convenience. The engine electronics, the transmission, ABV, interarder and eddy-current brake are networked via the bus system to optimise operations. As part of ongoing improvements, all Liebherr diesel engines used in LTM and LR cranes will comply with the Euro 3 or Euromot Stage 2 exhaust emission legislation by October this year.

## The market

So who will buy all the new cranes that Liebherr is ready to build? Freddie Baer, Liebherr's ebullient sales director, has no doubt that there is a market for them. He reveals that of last year's total new-crane turnover of DM1,128 million, about 90 percent came from the range of all-terrain mobile cranes and the remaining 10 percent from sales of crawler cranes.

"Twenty-eight percent of NEW crane turnover came from the domestic market, 46 percent from Western Europe, 15 percent from North America and 11 percent from the rest of the world" says Baer in an indication of where growth is likely to continue. He adds: "In 2000, worldwide demand for AT mobile cranes proved to be 2,638 units, more than



**Henning Ropp (left), member of the Liebherr board and Freddie Baer, sales director of Liebherr Ehingen**

twice as high as in 1994. There is currently no indication that this upward trend has passed its peak".

Looking specifically at the UK market Baer comments that: "The crane market in Great Britain is expected to grow again compared with 2000, and we can be confident of increasing our market share beyond the current 30 percent. Restructuring of the four largest crane-hire companies has been completed. Crane orders from new customers and an order for 23 cranes from the Ainscough company are evidence that turnover is likely to increase. However, the high price of fuel and a feeling that interest rates are likely to fall has caused demand from British crane-hire companies for new vehicles to remain at a rather moderate level".

So confident is Liebherr of continuing success in the UK that it is currently building new, enlarged premises which will more than double its available space in the UK. ■

## New UK premises

Next year will see Liebherr's UK business moving into new premises. Bruce Field, Liebherr GB managing director, told *Cranes & Access* that the new site, which is at Biggleswade on the A1, would cover 9.5 acres as opposed to the current 3.8 acres. Facilities at Biggleswade will include two dedicated mobile crane maintenance bays, a large test area and a workshop that is twice as big as the current facility. All of Liebherr's UK operations will re-locate at the end of next year and the current property will be sold.

"While we are sorry to leave Travellers Lane, the move will enhance our facilities and give us a world class service organisation for all our products in the UK" said Field.

bly lines without having to pass through an intermediate store" says Josef Hauser, general manager of the Ehingen factory.

Hauser is proud of the way that subcontractors and suppliers have been integrated into the new factory, but stresses that: "our assembly structure is based on an in-house manufacturing depth of between 15 and 20 percent, depending on the crane. About another 15 per cent of the components come from other Liebherr Group companies, in particular engines, hydraulic components, transmissions and electronics.

## Boom Construction

Completion of the new hall has left a large amount of unoccupied space in the existing buildings and Hauser has big plans for these. The complete boom construction facility is being moved to the former final assembly shop. This should make it easier to assemble and test the long booms featured on today's cranes. Also planned is a new repair shop which should be ready at the end of this year and reflects the high importance that Liebherr attaches to its used crane business. This can also be seen from the sales figures which reveal that used crane sales run at about 500 units per year in addition to the new crane sales.