

Annual Report **2013**



LIEBHERR
The Group

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The year 2013

Despite less positive overall conditions in certain business sectors, our family-owned company was able to maintain its turnover in the 2013 business year at a level almost equal to the previous year's high figure.

Together, our eleven product divisions recorded a turnover of approximately nine billion Euros. Development differed in the various business sectors in which we are active, with contradictory trends in the sales regions too. Dynamism was seen to ease off in the emerging markets, and uncertainty persisted in several industrial countries. In view of this background situation, we wish to thank all our customers and business associates for the confidence they displayed in our products and services.

Last year we again invested considerable sums in our production facilities, and in particular in our international sales and service network. We feel confident that these decisions were in our customers' interests as well. Considerable progress was made on a number of major investment projects.

In the past business year we focused on the extension and modernisation of our long-established locations in Western Europe. Unless we invest continually in our production facilities so that they satisfy high technical standards,

we shall be unable to reach the product quality we are aiming for and contribute substantially to the success of our customers.

Among the methods we adopt to maintain this level of quality and safeguard our technological independence is the mastery of key technologies in detail. We develop and produce major components and systems for our machines in-house, which enables us to offer our customers tailor-made, reliable solutions from a single source. In accordance with this policy we have greatly strengthened the production facilities operated by our components division.

In order to maintain our corporate success, we rely on competent, highly motivated employees who remain loyal to us over the years and dedicate themselves to the Group's best interests. We created a considerable number of new jobs again during the 2013 business year. Our total workforce worldwide at the end of that year exceeded 39,000, about 1,600 more than in the previous year. We greatly appreciate our employees' day-to-day commitment to our customers' needs, and thank them expressly here for their enthusiasm and loyalty to our company.



The family shareholders active in the Group (left to right): Patricia Ruef, Willi Liebherr, Isolde Liebherr, Stéfanie Wohlfarth, Sophie Albrecht and Jan Liebherr

Last year we undertook many new and follow-up developments in all divisions. The 2013 'Bauma' trade fair in Munich, Germany, was an ideal setting for us to present our innovations in the construction machinery, mining and components areas to visitors from all over the world.

We also found opportunities outside these business areas to bring our products and services to the attention of the public. Our latest refrigerators and freezers were on display at the 2013 'IFA' in Berlin, Germany, and at the Paris Air Show in Le Bourget, France, we exhibited innovations for the aerospace industry. The machine tool and automation systems division presented its latest developments at the leading trade fair, the 2013 'EMO' in Hanover, Germany.

We take a positive view of the situation in the current year, and will probably achieve approximately the same volume of turnover as in the previous year. We expect developments in the construction machinery and mining divisions to differ, but outside these areas we assume that there will be definite growth in some cases. In the current year we will begin to implement new investment projects at our production and our sales and service companies, as well as continuing existing projects. This will have effect of creating further jobs, a circumstance which we regard as most welcome.

Dr. h.c. Dipl.-Kfm.
Isolde Liebherr

Dr. h.c. Dipl.-Ing. (ETH)
Willi Liebherr

Development of the Liebherr Group

Business situation and markets

There was no improvement to overall economic conditions during 2013. The world economy grew by only 3.0%. Whereas there was increased dynamism in certain developed economies, growth was slower in threshold countries such as Russia and India.

In the key European countries there were signs of a recovery, though growth in Germany in fact fell from 0.9% in 2012 to 0.5% in 2013. Countries on the southern periphery of Europe remained in a difficult situation. Economic growth in the USA dropped from 2.8% to 1.9%.

Dynamism was also at a lower level in threshold and developing countries during 2013. In Russia, growth was noticeably lower than in the previous year, at only 1.3%. The Chinese economy grew by 7.7%, the same rate as in 2012.

The worldwide volume of trade increased by only 2.1% in 2013. The World Trade Organisation attributes this moderate growth to weak demand for imports on the part of the industrial nations, and an only moderate increase in imports to threshold countries.

No recovery in the construction industry was recorded last year in Europe. According to data supplied by the Euroconstruct organisation, activities

in this business sector declined in its 19 member nations compared with 2012. Construction work was hampered by economy measures, a high level of unemployment and consumer reluctance in certain European countries.

Development in the mining industry was also negative. Following strong growth in previous years, the international extractive industry recorded a definite downturn in 2013; one of the contributing factors was the relatively weak performance of China, one of the most important purchasers of commodities. In addition, increased production capacities caused commodity prices to drop, with adverse effects on the activities of mining companies worldwide.

In the international aviation business sector, the passenger and freight markets both developed positively. Passenger traffic increased by 5.2% and therefore almost equalled the previous year's rate of growth. Following a slight downturn in 2012, the international air freight market recorded a 1.4% increase last year.

Despite a regressive trend in the earthmoving and mining divisions, the Liebherr Group's total turnover in the 2013 business year was at approximately the same level as in the previous year. Sales revenue reached 8,963.6 million € and was thus only 126.6 million € or 1.4 % below the 2012 figure. Last year the Group invested 830.0 million € in new and existing production facilities and the expansion of its sales and service network. Total investment thus nearly equalled the previous year's figure.

The Group net result for 2013 as shown in the consolidated accounts of Liebherr-International AG in Bulle, Switzerland, is 364.1 million €, and

therefore 187.9 million € or 34.0% lower than the previous year's figure of 552.0 million €. Exchange-rate movements were one of the main contributing factors: in the past business year the Euro was upvalued in relation to all major world currencies, and this effect was especially pronounced in relation to many threshold countries' currencies, notably Russia, Brazil, South Africa, Turkey and Indonesia.

The workforce increased in size again during the past business year. At the end of 2013, 39,424 people were employed by the Liebherr Group, equivalent to the creation of 1,623 new jobs.



A 200 DR 5/10 Litronic derrick crane dismantling a 355 HC-L crane with fly jib in Montreal, Canada

Developments in turnover

Against a background of moderate world economic development in the past year, Liebherr achieved a turnover of 8,963.6 million €. Compared with the previous year, this was only a slight change of - 126.6 million € or - 1.4%.

Turnover in the construction machinery and mining area, at 5,630.4 million €, fell by 238.5 million € or 4.1%. These sales revenues represented slightly less than two thirds of the Group's overall turnover. The Liebherr Group's construction machinery and mining activities comprise the earthmoving, mobile cranes, tower cranes, concrete technology and mining divisions.

Turnover from the earthmoving division went down in 2013, with sales revenue totalling 1,884.7 million €, equivalent to a shortfall of 172.5 million € or 8.4%. The largest markets in 2013 were Germany, France, Russia, the USA and Brazil.

There was also a downturn in the mining division. After most satisfactory growth in 2012, turnover from large hydraulic excavators and mining trucks dropped in the review year by 250.9 million € or 19.4%, to a total of 1,041.7 million €. This development reflected the negative trend in the worldwide extractive industries. Australia was easily the division's most significant market, followed by Indonesia, South Africa and Ghana.



The SBS 7014 side-by-side combination received the "Plus X" award in 2014

Turnover by product groups

	2013		2012		Change	
	Mill. €	%	Mill. €	%	Mill. €	%
Earthmoving	1,884.7	21.0	2,057.2	22.7	- 172.5	- 8.4
Mining	1,041.7	11.6	1,292.6	14.2	- 250.9	- 19.4
Mobile cranes	2,077.8	23.2	1,939.6	21.3	138.2	7.1
Tower cranes	395.5	4.4	358.1	3.9	37.4	10.4
Concrete technology	230.7	2.6	221.4	2.4	9.3	4.2
Construction machinery and mining	5,630.4	62.8	5,868.9	64.5	- 238.5	- 4.1
Maritime cranes	830.1	9.3	827.7	9.0	2.4	0.3
Aerospace and transportation systems	1,120.1	12.5	1,032.6	11.4	87.5	8.5
Machine tools and automation systems	266.4	3.0	262.7	3.0	3.7	1.4
Domestic appliances	909.4	10.1	889.9	9.8	19.5	2.2
Other products and services	207.2	2.3	208.4	2.3	- 1.2	- 0.6
Other product areas	3,333.2	37.2	3,221.3	35.5	111.9	3.5
Liebherr Group	8,963.6	100.0	9,090.2	100.0	- 126.6	- 1.4

As in the previous year, Liebherr enjoyed definite growth in the mobile crane area, with turnover rising by 138.2 million € or 7.1 % to 2,077.8 million €. Increased business in Germany, the USA and the Netherlands, the division's largest markets in the review year, contributed to this result. Turnover did not reach the previous year's level in Russia and Australia.

The tower crane division grew in a most welcome fashion. Turnover rose in the past year by 37.4 million € or 10.4 % to 395.5 million €, with growth in Liebherr's three largest tower crane markets: Germany, Switzerland and Russia. Turnover was slightly higher in Austria than in the previous year, but dropped in France.

The concrete technology division also achieved positive results. Its turnover rose by 9.3 million € or 4.2 % to 230.7 million €. Although turnover was lower in Germany, Brazil and China, business developed at a high dynamic level in other major markets such as Russia, Switzerland and Algeria.

Outside the construction machinery and mining area, an increase of 111.9 million € or 3.5 %, to a total for the year of 3,333.2 million €, was recorded. Contributors to this were the maritime cranes, aerospace and transportation systems, machine tools and automation systems, domestic appliances and other products and services divisions, the last-mentioned including the components division.

Turnover from the maritime cranes division in the 2013 business year remained close to the previous year's figure, and reached 830.1 million €, a slight increase of 2.4 million € or 0.3 %. The principal sales markets in the review year were Great Britain, Saudi Arabia, Russia and South Africa.

The aerospace and transportation systems division continued the previous year's positive trend and increased its turnover by 87.5 million € or 8.5 % to 1,120.1 million €. The most important markets for this division were Germany, France, the USA and Great Britain.

Turnover from the machine tools and automation systems division remained close to the previous year's satisfying

result. After the marked increase in 2012, turnover rose only slightly, by 3.7 million € or 1.4 %, to the new total of 266.4 million €. Considerable increases were recorded in Germany and South Korea, two of the division's largest markets. In the USA, turnover went up rather more moderately after the previous year's growth.

The domestic appliances division achieved a turnover of 909.4 million €, equivalent to an increase of 19.5 million € or 2.2 %. The largest markets for Liebherr's refrigerators and freezers were Germany, Russia, France and Austria.

The figures from the other products and services area almost equalled those recorded in 2012: sales revenues fell back by 1.2 million € or 0.6 %, to a total of 207.2 million € in the review year. Other products and services include earnings from sales of driveline and control-system components to customers outside the Liebherr Group, and also turnover from the six hotels the Group operates in Germany, Ireland and Austria.

After a thoroughly positive pattern of development in the previous year, turnover from the various sales regions differed considerably in 2013. The ten largest sales markets for the complete Group were Germany, the USA, Australia, Russia, France, Great Britain, Canada, the Netherlands, Brazil and South Africa.

In Western Europe the Group was able to increase its turnover by 191.2 million € or 4.8 %, to 4,157.5 million €.



The Liebherr stand at the 2014 'Conexpo' in Las Vegas, NV/USA

In Germany, the Group's largest market if all sources of revenue are combined, turnover grew by an above-average amount. The business patterns in Great Britain, the Netherlands and Switzerland were also most satisfactory. In Spain, a definite increase was recorded in 2013 after some years in which a downward trend prevailed. France, despite a slight drop in turnover, remained the Liebherr Group's second-largest Western European market.

In Eastern Europe, turnover reached 914.1 million € and was thus 139.1 million € or 13.2% lower than in the previous year. The main reason for this was the recessive Russian market. Growth was achieved in Poland, the Czech Republic and Azerbaijan.



© AgustaWestland

Liebherr supplies the landing gear as well as the environmental control system for the AW189 helicopter by AgustaWestland

Turnover by market regions

	2013		2012		Change	
	Mill. €	%	Mill. €	%	Mill. €	%
Western Europe	4,157.5	46.4	3,966.3	43.6	191.2	4.8
Eastern Europe	914.1	10.2	1,053.2	11.6	- 139.1	- 13.2
Near and Middle East	306.5	3.4	307.9	3.4	- 1.4	- 0.5
America	1,470.3	16.4	1,499.1	16.5	- 28.8	- 1.9
Africa	606.0	6.8	591.8	6.5	14.2	2.4
Far East/Australia	1,509.2	16.8	1,671.9	18.4	- 162.7	- 9.7
Liebherr Group	8,963.6	100.0	9,090.2	100.0	- 126.6	- 1.4

In the Near and Middle East Liebherr recorded a turnover of 306.5 million €, a drop of - 1.4 million € or - 0.5 %. Worthwhile increases were recorded in Saudi Arabia and the United Arab Emirates.

In America the Group was unable to continue the previous year's positive trend. Turnover from this region totalled 1,470.3 million €, a slight reduction of 28.8 million € or 1.9 %. Sales revenue from the USA went down, and there was also a drop in turnover in Brazil. In Canada and Mexico, however, distinct increases were recorded.

On the African continent the review year proceeded positively, with total turnover of 606.0 million € for the Group,

representing an increase of 14.2 million € or 2.4 %. Earnings in South Africa and Algeria, the two largest markets in this region, developed positively, but there were downturns in Ghana, Zambia and Ethiopia.

Following an upward trend in the previous year, the Group was obliged to accept a reduction in turnover for 2013 in the Far East/Australia region. The total figure was 1,509.2 million €, and thus lay 162.7 million € or 9.7 % below that for 2012. This pattern of development was largely due to a loss of dynamism in Australia, China and Indonesia, whereas growth was achieved in South Korea and Hong Kong.

Employees

In 2013 the Liebherr Group's workforce increased by 1,623 (about 4%). The total at the end of the year for all Liebherr companies was 39,424 employees.

The number of employees at German Liebherr Group companies went up to 16,265, an increase of 4.8%. The company creating the most new jobs within the Group was Liebherr-Aerospace

Lindenberg GmbH, which develops and produces flight control and actuation systems as well as undercarriages for the aircraft industry. Strategic realignment of Liebherr-MCCtec Rostock GmbH



Trainee technical product designers

Numbers of employees

	2013		2012		Change	
		%		%		%
Germany	16,265	41.3	15,514	41.0	751	4.8
Austria	4,810	12.2	4,787	12.7	23	0.5
France	3,408	8.6	3,273	8.7	135	4.1
Switzerland	1,469	3.7	1,276	3.4	193	15.1
Other European countries	5,514	13.9	5,073	13.4	441	8.7
America	3,383	8.6	3,476	9.2	- 93	- 2.7
Asia and Australia	3,687	9.4	3,553	9.4	134	3.8
Africa	888	2.3	849	2.2	39	4.6
Liebherr Group	39,424	100.0	37,801	100.0	1,623	4.3

as the centre for the maritime cranes division had its effect on employment figures at the Rostock location. Recruiting of new employees went ahead actively, especially in the technical and sales departments. New jobs were also created at Liebherr-Werk Ehingen GmbH, which has responsibility for the development and production of mobile and crawler cranes. At Liebherr-Hydraulikbagger GmbH, Liebherr-Hausgeräte Ochsenhausen GmbH, Liebherr-Werk Biberach GmbH, Liebherr-Components Biberach GmbH and Liebherr-Elektronik GmbH the number of employees was in each case higher than a year previously.

In Austria the workforce of 4,810 remained at approximately the previous year's level. New jobs were created at Liebherr-Transportation Systems GmbH & Co KG in Korneuburg. This company is responsible for the development and production of air conditioning equipment and hydraulic actuation systems for rail vehicles. Among the reasons for the increase were the transfer of the engineering activities of Liebherr-Transportation Systems Mannheim GmbH to Korneuburg and the expansion of hydraulics activity and after-sales service at that location.

The workforce in France increased by 4.1%. At the end of 2013 the French Liebherr companies employed 3,408 people. Most of the new recruitment took place at Liebherr-Aerospace Toulouse SAS, which develops and manufactures air management systems.

There was a considerable increase in the number of people employed in Switzerland. 193 additional employees were taken on by Swiss Liebherr companies during 2013, so that the total rose to 1,469 by the end of the year, an increase of 15.1%. Most of the increase took place at Liebherr Machines Bulle SA, which develops and builds engines and fuel injection systems.

The total workforce in the remaining European countries rose by 441 to 5,514. More than half of these new jobs were at Group companies in Russia. At Liebherr-Nizhny Novgorod OOO, which operates in the construction machinery area, the workforce increased noticeably. Among the reasons for the increased labour demand is the enlargement of the earthmoving division's product programme. A number of new employees was again recruited for the sales and service company Liebherr-Russland OOO.

In view of the consistently good order situation at the domestic appliances company Liebherr-Hausgeräte Marica EOOD in Bulgaria, which produces an extensive range of high-quality refrigerators and freezers for trade and commercial use, a significant number of additional personnel were taken on.

2013 was also a successful year for Liebherr Container Cranes Ltd., Killarney, Ireland. The workforce was enlarged in response to a large number of orders for rubber-tyred and railborne container stacking cranes.

The total number of Group employees outside Europe went up to 7,958. On the American continent, however, the workforce was reduced in 2013, with 3,383 people working for the Group's companies. The reduction was mainly due to a severe slump in the extractive industry, which rendered it necessary to reduce the size of the workforce at Liebherr Mining Equipment Newport News Co., Newport News, VA/USA. The number of people employed at the Brazilian production company Liebherr Brasil Ltda. also went down, whereas new employees were recruited for production work at the Mexican company Liebherr Monterrey, S. de R.L. de C.V., which produces drive-line components.

Last year 134 new jobs were created in Asia and Australia, so that at the end of the year the Liebherr companies there employed 3,687 people. Once again, half of the new jobs were at Liebherr-Australia Pty. Ltd., which is responsible for sales and service of the Group's construction machinery and mining programme in Australia and New Zealand. An increased demand for new staff also arose in 2013 at the Saudi Liebherr Company Ltd., Saudi Arabia. In China

the size of the workforce went down slightly, but new jobs were created at the sales and service company Liebherr-Singapore Pte. Ltd.

On December 31, 2013 Liebherr companies on the African continent employed a total of 888 people. Additional employees were taken on at Liebherr-Africa (Pty.) Ltd. in South Africa and at Liebherr-Mining Ghana Limited.



An employee of Liebherr Aerospace Brasil Ltda. adjusts intersection holes that were machined into components for flight control systems

Product development

Expenditure by the Group's various divisions on research and development during 2013 totalled 434.7 million €, 51.5 million € or 10.6 % below the previous year's figure. The resulting technical progress and innovation form an important basis for consolidating and extending the Group's market position in its product areas.

In the wheeled excavator product area a new road-rail excavator was introduced in 2013. The new A 922 Rail Litronic takes the place of the A 900 C ZW Litronic, of which more than 900 have been delivered since its introduction in 2005. A further innovation in the past business year was the electro-hydraulic pilot control system for movement of the working attachments on wheeled excavators.

A notable event last year in the wheel loader product area was the market launch of the new generation of machines complying with Stage IIIB/Tier 4i exhaust emission limits. Development work was completed on the compact L 506 C and L 508 C models, which were exhibited at the 2013 'Bauma' trade fair. As a new model line, they extend the existing product programme consisting of Stereo loaders, medium-size and large machines.

Development work on crawler excavators too was concentrated on changes to the model programme to comply with the latest emission standards. Altogether, seven new machine size categories from R 918 to R 980 SME were developed.

In the material handling area, development activity was focused on an extensively revised series of machines. Increased stationary torque was obtained from a new crawler-track undercarriage with larger contact area, which enables the working radius and load capacities to be increased.

In 2013 a new, more powerful drill drive was introduced for the LB series of large rotary drilling rigs. Among its features are automatic torque control, continuous speed optimisation and four electronically selectable speed ranges. In the duty-cycle crawler crane programme, the HS 8100 HD model's load handling performance was significantly increased by installing an optimised power unit combined with improved hydraulics.

During 2013 a 200-tonne machine was added to the programme of large hydraulic excavators for open-cast mining. The first two R 9200 prototypes will begin field testing in 2015. In addition, preparatory development on the new R 9600 was completed; this will take the place of the R 996 600-tonne excavator in coming years. Machines operating in the field were equipped with a new Liebherr tooth system, and there was also development work in the machine automation and driver assistance system areas.

The ultra-class T 284 mining truck underwent design revisions in the past year to incorporate a Tier 4f drive-line and to optimise emissions. Initial development work also began on an additional dump truck in the 290-tonne class, the T 274, which will be technologically similar to the existing T 264 and T 284 models.

In the mobile cranes area, development work on the LTM 1160-5.2 all-terrain crane was largely completed. This 5-axle, 160-tonne model has significantly higher load capacities than its predecessor, and better manoeuvrability thanks to a reduction from 3 to 2.75 m in overall width. It also incorporates the new Liebherr superstructure drive concept. Instead of the use of two engines which is customary in this size category,

only a single engine is used, and drives the crane superstructure by way of a mechanical shaft.

In the crawler crane market segment, testing began on the new LR 11000, which has a maximum load capacity of 1,000 tonnes. A reinforced wind-power boom system was developed for the successful LR 1600/2 crawler crane, forming the basis for extensive uprating of this 600-tonne model.

The LR 1250 was also completed during 2013. This crane in the 250-tonne class has optimised load capacities and can, as an optional extra, be equipped with carbon fibre (CFRP) retaining rods – a feature that enhances user convenience.



The new A 922 Rail Litronic road-rail excavator lifting loads on rail in Stuttgart, Germany

In the tower cranes division, development activity was concentrated on the new 53 K fast-erecting crane design. Based on the successful K series concept, the new 53 K fills the gap between the 42 K.1 and the 65 K. With a maximum load capacity of 4,000 kg, this crane is intended for the construction of detached and terraced houses. Its practical design ratings for this type of work are borne out by flexible hook heights between 15.4 m and 30.4 m – a new feature on cranes in this size category.

The concrete technology division developed a new mixing plant, the Beto-mat V-L, with increased support width and a new silo design. Work also began in the Compactmix area on developing a container system for the DW 1.25 twin-shaft mixer. In the truck mixer area, several versions were developed to satisfy customers' needs on important Asian markets. An exceptionally light but none the less torsionally rigid mast was developed in the mobile concrete pump area for the 47-m model.

In the offshore product area the maritime cranes division added the RL-K 4200 model to its deep-sea crane programme. An innovation from this division are the LiSIM crane simulators, which provide a training facility for mobile harbour cranes, offshore cranes, container loading gantries and rubber-tyred container stacking cranes.

One of the priorities of the aerospace and transportation systems division has been to develop more environmentally acceptable technologies for aircraft. Together with aviation industry supplier Thales, Liebherr has undertaken the

GETI research project, which is concerned with optimal architectures for the dynamic management of electrical and thermal energy in aircraft. The objective is to reduce CO₂ and NO_x emissions. Increasing aircraft electrification provides a basis for efficient energy management: for the 'Clean Sky 2' research project, Liebherr is building up an "Innovative Electrical Wing" demonstrator with examples of new solutions to flight control, wing de-icing and undercarriage tasks. Such systems will obtain their power supply and be controlled from innovative "Power Bus" and digital "Bus" ("Binary Unit System") architectures that distribute energy and signals by way of intelligent electronic units. Among developments in the transportation systems area was an air conditioning heat pump for rail vehicles.

In the machine tool product area, three machine series aimed in particular at the automobile industry's needs were developed. The new LGG 180 gear grinding machine has been designed specifically for high-volume production, and is currently the smallest machine in a new model line. The new LCH 180 two gear hobbing machine is equipped with two tables, so that the gear hobbing and pressure deburring operations can be performed in parallel instead of sequentially as before. The new LC 180 Chamfer Cut gear hobbing machine has a second machining unit at which the workpieces receive their initial chamfer or bevel cut.

The LPC 3400 palletising cell was developed in the automation systems area. It stores unmachined or completed parts in tool baskets mounted on casters

and feeds them to the machine as part of an automated process. This method of handling parts makes it possible to integrate machines flexibly into the production-material flow.

In 2013 the domestic appliances division undertook development work on a new generation of standalone appliances. Eight freezers were added to the built-in model generation developed in the previous year, and two new BioFresh appliances were also developed. In the wine storage cabinet area, a new series of under-worktop models was introduced with the innovative “touch-to-open” function. Wine cabinets specially adapted to suit Asian and Australian market needs were also developed. In the commercial appliances area the new display freezer chests were subjected to a large-scale field test.

For the components division, the emphasis in the diesel engines area was on finalisation of the modular range of engines to comply with the exhaust emission legislation applicable from 2014

onwards. Systematic extension of the modular concept led to the development of an additional 8-litre, 4-cylinder engine.

The drivelines, electric machines and control gear product areas continued initial development work on diesel-electrical drivelines for various mobile applications. These drivelines are based on a combination of diesel engine and generator, converters with power control, electric propulsion motors and wheel or travel drives. Their superior efficiency compared with the equivalent hydraulic systems affords significant potential for fuel saving.

In the industrial electronics area a transmission control unit for agricultural machinery was developed to series production level. In addition, new control units for diesel engines complying with Stage IV/Tier 4f exhaust emission limits were developed. In the hydraulic cylinder business area, development activities on position detecting systems continued.



Hobbing machine LCH 180 two with two horizontally arranged work piece spindles and separate press deburring unit and palletiser

Investments

Investments by the Liebherr Group in the 2013 business year totalled 830.0 million €. They were devoted to modernising and extending the worldwide production network and strengthening the sales and service organisation. Total investment thus remained at a high level and was only 23.8 million € or 2.8% below the previous year's figure.

Last year 552.5 million € were invested in construction machinery and mining. About half of this went to the earthmoving division. Construction work began in the summer of 2013 on a new logistics centre near Kirchdorf an der Iller, Germany. This centre will in future be responsible for the worldwide supply of spare parts for Liebherr earthmoving machinery. Among the investments undertaken in Kirchdorf by Liebherr-Hydraulikbagger GmbH is an initial and follow-up training centre. In Austria, investment included the assembly area of the plant in Telfs. In Dalian, China, the production facility was extended.

The mining division invested 106.2 million € last year. In addition to extensions in Colmar, France and Newport News, VA/USA, the division invested in extensions to existing facilities at several locations in Australia, among them Adelaide and Perth. Work continued for instance in Adelaide on construction of a new component reconditioning centre and on an extension consisting of a large warehouse and logistics centre.

Investment in the mobile cranes division reached a total of 83.6 million €. In Ehingen/Donau, Germany, Liebherr erected a new assembly building for experimental work and undercarriage acceptance testing, and for the assembly of large sunshades. In Mexico, the new sales and service company began to operate.

73.2 million € were invested last year in the tower crane business area. In Biberach an der Riss, Germany, construction work was completed in the autumn of 2013 on a new training centre, and in addition a new surface technology building was constructed. In Pamplona, Spain, work went ahead on conversion to a two-component paint spraying method. At the location in Nizhny Novgorod, Russia, the division invested in tower crane production.

Investments in the concrete technology division totalled 13.1 million €. In Bad Schussenried, Germany, the investment was devoted to paint application techniques for concrete mixing plant.



Outside the construction machinery and mining areas, the Liebherr Group's investments totalled 277.5 million €, of which 71.1 million € were allocated to the maritime cranes division. At Liebherr-Werk Nenzing GmbH, Austria, work included the erection of a new maintenance building. In Killarney, Ireland, Liebherr Container Cranes Ltd. went ahead with construction of a new building for structural steelwork. Liebherr-MCCtec Rostock GmbH, Germany, invested in increased production capacities. A new sales and service company, Liebherr Kazakhstan TOO, was opened with registered offices in Almaty.

In the aerospace and transportation technology area, total investment in the review year was 76.4 million €. In Lindenberg, Germany, progress was made with

the large-scale expansion of the production plant. The first phase, comprising the erection of two assembly shops and a logistics building, was largely completed in 2013. In Toulouse, France, and Dubai, United Arab Emirates, work went ahead on the construction of logistics centres.

The machine tools and automation systems division invested 7.1 million € in 2013, for example on extended production facilities and a new office building with rooms for training purposes in Bangalore, India.

In 2013 the domestic appliances division invested a total of 37.2 million €. In Ochsenhausen, Germany, for instance, sheet metalworking plant and material was purchased. In Radinovo, Bulgaria, the production plant was enlarged and



Construction of a new logistics centre near Kirchdorf an der Iller, Germany

modified as appropriate. At this location Liebherr has also begun planning work for the construction of a new logistics centre. In Lienz, Austria, the bulk of investment was devoted to the development and production of new products for commercial users.

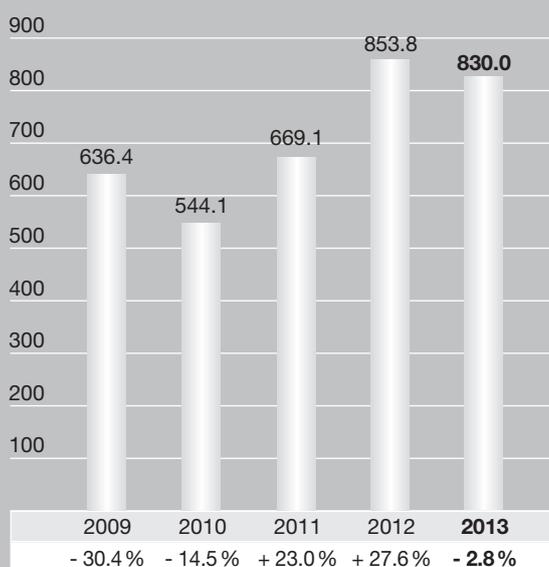
The Group devoted 85.7 million € in all to investments on other products and services. Among the investments undertaken in the past year by the components division, which comes under this heading, were the extension and reorganisation of the production facility in Bulle, Switzerland. Liebherr Machines Bulle SA will significantly extend its capacities in the diesel engine and fuel injection system areas over the next six years. Liebherr-Components Biberach GmbH began construction work on a branch factory close to the existing plant site. From the end of 2014 on it is scheduled

to start development and manufacture of switchgear, electric motors and generators. In Colmar, France, the division continued the build-up of the diesel-engine production plant. At the location in Lindau, Germany, Liebherr-Elektronik GmbH invested in a new logistics centre for long-term warehousing of electronic components. Preparations also went ahead for the establishment of Liebherr-Components Kirchdorf GmbH, Germany. In 2014 this company assumed responsibility for the Liebherr Group's hydraulic cylinder activities. This product segment was until now part of Liebherr-Hydraulikbagger GmbH, but that company will now concentrate on earthmoving and material handling machinery.

In the accounts for the 2013 business year, total investments of 830.0 million € will be offset against depreciation in the sum of 405.3 million €.

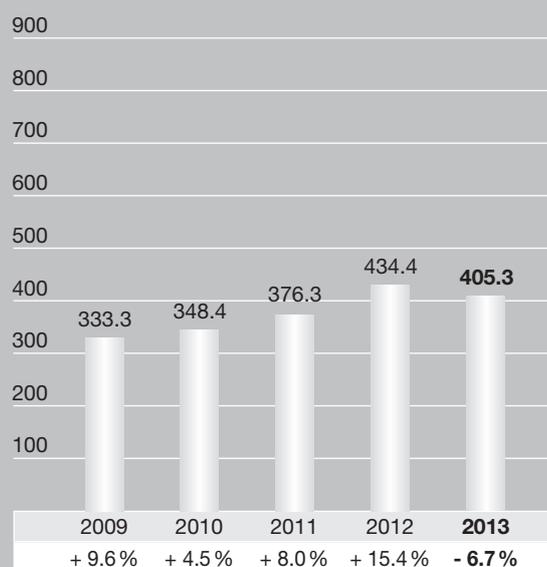
Investments

Mill. €



Depreciation

Mill. €



Outlook

In the current year, world economic development will probably be rather more dynamic than in 2013, and according to International Monetary Fund forecasts should increase by 3.6%. A gradual recovery is anticipated in the Eurozone.

Opportunities for the Group will arise as a result of the renewed strength of the economy in North America, a more stable trade situation in the EU and the upward trend in various threshold countries.

The industrial nations are expected to record economic growth of 2.2% in the current year, with growth of 4.9% anticipated in the threshold countries.

For the Eurozone, the International Monetary Fund expects a gradual recovery to set in for the first time following the recession, with 1.2% overall economic growth in the current year. In Germany the economy will grow by 1.7%, and growth in the USA is expected to reach the most welcome level of 2.8%.

According to the World Trade Organisation's figures, the volume of world trade should increase by 4.7% in the current year, and therefore more strongly than in 2013. Within this trend, trade in threshold countries will develop more satisfactorily than in industrial countries.

Prospects for the construction industry this year in the USA and Canada are positive, and after some years in which a low level of dynamism prevailed,

stabilisation or even a slight upturn are now anticipated for the European construction industry.

Following the cooling down process that began in the mining industry as early as the second half of 2012, and the drastic drop in many commodity prices in 2013, estimates for 2014 based on worldwide market developments can only be extremely cautious. Despite this, the mining industry is expected to grow in the long term.

In aviation, the positive trends of recent years will probably continue. According to information supplied by the International Air Transport Association (IATA), increased volume is anticipated in both passenger traffic and air freight.

In its first estimate for 2014, the Liebherr Group expects total turnover to be on a par with the 2013 figure. Developments in the construction machinery divisions will probably differ widely. Growth is primarily anticipated in the maritime crane and in the earthmoving areas as well as in aerospace and transportation technology, and there will also probably be a further increase in the total workforce.

Reports on the divisions



Earthmoving



Earthmoving

After remaining at a high level in 2012, turnover from the earthmoving division fell back by 172.5 million € or 8.4% to 1,884.7 million € in 2013. Business in the duty-cycle crawler crane and deep foundation equipment product area developed positively, but there was a downturn in the excavator and crawler tractor areas. Wheel loaders generated turnover at the same level as in the previous year.

Within the earthmoving division, an extensive programme of wheeled and crawler excavators, duty-cycle crawler cranes, special deep foundation machinery, crawler loaders and tractors, pipe layers, telescopic handlers, wheel loaders, articulated dump trucks and material handling machinery has been developed and is in production at locations in Germany, France, Austria, Brazil, China and Russia.

During the past year the stabilising measures taken by the European Union have inspired fresh confidence in the economy in Europe, the division's most important market region, and can represent a basis for new investment programmes. At the same time, however, demand suffered from the need to convert machines to comply with the Stage IIIB/Tier 4i exhaust emission limits. In many threshold countries, several years in which the market was overheated were followed by a period of consolidation in 2013; as a result of which these markets generated fewer impulses for manufacturers of earthmoving machinery.

The world market for earthmoving machinery suffered a 9% loss of volume in 2013. In terms of units sold, the downturn was above average in Western Europe, the Near and Middle East and South America. Market growth occurred only on the African continent. In the metal handling trade, the negative price trend persisted and led to a distinct drop in the quantities of material being handled.

In Western Europe the division's turnover fell again following slight growth recorded in the previous year. This was primarily due to a downturn in Germany, the division's largest international market, but also in France, Great Britain and Austria. Sales revenues also dropped in the Netherlands and Spain. Turnover in Switzerland and Italy was slightly below the previous year's figure, whereas the division recorded growth in Turkey, Sweden and Finland.

There was an overall downturn in Eastern Europe, despite the growth achieved in Russia. Turnover fell significantly in Poland, the division's second-largest market in this region, and also in



Recovering gravel with the PR 736 crawler tractor

Azerbaijan. In the Near and Middle East there was a further drop in sales revenue. The United Arab Emirates, Saudi Arabia and Israel were the largest markets for Liebherr earthmoving machinery in this region.

Turnover declined on the American continent, and the division incurred a definite drop in the USA. Market dynamism was also only slight in the region's other large markets, Brazil and Canada. Development proved to be gratifying in Argentina, and also in Colombia, Mexico and Bolivia.

In the Far East/Australia region, turnover did not reach the previous year's level. In China and Australia, two of the division's largest markets in this region, sales revenue declined. In Hong Kong however, another most significant

market in the past year, an increase was recorded. There was also a distinct drop in turnover in India and in Singapore. Market dynamism was extremely high in Indonesia, and turnover from earthmoving machines rose in New Zealand too.

After growth in 2012, turnover from the African continent went down slightly last year. Sales developed gratifyingly in Algeria, the division's largest market in this region, and also in Nigeria. Sales revenue was at the previous year's level in South Africa, and turnover dropped in Ethiopia and Morocco.

Last year the value of orders received for mobile excavators was slightly higher than in 2012, with particular demand for compact excavators. However, turnover from this product area went down compared with 2012.

In the wheeled excavator and material handling equipment areas, the division launched no fewer than 16 new production models in 2013. Among these new developments were the 15-tonne R 914 Compact Litronic crawler excavator. With its tail swing radius of only 1,550 mm and its 80 kW (109 hp) power output, its compact dimensions are paired with high grabbing force and performance, making it especially suitable for use in landscape gardening, road works, drainage and all tasks on sites where the range of movement is limited.

In view of the need to convert machines to comply with Stage IV/Tier 4f limits, activity was concentrated on reducing the pollutant content of the exhaust. Functional development was focused on further improvements in the efficient use of energy.

Orders received for material handling equipment did not reach the previous year's level. New developments in 2013 included the LH 60 C and LH 40 M models, both of which were presented at the 2014 'Conexpo' international trade fair in Las Vegas, NV/USA. The LH 60 C has a 6-cylinder engine and a maximum system output of 288 kW. The LH 40 M, with its 4-cylinder engine, is rated at 226 kW. The electric excavator programme for material handling work was extended in 2013 by the introduction of the ER 934 C High Rise, a version of the ER 934 C with a new undercarriage and integrated tower elevation.

In Germany and France there was a distinct loss of volume in the crawler excavator market last year. This had a corresponding influence on the division's turnover in this product segment.



An R 922 crawler excavator at work in Colmar, France



The new Compact loaders join the programme consisting of Stereo, medium-size and large machines

A number of new crawler excavators complying with Stage IIIB/Tier 4i emission limits reached the market in 2013, including the R 918, R 920, R 922, R 966, R 970, R 976 and R 980 SME models. Several models developed specifically for threshold countries also reached market maturity. The R 926 Compact is scheduled for introduction in the current year, and was shown to the public for the first time at the 2014 Berne, Switzerland, construction machinery trade fair. It has a service weight of 25 tonnes and supersedes the R 924 Compact. Prototype testing of a number of crawler excavators for use in tunnel construction or on demolition work also began in 2014.

Design revision of the entire crawler excavator product programme to ensure compliance with forthcoming Stage IV/Tier 4f emission legislation also began in 2013, as well as projects for the development of new machines for threshold countries.

There was a positive trend in turnover from duty-cycle crawler cranes and special deep foundation machinery in 2013, especially in the Far East/Australia region and in Western Europe. Among the work carried out in this model category, the HS 8100 HD underwent further development in order to boost its handling performance and economy. The HS 8100 HD now has a new engine developing 390 kW and complies with Stage IIIB/Tier 4i emission limits. As well as the new engine, its optimised specification was obtained by improvements to the hydraulics.

The principal development emphasis in the deep foundation equipment area was on projects concerning attachments such as compactors and hammers. In the rotary drilling rig product area, too, Liebherr was able to improve its position significantly. Especially the large rotary drilling rig LB 44-510's successful introduction on the market contributed to this development.

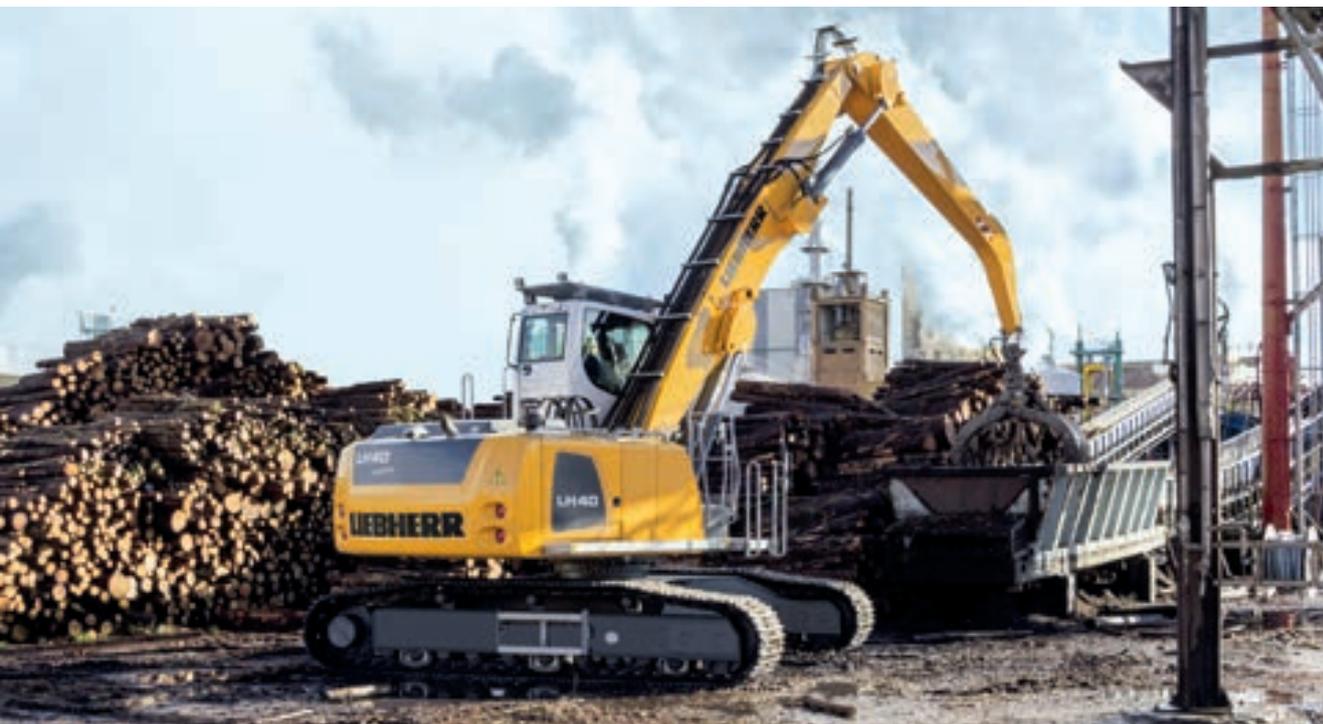
The world market for crawler tractors lost volume in 2013, and within the division too there was a downturn in sales revenue from crawler tractors and loaders. The research and development department responsible for the crawler tractor and loader and the telescopic handler product areas has undertaken fundamental research into tool-soil interaction, welded and bolted connections and the ergonomics of joysticks and equipment controls, among other topics. In addition, various software developments for the new machine control systems took place.

Among the new crawler loader developments was the LR 624 LGP, a version with wider track and 660 mm wide track plates. Its low ground contact pressure makes it especially suitable for work on surfaces with low load-bearing capacity. Two basic crawler loader models are produced, the LR 624 and the LR 634.

A further new development was the PR 724 LGP Litronic, a crawler tractor weighing 20 tonnes. In the telescopic handler product area, work during 2013 was mainly concentrated on the new models complying with the IIIB/Tier 4i exhaust emission limits.

The world market for wheel loaders went down in volume in 2013, the main reason for this being reluctance to invest in the traditional industrial regions, namely Western Europe and North America. None the less, turnover from this product area remained stable, and it was possible to increase sales revenue in Africa and America.

Within the group of wheel loaders designed to satisfy requirements in industrial countries, development work was undertaken on 17 types and 42 different versions. The resulting modifications were applied to 12 production



The new LH 40 C Litronic handling timber at a paper mill in Tartas, France

types and 23 versions. Various projects were also carried out on a number of the machines intended to satisfy the needs of threshold countries, again with several of these projects being adopted on series-production models during the year.

The performance ratings of new-generation large wheel loaders were increased further: power output was raised on the L 576 and L 580 models, and the engine compartment was completely redesigned with the diesel engine installed transversely on the L 550 and L 556, making these models more compact, with all the principal maintenance points accessible from ground level.

In 2013 the earthmoving division invested a total of 276.4 million €. Near Kirchdorf an der Iller, Germany, construction work started on a logistics centre. In future spare parts for Liebherr earthmoving machinery will be supplied worldwide from this location. The first construction stage will probably be completed in the third quarter of 2014.

Many construction projects were either continued or completed in Kirchdorf an der Iller during 2013, including an initial and follow-up training centre for Liebherr-Hydraulikbagger GmbH. In Austria, Liebherr-Werk Bischofshofen GmbH completed a new administrative and welfare building, which was occupied early in 2014. Investments at Liebherr-Werk Telfs GmbH, Austria, were devoted to the assembly area and to modernisation of a machining centre. The main emphasis of investment by Liebherr-France SAS in Colmar, France, was on the company's rental fleet.

The sales and service company Liebherr-Baumaschinen Vertriebs- und Service GmbH, which has its registered offices in Kirchdorf an der Iller, opened a subsidiary in Frankfurt/Main, Germany. This is followed in June 2014 by the opening of a new sales and service centre in Berlin, Germany. In Västerås, Sweden, the new headquarters of Liebherr-Sverige AB went into operation in November 2013.

At the production plant in Dalian, China, a new production building was completed, permitting an increase in the production capacity available at Liebherr Machinery (Dalian) Co., Ltd. for China and various threshold countries. In Nizhny Novgorod, Russia, there was also investment in an extension to the production facilities.

An organisational change took place early in 2014: the hydraulic cylinder product area that was formerly part of Liebherr-Hydraulikbagger GmbH, Kirchdorf an der Iller, became an independent company within the components division, and was named Liebherr-Components Kirchdorf GmbH. In future Liebherr-Hydraulikbagger GmbH will concentrate on the earthmoving and material handling machinery product segments.

In view of the stabilisation of the Eurozone that has taken place, and moderate growth on core markets such as Germany and France, the earthmoving division views the current business year with restrained optimism. In the USA and Canada the construction industries are recording growth. In certain product areas it is assumed that turnover will reach the previous year's level, and in others the division expects an increase in sales revenue and that its total turnover will be higher in 2014.



Mining



Mining

The worldwide collapse of commodity prices also influenced the mining division's turnover in 2013. Following significant increases in previous years, sales revenue dropped last year by 250.9 million € or 19.4 %, to a total of 1,041.7 million €.

The division's programme for the extractive industries worldwide currently consists of eight types of large hydraulic excavator, with service weights between 100 tonnes and 800 tonnes, engine outputs as high as 3,000 kW and grab capacities up to 47.5 m³. These excavators are produced by Liebherr-Mining Equipment Colmar SAS in Colmar, France. Their principal sales markets in 2013 included Australia, South Africa, Ghana and Russia.

Liebherr Mining Equipment Newport News Co. of Newport News, VA/USA, produces large dump trucks with a diesel-electric driveline and payloads between 220 tonnes and 360 tonnes. The most important markets for these machines in 2013 were Australia, Chile, the USA, Canada and Brazil.

After highly dynamic years, the international mining industry was obliged to suffer a definite downturn in 2013. One of the main reasons for this was the weakness of the Chinese economy, since depending on the commodity China takes between 40 % and 60 % of world production.

The decline in demand in that market from 2011 onwards and at the same time the increase in the mines' production capacity resulted in lower commodity prices. Those for coal and for gold in particular fell steeply last year. This led to a further extremely rapid cooling down of the extractive industries' economic situation, starting at the end of 2012.

All the large mining companies adopted a very restrained policy with regard to the implementation of previously announced investments. Many increases in capacity were postponed. At the same time, companies in the extractive industries began to put long-term cost reduction and economy programmes into effect. Only those active in the iron ore area pursued their programme of capacity increases, planned until about 2015, largely without reacting to such influences.

The marked reluctance to invest in this business sector also had its effect on the mining division. Whereas orders received for large hydraulic excavators had risen steadily from 2009 to 2012, their level dropped very distinctly within a short time, starting midway through



Two Liebherr T 264 mining trucks at work at a coal mine in Wyoming/USA

2012, and at the same time orders were cancelled. Nor did the situation improve in 2013: the number of orders taken for mining trucks fell again distinctly.

In 2013 the world market for large hydraulic excavators with service weights of more than 100 tonnes failed to reach half of the previous year's volume. Market share for the period from January to August 2013 remained stable, and was in fact increased slightly to about 21 % for the complete machine programme.

Compared with the previous year, there was a drastic reduction in the number of large dump trucks delivered worldwide. Market share for trucks with more than 320 tonnes payload went down on account of this drop in demand.

Last year, as in the previous year, Far East/Australia was easily the division's most significant sales region. Turnover went down due to reduced demand in Australia and Indonesia, and was also lower in Mongolia, whereas sales revenue developed satisfactorily in China and New Caledonia.



A Liebherr R 9800 hydraulic mining excavator loads a Liebherr T 282 C mining truck at an Australian coal mine

On the American continent, the negative trend persisted in 2013. In Chile and the USA, the most important markets in this region, but elsewhere too, a drop in turnover was recorded. In Canada, Argentina and Brazil, on the other hand, the division enjoyed a successful business year. A downturn was encountered in Colombia.

After positive development in the previous year, turnover from both products dropped in Africa. This pattern was also encountered in the division's two largest African markets, South Africa and Ghana.



In Eastern Europe, turnover went down distinctly following an extremely dynamic previous year; this was primarily due to a downturn in Russia. Despite this, Russia was easily the division's largest market in 2013 in this region. An upward trend was recorded in Western Europe in the past business year. In France, the division's largest market in this region, turnover improved in a most welcome fashion. In the Netherlands and in Belgium too there was distinct growth in sales of large hydraulic excavators.

The division improved its results in the Near and Middle East as well, though the level of turnover remained low. In Saudi Arabia the mining excavator product area generated a considerable proportion of the region's total turnover. Excavators also played their part in a satisfying increase in business in the United Arab Emirates.

Many new and ongoing developments took place last year: at the end of the year a prototype of the R 9200 large hydraulic excavator was built. Specific research work was started in the equipment automation and driver assistance systems areas. Continuing development work of this kind is intended to make the machines even more efficient, easy to operate and more cost-effective.

Activities in the mining truck area were concentrated on further optimisation of the T 282 C and field testing of the T 264, which is scheduled to reach the market in 2014. This vehicle in the 220-tonne class was first shown to the public at the 2012 'Minexpo' in Las Vegas, NV/USA, and subsequently at the 2013 'Bauma' in Munich, Germany. Matched in performance to the R 996 B and R 9800 mining excavators, the

T 264 has an economical Litronic Plus AC driveline and an engine with a rated output of 2,013 kW (2,700 hp).

Development work also started on further dump truck models that will fill out the product range in various payload categories.

The mining division invested a total of 106.2 million € in the 2013 business year. In view of the declining dynamism in this business sector, certain projected investments on plant and buildings for logistics and production purposes were postponed. Among developments in Colmar, France, was the acquisition of a site for machine testing. In Newport News, work on extensions continued and there was also investment in machinery.

Extension plans were put into effect at various locations in Australia. In Adelaide the division continued work on construction of a new centre for component reconditioning, covering an area of 16,000 m². A 12,000 m² warehouse and logistics centre is being added to the existing facilities and is scheduled for completion by the autumn of 2014. In Perth and Mackay new store buildings and other facilities were completed early in 2014, and additional construction work was carried out in Mount Thorley and Newman.

The weak situation worldwide in the commodities sector will continue to have an effect on the division's order situation

in the current year. Several measures have been implemented with a view to ensuring economically viable utilisation of large hydraulic excavator production capacity at the Colmar location in the near future even if business volume declines.

In the mining trucks area, distinctly reduced volume is also expected in the current year. However, at its Newport News location Liebherr is in a position to react very flexibly if the market begins to recover, and increase its output accordingly.

Worldwide market trends and the project situation do not permit more than an extremely cautious estimate for 2014. A continuation of the currently negative business climate is to be expected in the first half of the year. In a situation such as this, exceptional flexibility is called for not only in the division's own production activities but also from its suppliers.

In view of the large number of machines delivered in the past three years, increasing importance attaches to the sale and delivery of spare parts. Strong demand is therefore anticipated in the spare parts business area.

The market launch of the T 264 mining truck offers Liebherr further sales opportunities during the current year, especially in Australia and the USA. In the long term, growth in the mining industry is still expected.



A mining excavator working at a platinum mine in South Africa



Mobile cranes



Mobile cranes

In the 2013 business year the mobile cranes division was able to continue the success it achieved in the previous year. Turnover rose by 138.2 million € or 7.1% to 2,077.8 million €. Significant growth was recorded in Western Europe and on the American continent. The turnover situation also developed positively in Africa.

The division's range of products consists of more than 30 types: all-terrain cranes and lattice boom cranes with crawler undercarriages. All mobile cranes and the crawler cranes with a load capacity of more than 300 tonnes are developed and produced in Echingen, Germany. At the location in Nenzing, Austria, Liebherr develops and builds crawler cranes with up to 300 tonnes load capacity. These cranes are in particular demand for energy-sector projects, in the petrochemical industry and in infrastructure areas.

The market for mobile cranes in 2013 was generally speaking in equilibrium worldwide, though as in previous years, considerable differences could still be identified in the individual market regions and product segments.

In 2013 the world market for all-terrain cranes dropped slightly (by 3%). Altogether, 2,537 of these cranes were delivered, and Liebherr was able to maintain its world-market lead in this segment and increase its market share to 47.6%.

The highest rates of growth were achieved in the 4- and 5-axle crane classes, whereas no significant revival was evident in the smaller classes, which are primarily in demand in Europe. The division enjoyed increased business in the large telescopic-boom mobile crane area (with more than six axles); this was due in particular to the LTM 1750-9.1 telescopic-boom mobile crane entering series production. A degree of saturation, on the other hand, was encountered in the market for other cranes in this size category.

Overall development was stable in the lattice-boom mobile crane area, though here too there was evidence of saturation in the load-capacity class below 600 tonnes. Above this weight, the order situation was constant. The division recorded a high level of demand for its LG 1750 lattice-boom crane.

Development was slightly recessive in the crawler crane segment above 300 tonnes. 208 of these cranes were delivered worldwide in 2013, compared with 240 in the previous year. With a market share of 42%, the division again occupied a leading position. There was satisfying demand for the LR 11000 lattice-boom crawler crane shown to the public

for the first time at the 2013 'Bauma' international trade fair in Munich, Germany. All in all, the order situation in the telescopic-boom crawler crane, the truck-mounted telescopic crane and the compact crane segments was healthy.

Differences in demand in the various machine classes led to a variety of adaptive measures being taken in the production area. Increasing the planned programme in the small and medium-size segment and effecting a further



Mobile cranes type LTM 1350-6.1 and LTM 1160/2 at the assembly of a mobile harbour crane at the industrial docks in Sète, France

reduction in large crane production once again called for considerable flexibility in all production areas. At the same time it was often necessary during the year to reconfigure cranes quickly and at short notice, modify the equipment specification or undertake other conversion work.

Strong demand for used machines continued, especially in the medium load-capacity classes. Certain machines incurred availability problems.

The division achieved distinct increases in several of its sales regions. Following a stable situation in the previous year, there was an increase in turnover in Western Europe. Positive development was recorded in North America and Africa. In Eastern Europe, on the other hand, progress was less dynamic, and a negative trend was also encountered in the BRIC countries.

Germany, where an above-average increase was recorded, continued to be the division's largest Western European market. In the Netherlands and Great Britain, the second- and third-largest markets in this sales region, turnover also developed dynamically. There was also an increase in volume in France. Market dynamism in Turkey was extremely strong, and in contrast to the previous year the division achieved growth again in Spain and Portugal. Turnover fell back farther in Italy. In Norway and Sweden sales revenue increased.

After a period in which turnover from Eastern Europe rose steadily, 2013 saw a downturn in this region. Russia remained the strongest market in the region. The

previous year had seen significant turn-over for the first time from Azerbaijan, and this was in fact improved upon in 2013. Progress was also recorded in Poland and Belarus.

In contrast to 2012, sales revenue took a downturn in the review year in the Far East/Australia region. Turnover fell in the region's two largest markets, Australia and Japan. Dynamism was not so marked in China either. In South Korea and India, the division lost ground distinctly, whereas business progressed well, among other countries, in Singapore, Taiwan and Hong Kong.

In 2013 the division again made progress on the American continent. In the USA, the division's largest market in this region, growth was above average. The business situation in Canada, Chile and Mexico was also highly satisfactory, and Brazil, although a downturn occurred, remains one of the region's most important markets.

Sales in the Near and Middle East failed to come up to expectations. The negative trend was primarily due to developments in Saudi Arabia. There were increases in the United Arab Emirates and in Qatar, but the division's highest percentage growth was on the African continent, where in 2013 South Africa took over from Algeria as the region's largest market.

In the past year the division undertook new and ongoing development work relating to the entire product programme. Basic and technological research was influenced by peripheral conditions such

as legislation, industrial standards, safety and environmental protection requirements. At the same time work was devoted to optimising economy, availability, ease of control and operating safety, as well as convenience and ergonomics.

Liebherr introduced several cranes successfully to the market in 2013: the LTM 1750-9.1 and LTM 1060-3.1 telescopic boom mobile cranes, the LTR 1220 in the telescopic-boom crawler crane segment and the LR 1250 crawler crane.

When the LTM 1750-9.1 entered production early in 2013, it led to a significant increase in telescopic-boom mobile crane turnover. An addition to the all-terrain crane series, it is positioned between the LTM 1500-8.1 and LTM 11200-9.1 models. A notable feature of this 9-axle vehicle is that it can be driven on the public highway with the complete telescopic boom in position. The concept takes various transport weights and axle load variations into account, in order to enhance the crane's economic viability worldwide.



Type LR 1300 crawler cranes help to build a football stadium in Santa Clara, CA/USA



Type LTM 1750-9.1 mobile crane removes scaffolding from Cologne Cathedral in Cologne, Germany

In 2013 the LTM 1060-3.1 was the most powerful 3-axle mobile crane on the market. Its gross weight of 36 tonnes and its 12-tonne axle load allow for 5.5 tonnes of ballast, 16-rating tyres, an eddy current brake, a 6 x 6 driveline and the hook block.

The LTR 1220 telescopic boom crawler crane has a maximum load capacity of 220 tonnes and a 60-m long telescopic boom. It is particularly suitable as a second crane when erecting wind power generators, and can be used to erect and take down the main crane. Other potential operating areas are long-term construction sites in the energy supply sector or infrastructure projects.

The LR 1250 crawler crane was developed as a new product in the 250-tonne class. CFRP retaining rods can easily be installed for enhanced user convenience.

Other crane types are currently at the development stage. The product programme is updated steadily and matched to market needs. An example of a special product under development is a 4-axle telescopic rescue crane with extra protection.

Among the main development activities devoted to more than one type of crane was conversion of the entire product programme to use the new diesel engines that comply with the more stringent exhaust emission regulations

– Stage IV according to 97/68/EG in Europe, Tier 4f in the USA (EPA/CARB). Other research and development work was devoted to single-engined cranes with more than five axles and to the development of a variable support base system.

In 2013 the mobile cranes division invested a total of 83.6 million €. In this connection special note should be taken of the new assembly building constructed in Ehingen, Germany. It includes areas for experimental work and undercarriage acceptance testing. The remainder of the building is given over to the assembly of large-area sunshades.

Liebherr Mexico S. de R.L. de C.V. began operation in Mexico City at the beginning of 2013. This new sales and service company is responsible for Central American markets. By extending the international sales and service network with this new subsidiary, the division acknowledges the increasing importance of this region. In addition, Liebherr Maroc SARL was established at the beginning of 2014.

Incoming orders remained stable at a high level in the second half of 2013, and the satisfactory business situation will continue in the current year. Opportunities are afforded by the strong North American economies and development potential in various threshold countries. In view of this, the production programme was increased for 2014.



Tower cranes



Tower cranes

The tower crane division was able to boost its turnover in 2013 by 37.4 million € or 10.4 %, to 395.5 million €. In Western Europe in particular the business year progressed positively, and development on the African continent was regarded as highly satisfactory.

In the year under review, the Liebherr Group divided its construction cranes and mixing technology division into two separate product areas, so that there is now a tower cranes division and a concrete technology division. In the tower crane area Liebherr-Werk Biberach GmbH, Germany, serves as a divisional controlling company and is at the same time a production company.

In addition to its plant and offices at Biberach an der Riss, the tower crane division has production facilities in Pamplona, Spain, Pune in India, Guaratinguetá in Brazil and Nizhny Novgorod, Russia. Crane production in each market region is adapted to suit customers' specific needs.

Liebherr-Werk Biberach GmbH develops and builds top and bottom slewing cranes, and also mobile construction cranes. The top slewing cranes from Biberach include the EC-B Flat Top series with load moment values of more than 160 mt, the EC-H High Top series, Heavy Load cranes of type HC for very high hook heights and the HC-L series of

luffing jib cranes for work on exceptionally high buildings or where space is particularly limited. The product programme also includes type DR derrick cranes, which perform the special function of taking down other cranes when building tower blocks, bridge pylons or telecommunication towers. Furthermore, the division designs and builds type K bottom slewing cranes and mobile construction cranes in the MK series; these combine the mobility of a classic mobile crane with the functional advantages of a tower crane.

In Pamplona Liebherr builds Series H and HM bottom slewing cranes, the 34 K and Flat Top cranes from the EC-B series. In Brazil and India the 85 EC-B Flat Top crane, amongst others, is produced. Last year, production of a 150 mt class tower crane began in Russia.

The markets for tower cranes developed differently from region to region in 2013. In Western Europe, the division's most important region, growth was slightly above average. The bulk of turnover was obtained from Germany,

Switzerland, Austria and France. However, turnover declined in France, whereas a positive business year was enjoyed in the region's other large markets. The division also achieved significant growth in Belgium, and turnover doubled in Great Britain, whereas in Turkey the trend was downward.

In Eastern Europe as a whole, turnover was lower in the 2013 business year, though the pattern of business was positive in Russia. Among the national markets on which turnover dropped were the Czech Republic, Poland and Belarus.



Railborne EC-H cranes help to build the market hall in Rotterdam, Netherlands

On the American continent the division enjoyed above-average growth last year. This was primarily due to distinct upturns in the USA and Canada, two of the division's largest markets in this region. Sales revenue fell, however, in other relevant markets such as Chile, Brazil and Cuba.

The largest percentage growth in 2013 was achieved in Africa, with Algeria, Nigeria and South Africa making a particular contribution to turnover. Sales

revenue in these countries was approximately twice as high as in the previous year.

In the Far East/Australia region, the division continued to benefit from a positive trend. Hong Kong took over from India as the region's most important market. Results from Thailand, South Korea and New Zealand were again positive. In Singapore, however, turnover was distinctly lower than in the previous year.



The mobile construction crane MK 88 in the Swiss Alps

It was not possible to maintain the previous year's level of business in the Near and Middle East. This weak performance was due to project business in Saudi Arabia, the division's most important market in this region. In Israel, on the other hand, an increase in turnover was achieved.

A number of new developments reached the market in 2013. Many of these machines were exhibited at the 'Bauma' international trade fair held in that year in Munich, Germany. In the top

slewing crane category, for example, the 150 EC-B 8 was on display, and aroused strong interest. With its maximum outreach of 60 m it is positioned between the 130 EC-B as an FR.tronic version and the 160 EC-B as a Litronic version. The 150 EC-B has also been adapted to suit the Russian market, where it is to be built locally.

The 1000 EC-B 125 was also introduced in 2013. This crane is designed specifically for the work entailed in erecting wind power generators. It can handle weights up to 125 tonnes and install wind power generators rated at up to 4.5 MW. The second crane in the 1,000-mt market segment, the 1000 EC-H, was also shown to the public for the first time. It is the largest EC-H crane in this segment. Other new products included the 357 HC-L and 542 HC-L, two luffing cranes notable for their higher load capacities.

Among the other innovations exhibited at the 2013 'Bauma' was the MK 140 mobile construction crane, which supersedes the MK 100. A special feature of the MK 140 is the four-section folding jib system, which reduces the overall length of the crane package for transport purposes. Other features are the 70° steep-angle jib operating position, the 65-m long jib and the height of almost 95 m under the hook.



A further new development is the 710 HC-L, which completes the lower end of this crane family. This crane was first exhibited at the 2014 'Conexpo' trade fair in Las Vegas, NV/USA, and is scheduled to start series production at the end of the year.

In the bottom slewing crane category, the 53 K was designed in 2013 to close the gap between the 42 K.1 and the 65 K. The prototype is in the test phase in the current year.

In the control technology area, the new AC-500-S control system was introduced for the EC-H, EC-B and HC-L, and the new SD.shift hoisting gear with electrical star-delta changeover also reached the market.

In 2013 the tower cranes division invested a total of 73.2 million €. In Biberach an der Riss, construction work was completed on a new training centre. Other investment projects at this location included the construction of a surface technology building; this initially contains a pilot powder coating unit. As soon as this began to operate, construction work commenced on the main powder coating plant.

In Pamplona the principal investment concerned the changeover to two-component paint finishes. The existing

spray booth was converted and a blasting unit installed. In Pune, the local company invested primarily in crane production technologies. In Nizhny Novgorod, the main investment emphasis was on build-up of the production facilities.

To comply with the wish expressed by customers for used machines to be taken in part exchange when new cranes are purchased, the "Tower Crane Center (TCC)" was established. The task of this competence centre is to coordinate and strengthen worldwide rental and used tower and mobile construction crane business. Turnover from tower crane rentals rose in France and Germany after an increase in the volume of the rental fleet; this now contains approximately 1,500 cranes, making Liebherr the world's largest tower crane rental company.

The division expects to record a further increase in turnover in 2014. Opportunities for this will arise in connection with planned accessing of new business areas and further expansion of rental and used machine activities. In addition, growth prospects are seen in the form of targeted build-up and expansion in numerous markets throughout the world. The world economic recovery that is forecast could lead to a further revival of demand.



An 85 EC-B 5b Flat Top crane at a high apartment block under construction in Vitória, Brazil



Concrete technology



Concrete technology

Turnover from the concrete technology division developed positively in 2013, and reached 230.7 million €, an increase of 9.3 million € or 4.2%. Sales revenue from truck mixers and concrete mixing plant was at approximately the previous year's level. Turnover was boosted by the results from the new concrete pump product area.

Last year the Liebherr Group, by dividing up its construction cranes and mixing technology division into two separate product areas created a concrete technology division and a tower crane division. The division management function for the concrete technology area is entrusted to Liebherr-Mischtechnik GmbH in Bad Schussenried, Germany. This company also operates a production plant.

The division's product programme consists, as well as other products, of concrete mixing plant in various sizes and versions, truck mixers, belt conveyors for truck mixers, control and measurement technology and residual concrete recycling systems. Since take-over in 2012 of the Waitzinger company with its registered offices in Neu-Ulm, Germany, concrete pumps have also been part of the division's programme. This company's name has in the meantime been changed to Liebherr-Betonpumpen GmbH. It primarily develops and builds truck or trailer-mounted concrete pumps and versions for installation on truck mixers. Acquisition of this company has given Liebherr the status of a complete systems supplier in the concrete technology area.

Apart from Bad Schussenried and Neu-Ulm, there are concrete technology production facilities in Guaratinguetá, Brazil, in Rayong, Thailand and in Xuzhou, China.

During the business year under review here, sales of ready-mixed concrete remained stable in most markets despite a low level of dynamism in the economic environment. None the less, strong competition on price persisted among suppliers of ready-mixed concrete, and this led to changes in the division's customer structure. The prevailing difficult earnings situation suffered by ready-mixed concrete suppliers encouraged the trend, in Western Europe, for older plant to be modified and converted to state-of-the-art technology. In this connection European manufacturers were obliged to devote increasing attention to the CE declaration of conformity with its risk assessments and analyses. The Group's concrete technology division has taken steps to satisfy the demands set out in the currently valid guidelines.

Last year the division was unable to maintain the previous year's positive trend in Western Europe, its most important sales region, so that turnover dropped.

Despite a drop in turnover, Germany remained the strongest sales market. Turnover was also lower in France, Austria and Great Britain. The business year was satisfying in Switzerland, however, where there was strong demand for concrete mixing plant. Germany was the largest worldwide sales market for the new concrete pump product area.

The business year yielded welcome results in Eastern Europe, where the upturn noted in 2012 continued. In Russia it proved possible to double the turnover, and this country accounted for a high proportion of worldwide sales revenue from concrete mixing plant in particular. The new Liebherr concrete pumps were also well received by customers in Russia. A slight improvement was recorded in Belarus and Kazakhstan. Turnover went down in Romania. In Eastern Europe the principal demand for concrete pumps was in Russia, the Ukraine and Kazakhstan.



This Betomix DW 4.5 horizontal concrete mixing plant in Muscat, Oman, supplies up to 200 m³ of concrete per hour

In the Far East/Australia region, turnover was generally positive, though there was a reduction in sales revenue in China, the region's most significant market. In Thailand, on the other hand, increased business was obtained both from concrete mixing plant and from truck mixers. Results from Myanmar also exhibited an upturn. A specific reason for this was Liebherr having secured orders of some size for the Compactmix 1.0 concrete mixing plant, but concrete pumps were also sold successfully. In Viet Nam the division also enjoyed a successful business year. In the Philippines, there were successful sales of both concrete mixing plant and truck mixers.

The regressive tendency that began in 2012 persisted on the American continent. In Brazil, the division's second-largest market in 2013, turnover was mainly generated by truck mixer sales.

Whereas in the previous year business from concrete mixing plant developed most rewardingly in the USA, turnover fell back again in the review year. In Peru and Canada there were improvements, though based on a low previous turnover level. This was achieved in Peru by the truck mixer product area; in Canada the improvement resulted from sales of concrete mixing plant.

In Africa, a definite increase in turnover was recorded. In Algeria, the most important market in this region, the pattern of business developed very satisfactorily, thanks to sales successes for both concrete mixing plant and truck mixers. Other countries in which there was an upturn were Nigeria, Congo, Egypt and Gabun.

In South Africa, the division's second-largest market on the African continent, sales revenue was slightly lower than in the previous year. The new concrete pump product area generated turnover in Congo, Algeria and elsewhere.

Slight growth was recorded in the Near and Middle East. In Saudi Arabia, the division's largest market in this region, total turnover just failed to equal the previous year's figure. Business obtained from concrete mixing plant was encouraging, but demand for truck mixers declined. In Israel and in Oman higher turnover than in the previous business year was achieved.

Development work on truck mixers during 2013 was mainly devoted to product optimisation. In addition, Liebherr undertook to modify its products to



The HTM 904 truck mixer has a nominal volume of 9 m³

comply with new regulations and industrial standards. Weight-saving measures for truck mixers were developed in order to take account of the trend toward higher payloads.

The division also worked on various solutions for specific markets, for example a new version of the HTM 1204 to HTM 1604 model family suitable for Asian markets.

In Thailand and neighbouring countries, a modified Type Compactmix 1.0 concrete mixing plant was specially developed for the market and introduced successfully. Liebherr presented a new plant, the CPM 1.25 B-R/DW, at a trade fair in Myanmar. It is equipped with a new twin-shaft mixer and has been specially designed for suppliers of fairly small amounts of ready-mixed concrete in rural regions of Thailand and Myanmar.



The THS 110 D-K crawler concrete pump is an excellent choice when grouting concrete piles

Additions were made to the existing concrete mixing plant programme, and individual components improved and standardised. Ongoing development of a frequency-controlled ring pan mixer with double cyclone system for high-performance and ultra-high strength concrete has made it possible to produce increasingly advanced mixes. A larger support frame was designed for the Betomat V concrete mixing plant, of sufficient width for two truck mixers to pass through at the same time.

There were also new developments in the measurement technology area. Based on the successful Litronic-FMS moisture measuring system, a sensor for layer thickness measurement was developed. It enables paper and foil or adhesive layer thicknesses to be monitored during the actual production process.

At the 'Conexpo' international construction machinery trade fair held in the spring of 2014 in Las Vegas, NV/USA, the THS 110 D-K crawler concrete pump, a revised design with 6-cylinder engine and a discharge rating of 102 m³/h, was exhibited.

The THS 110 D-K has been specially conceived for flexible construction-site operation. The Liebherr crawler concrete pump programme now consists of three models: the THS 80 D-K, the THS 110 D-K and the THS 140 D-K, with maximum discharge volumes between 65 m³/h and 135 m³/h.

In the past year the sum of 13.1 million € was invested in the concrete technology area. Among investments by Liebherr-Mischtechnik GmbH were those devoted to paint application techniques for concrete mixing plant.

The volume of truck mixer orders in hand at the end of the year was distinctly higher than a year previously. This was mainly due to the introduction of the Euro 6 exhaust emission legislation in January 2014, which imposes much more stringent commercial-vehicle emission requirements in the EU and in Israel. In view of this, orders planned for 2014 were brought forward in several countries. Numerous company takeovers by Chinese manufacturers had the effect of rendering competition on price in the truck mixer market still more severe.

In the concrete mixing plant area, orders in hand at the end of 2013 were higher than at the end of the previous year, a development encouraged by orders from Russia, Saudi Arabia and elsewhere.

Despite the satisfactory overall volume of orders in hand, it is not yet possible to speak of a general recovery in the relevant business sector. The division none the less takes an optimistic view of 2014, and will once again expand its worldwide presence as a complete concrete technology systems supplier.



Maritime cranes



Maritime cranes

In 2013 the maritime cranes division generated 830.1 million € of turnover, a figure very close to the previous year's total. Turnover rose by 2.4 million € or 0.3%. There was growth in the offshore and container crane areas, but a drop in turnover from mobile harbour and ship cranes.

The division's products are manufactured at four plants in Europe: Liebherr-Werk Nenzing GmbH, Austria, Liebherr Container Cranes Ltd. in Killarney, Ireland, Liebherr Sunderland Works Ltd., Great Britain, and Liebherr-MCCtec Rostock GmbH, Germany.

In the past year, demand for the division's products differed very widely from one region to another. Growth regions during the year included the Near and Middle East, America and Africa. In Western Europe, turnover was slightly above the previous year's level. Sales revenues from the Far East/Australia and Eastern European regions were lower.

In the review year, Western Europe was the division's most significant sales region. In this region, total turnover was slightly higher than in the previous year, with a more marked increase in Great Britain and Germany. Sales revenues were also higher in Spain and the Netherlands,

but declined in Turkey and Denmark. In Eastern Europe, turnover dropped in 2013, due in particular to a noticeable reduction in demand for container and offshore cranes in Russia. Turnover in Poland remained at the previous year's level. Container crane sales resulted in most welcome additional business in the Ukraine.

Overall sales revenues were lower in the Far East/Australia. In South Korea, the division's largest market in the region, turnover rose significantly; this was primarily due to sales of offshore cranes. The business year proved positive in Singapore, Australia and New Zealand. China, India and Indonesia lost relevance to some extent, and the division's turnover in these three countries dropped considerably. In the Philippines, Thailand and Malaysia, there was a dynamic upturn in sales revenue, though turnover in these markets was at a much lower level than in the principal markets.

On the American continent, the division enjoyed a satisfactory business pattern, with worthwhile increases in the USA, Panama and Mexico, the largest markets there. In Peru as well, growth from the previous low level of turnover was achieved. In Brazil, which had been the second largest market in 2012, turnover was much lower, and the situation was similar in Argentina.

The division also enjoyed growth on the African continent. The largest market there in 2013 was South Africa, where there was considerable growth. In Liberia, Ghana and Angola too, progress was most gratifying in the business year under review; the turnover generated in Liberia was stimulated by extremely



New type FCC crane at the foot of the Niagara Falls

dynamic activity in the ship crane area. The business year was less positive for the division in Egypt and Nigeria. In Morocco, the division suffered a definite drop in sales revenue and thus in importance in the past year.

In the Near and Middle East, sales revenue also rose at an above-average rate due above all to extremely positive developments in Saudi Arabia, which is now the region's strongest market in terms of turnover. The increase was due in particular to sales of container



Liebherr ship-to-shore container cranes at the port of Cape Town, South Africa

loading gantries. Six rail-mounted stacking cranes were for instance supplied to Saudi Arabia's Jubail Commercial Port. A positive trend was also recorded in the United Arab Emirates, whereas a downturn took place in Kuwait.

Turnover from the mobile harbour cranes area dropped, though demand remained high. The division maintained its position as world market leader: almost 80 of the cranes of this type delivered worldwide came from Liebherr, giving it a market share of well over 50 %.

In recent years the offshore crane segment has gained in importance, due especially to the receipt of large orders for heavy-lift cranes. Other positive impulses came from the subsea crane segment, which the division accessed in 2012 and 2013 with two new crane types, the RL-K 4200 and the RL-K 7500. These are designed for deep-sea applications. Market developments were also positive in the "Oil & Gas" and "Offshore Construction" segments.

In the ship crane product segment, Liebherr was able to secure a significant order for a total of six heavy-lift ship cranes in 2013: four Type CBB 4700 cranes of 450 tonnes load capacity and two Type CBB 3450 cranes with a load capacity of 120 tonnes. The heavy-lift crane market continues to be hotly contested, with only a small number of orders placed, but with a high individual order volume.

Pontoon and barge cranes, which are grouped together as "Floating Transfer Solutions" (FTS), are currently achieving high acceptance on the world market as efficient, economical high-performance alternative to classic dockside infrastructures. This applies both to bulk material and container handling cranes. Permanently installed and railborne cranes from Liebherr, the Type FCC (Fixed Cargo Crane) and TCC (Travelling Cargo Crane), continue to be highly popular in threshold countries. A most welcome development was penetration of the South American market with these products.

The volume of the market for container loading gantries was slightly lower in 2013, but the effect of this trend was rendered less pronounced by above-average turnover in Great Britain, Saudi Arabia, South Africa and Australia.

During 2013 the division's development departments worked on various projects. Early in the year the new Type RL-K 7500 deep-sea crane with articulated boom was shown for the first time to an international public. It has impressive performance parameters, can lift loads of up to 270 tonnes above water level and lower loads to a depth of 3,400 m. Among this subsea crane's patented technical innovations are a new winch

system and a wave compensating system using sensors to cancel out movement of the ship during crane operation. The energy needed for this is obtained from a hybrid driveline.

Also announced in 2013 were the new Liebherr simulators (LiSIM) for maritime applications, which offer a means of training personnel on mobile harbour cranes, offshore cranes, container loading gantries and rubber-tired stacking cranes. Based on original soft- and hardware, the simulators are an economically viable, innovative answer to the need for professional training of crane operators in realistic ambient conditions.

In the mobile harbour crane area, development work began on new products and technologies aimed at providing a direct link with the numerous innovations that have been introduced to the market in recent years. In the ship crane segment, the division has been developing the new CBB 3800 for container and cargo handling. In the offshore crane area, work went ahead on renewing and adding new models to the BOS series. This currently comprises various sizes and lifting capacities up to 1,200 tonnes. The maximum jib length available on these cranes is 102 m, a length that offers particular advantages when installing offshore wind parks.

Production of Type BOS 4200-60 D Litronic and MTC 3100-25 D Litronic cranes began in Guaratinguetá, Brazil. Production of cranes in Brazil is Liebherr's response to the growth of the local oil and gas extraction market.

In 2013 the division invested 71.1 million €. Among the work undertaken at Liebherr-Werk Nenzing GmbH was a new repair shop building. Liebherr Container Cranes Ltd. continued construction work on a new structural steelwork production building. Liebherr-MCCtec Rostock GmbH invested in the extension of its production capacities.

A new service company for the division's products was established in 2013 in Almaty, Kazakhstan. Liebherr Kasachstan TOO has in the meantime commenced operations there.

In addition, work went ahead within the division on reorganising the individual locations' responsibilities and competences. Liebherr-MCCtec Rostock GmbH will in future be the central company within the Liebherr Group's maritime division; Liebherr-Werk Nenzing GmbH will concentrate mainly on the construction machinery area. Increasing activity in the technical and sales areas at the Rostock location led to a considerable increase in staff during 2013, and this trend will persist in coming years.

Midway through 2013 a new sales and service centre was opened in Hialeah Gardens, Miami, FL/USA. This facility supports the maritime cranes division's sales and service activities in North America and large parts of Latin America.

At the beginning of 2014 incoming orders were higher in value than anticipated. Despite restrained forecasts for the business sector as a whole, the division expects its turnover to rise significantly in the current business year.



The newly opened Liebherr sales and service centre in Hialeah Gardens, FL/USA



Aerospace and transportation systems



Aerospace and transportation systems

In the 2013 business year the aerospace and transportation systems division achieved a turnover of 1,120.1 million €, an increase of 87.5 million € or 8.5%. Whereas the aerospace equipment area grew at an above-average rate, the pattern of development was negative in the transportation systems area.

For the aviation industry the division develops and builds flight control and actuation systems, landing gear and air management systems for helicopters, wide-bodied aircraft, single-aisle and regional jet airliners, business jets and military aircraft.

The trend in worldwide air traffic was positive in 2013, but although the price of oil was slightly lower than in previous years, pressure on the procurement of low-consumption aircraft generally continues to increase.

Aircraft manufacturers Airbus and Boeing were able to maintain their previous years' successes in 2013. Airbus exceeded its targets for the year in the single-aisle and long-range aircraft categories, and reported record results in deliveries, new orders received and orders in hand. Airbus was especially successful with the A320neo and the A330. For the A350 XWB long-range aircraft, which made its maiden flight in the summer of 2013, Airbus has announced an increase in production capacity.

The maiden flight of the fuel-efficient CSeries aircraft from Bombardier, the Canadian manufacturer of business jets and regional aircraft, took place successfully in the autumn of 2013. The Brazilian aircraft manufacturer Embraer launched its E-Jet E2, the second-generation E-Jet, and has already taken orders for it.

The helicopter market remained stable. Airbus Helicopters was able to increase its delivery volume. AgustaWestland recorded strong demand for its AW139 model in particular. Thanks to its AW169 and AW189 models, the Italo-British manufacturer takes an optimistic view of the future.

The division was able to continue its previous year's success in the aerospace area, and recorded an above-average increase in turnover. Deliveries for the production versions of the Airbus A320, A330 and A380 model families, the A400M military programme, the start of A350 XWB series production and the deliveries made to Airbus Helicopters and AgustaWestland all had a positive effect.



Assembly of an A350 XWB nose landing gear

An increase in turnover was also achieved in this area in Eastern Europe. Sukhoi Civil Aircraft stabilised the production rate for its Superjet 100, for which Liebherr supplies the flight control and air management systems.

In the Far East/Australia region Liebherr again recorded a gratifying increase in turnover from after-sales service work. Earnings grew most dynamically in the Near and Middle East, where the after-sales service for aviation equipment is being built up steadily.

Growth was achieved in America as a result of deliveries for the Global Express and Challenger 300 business jets, Bombardier's CRJ regional aircraft and the

Embraer E1 E-Jet programme. Liebherr also benefited from stabilisation of B747-8 production, Boeing's long-range commercial aircraft.

In 2013 the development departments mainly worked on orders granted to the division in the previous year. Important landing gear projects were the system for the Bombardier CSeries aircraft, the system for the C919 built by Chinese manufacturer COMAC and the landing gear for the AgustaWestland AW149 helicopter. Development work continued on the landing gear system for the Chinese ARJ21 regional aircraft.

Liebherr also worked on the slat actuation system for the A350 XWB and the flight control system for the Superjet 100, and commenced development of the high-lift system for the E-Jet E2 aircraft family, on the basis of an order placed with Liebherr in 2013.

In 2013 the air management systems area produced the first components for the Brazilian KC-390 military transport aircraft. Liebherr had previously concluded a contract with Embraer, the manufacturer, for development and production of the engine bleed air, cabin pressure control and air conditioning systems. Work continued on the



Checking a printed circuit board for an avionics component at Liebherr-Aerospace in Singapore

integrated air management systems for Bombardier's CSeries, Learjet 85, Global 7000 and Global 8000 aircraft and COMAC's C919. Progress was also made on the bleed air system for the Snecma (Safran) Silvercrest engine and the air conditioning systems for the AW189. In addition, the division began qualification tests on the engine bleed air system for the A320neo aircraft family.

New orders were received from Embraer and other sources. Liebherr will for instance develop and supply the high-lift system for the E-Jet E2 family, and also develop and manufacture the air management system for the new generation of E-Jets, comprising the integrated control architecture with lightweight pneumatic and mechanical components and the bleed air, air conditioning and cabin pressure control systems. Boeing commissioned Liebherr to develop, manufacture and service the regulation valves of the nitrogen-enriched inerting system for the KC-46 tanker aircraft. For the Challenger 350 business jet, Bombardier commissioned two safety-critical systems, the flap actuation and air management systems.

The aircraft manufacturer Fábrica Argentina de Aviones Brig. San Martín S.A. (FAdeA S.A.) selected Liebherr to develop, manufacture and service

components of the flight control system, landing gear system and air management system of its IA-63 Pampa training aircraft. Liebherr signed a contract with Dassault Aviation for the air management system on its new twin-jet Falcon 5X business jet. The contract covers the development, production and servicing of the air conditioning system, the associated cabin pressure control system and equipment for air distribution in the cabin.

The division invested a total of 76.4 million € in 2013. Extension of the facilities in Lindenberg, Germany, went ahead, with construction of a logistics building and two assembly buildings largely completed. Plans for further extensions are scheduled for realisation by 2018. In Toulouse, France, construction of a new logistics centre continued, with the aim of optimising industrial processes and further enhancing quality and on-time delivery. A further logistics centre is taking shape in Dubai, United Arab Emirates. As part of the service network it will offer aircraft manufacturers and operators comprehensive logistics services, including the availability of spare parts and tools for the growing fleets operated by customers in the Near and Middle East.

In 2013 the worldwide rail transport sector maintained its moderate rate of growth, which was realised again by the enlargement and renewal of rail networks in the infrastructure area and also in the service area.

In the transportation systems business area, Liebherr develops and manufactures air conditioning and power supply equipment and hydraulic actuation systems. Turnover from this area dropped slightly in 2013, due to increasingly frequent delays in the placing of orders for new rail vehicles and more severe competition caused by the activities of new suppliers.

With regard to air conditioning systems, the division's participation in Germany as a supplier to the "E-Talent 2" regional trains, "Twindexx Vario" double-deck trains and the "ET 430" suburban trains exerted a positive influence, as did the supply of air conditioning sets for the French "Nouvelle Automotrice Transilienne", the Toronto Transit Commission's subway in Canada, the "DPZ+" regional trains operated by the Swiss Federal Railways and the Class 158 "Sprinters" in Great Britain. Another welcome source of turnover was the development work carried out on behalf of the British Ministry of Transport for the "Thameslink" project. In the hydraulics area, the division achieved an increase in turnover in particular as a result of orders placed for the delivery of levelling systems to the Chicago Transit Authority.

In the transportation equipment area, Liebherr booked numerous follow-up and new orders in 2013. For the "electromobility" segment that is now taking shape on the bus and rail-vehicle markets, Liebherr has signed an agreement with vehicle manufacturer Bombardier to develop a cooling system for lithium-ion batteries as used in electric drive systems, which are set to power urban transit buses and light-rail vehicles. This cooling system ensures that the batteries operate in optimum thermal conditions.

In Great Britain the division was granted follow-up orders for air conditioning sets on "Electrostar" trains, and further options were taken up in Germany for the "E-Talent 2" project. The Slovakian rail vehicle manufacturer ŽOS Vrútky placed a repeat order for air conditioning systems. The Czech State Railway granted the Siemens company an option for the "CD-Jet" trains for which Liebherr supplies the air conditioning equipment. In the urban transport segment the division secured an option for the Frankfurt/Main, Germany, underground and also took orders for the development and production of heating control systems for vehicles that will operate in Darmstadt, Germany, and for the servicing of air conditioning equipment on the "Variobahn" in Bergen, Norway.

A Polish rail vehicle manufacturer has ordered anti-buckling systems from Liebherr, to be installed on trams for Braunschweig, Germany. Chinese tram manufacturers have also adopted this technology for use on vehicles in various Chinese cities.

In the hydraulics area, the division received a repeat order to supply levelling systems for low-floor trams in Toronto. A contract was also signed with Alstom for the development and production of bogie coupling systems on “H3 Hybrid” shunting locomotives.

Transport-technology research and development was concentrated on optimising the availability of low temperatures. In the cold vapour technology area intensive work was carried out on reducing the energy consumption of cooling systems by introducing a heat-pump function or by other means. In cold-air

technology the emphasis was on boosting the efficient use of energy by systems using this technology. During 2014 it is planned to hold a field test in cooperation with the French railway operating company SNCF.

The division views 2014 with optimism. The positive trend in the aviation industry will probably persist. In the rail business area there are signs that global growth will continue, with production of rail vehicles continuing to increase at a moderate rate. All in all, the aerospace and transportation systems division anticipates an increase in its turnover.



Light-rail vehicle by Bombardier with a Liebherr cooling system for a Li-Ion battery



LCH 180
two

Y2

12

Machine tools and automation systems



Machine tools and automation systems

In 2013 the machine tools and automation systems division achieved a slight increase in turnover, of 3.7 million € or 1.4% to 266.4 million €. Whereas sales revenue from machine tools was slightly below the previous year's figure, the automation systems area developed most encouragingly in Western Europe and achieved a better overall result than in 2012.

The division's products are developed and manufactured in Western Europe by Liebherr-Verzahntechnik GmbH in Kempten, Germany, and its branch factory in Ettlingen, Germany, and also by Liebherr-Utensili s.r.l. in Turin, Italy. The division is represented in Asia by its production facility Liebherr Machine Tools India Private Limited in Bangalore, India, which undertakes the assembly of machine tools. At the location in Saline, MI/USA, the division operates the sales and service companies Liebherr Gear Technology, Inc. and Liebherr Automation Systems Co.

According to data released by the German Federation of Machine Tool Manufacturers (VDW), incoming orders for machine tools worldwide remained largely stable in the second half of 2013 following a weak first half of the year. However, worldwide production of machine tools went down by 11.9% to a value of 58.3 billion €.

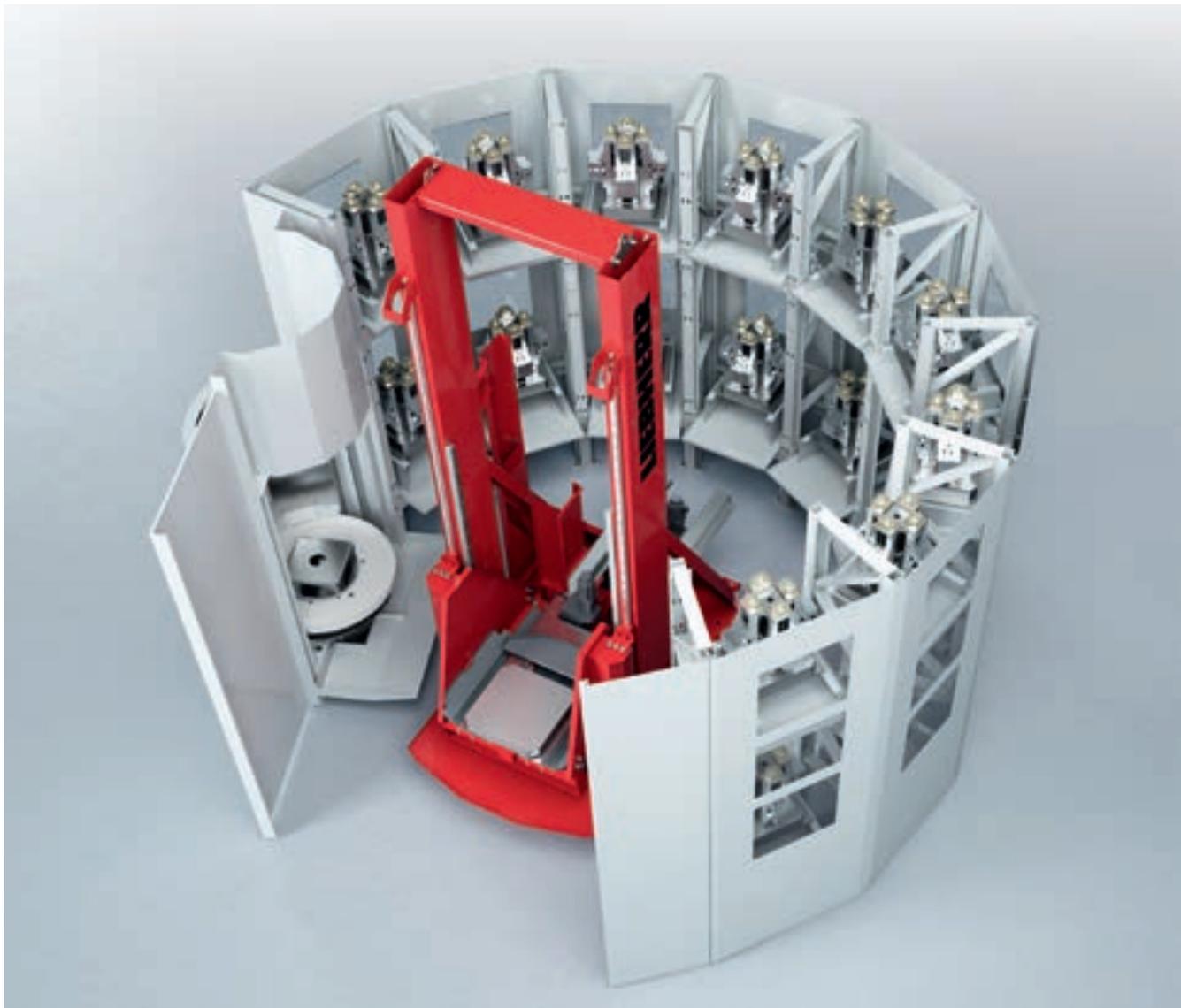
In 2013 the German machine tool manufacturers recorded a 6.3% drop in incoming orders. Business volume on the domestic market was 7.0%, and exports were 6.0% lower than in the previous year. Utilisation of capacity in the machine tool industry was 92.8%, which amounts to a reduction compared with 2012.

Average orders in hand for 2013 as a whole were sufficient for 7.5 months. In the previous year they had been sufficient for 8.5 months. According to information supplied by the US Association for Manufacturing Technology, incoming orders in the USA went down by 5.1% in 2013.

Overall sales earnings by the machine tools and automation systems division rose slightly last year, with Western Europe taking over from America as the most important sales region. Turnover from that region increased by more than a third and thus continued the positive development recorded in the previous year.

A distinct rise in turnover from Germany made this easily the division's most important market. In Great Britain, turnover rose again as it did in the previous year. There was a fourfold increase in sales revenue from the Swedish market, due to strong demand for machine tools, making Sweden the third-largest

Western European market. Growth was also achieved in Austria and Turkey, but dynamism was lower and turnover fell in France and in the Southern European markets Spain, Portugal and Italy.



Rotary loading system RLS: entry into high-efficiency production

Turnover went down in Eastern Europe as a whole, although Russia, this region's most important market, developed in the machine tool area in a highly positive way. In contrast to the previous year, there were distinct downturns in Romania and Belarus, and negative trends in Hungary and Poland as well. Growth was achieved in the Czech Republic, although based on a low figure in the previous year.

The division succeeded in increasing its turnover in the Far East/Australia region. This resulted from strong demand for machine tools. In South Korea, the division's largest market in this region, this product area enjoyed considerable success, as it did in China as well. However, the business year as a whole in China was not so satisfactory for the division, since there was a definite downturn in automation systems sales. In



Gear hobbing machine LC 500 and gear shaping machine LFS 500 with a KKB plastic chain conveyor

India, Hong Kong and Taiwan the division's turnover fell, whereas in Singapore a very steep rise was recorded.

The market for machine tools and automation systems on the American continent exhibited a negative trend. In the USA sales did not reach the previous year's level and turnover dropped considerably. On the Brazilian market sales revenue doubled, this being due

to sales of automation systems. In Argentina, Canada and Mexico definite gains were achieved in the machine tool area, though these were based on a low level of business in the previous year. In Chile, the region's second-largest market in 2012, turnover slumped in the review year, due to low demand for machine tools.

Development activity in 2013 was concentrated on modernising the product programme to suit the needs of passenger-car manufacturers. As part of this project, three new machine series were developed and exhibited in the autumn at the 2013 'EMO' in Hanover, Germany, the international trade fair for machinery manufacturers.

The new LGG 180 gear grinding machine has been designed for high-volume gearwheel production in the passenger-car industry. It combines short grinding times with consistently high quality for long production runs. The new grinding head with one-sided bearing accepts tools complying with existing standards, but also the latest generation of tools with high-efficiency cutting materials. Although this machine has only one workpiece table, it is capable of achieving chip-to-chip times of under four seconds. The LGG 180 is the smallest machine in this new series; further LGG versions are currently under development.

Another new development was the LCH 180 two gear cutting machine for the preliminary machining of gearwheels. In order to boost productivity the two machining units – chamfering and deburring – were located separately, and the machine was given two tables that swing into the two machining units



alternately, in accordance with the work sequence. The workpiece axes of the two tables are arranged horizontally in order to save space and ensure effective operator control.

A further innovation in this work area is to be found on the LC 180 Chamfer Cut gear cutting machine. A complete second machining unit with seven NC axes has been added to this machine. Whereas on the LCH 180 two the same workpiece clamping is used in both machining positions, the workpiece on the LC 180 Chamfer Cut is moved from one machine table to the other.

These projects were completed by presentation of the new LH-Geartec machine control system. In future, a user interface with "multi-touch" screen will replace list-oriented control and permit intuitive, graphically supported menu control.

In the automation systems area, development work resulted in systems for the intelligent handling of heavy workpieces. The LPC 3400 pallet cell complements the division's new machine-tool products. The pallet cell stores workpieces in baskets on floor-level rollers; the automation then supplies them to the machine. This form of parts handling makes it possible to integrate machines flexibly into the production-material flow.

From the gear tools product area, shaping tools to AAA quality standard and with reversible cutter blades were exhibited for the first time in 2013 at the 'EMO' trade fair in Hanover.

In the past business year new and ongoing development work was also carried out for the Group's aerospace and transportation systems division. For automation of a new titanium machining centre at the Lindenberg, Germany, location, Liebherr-Verzahntechnik GmbH developed an external tool storage and distribution system. The centre machines titanium components for aircraft flight control and actuation systems.

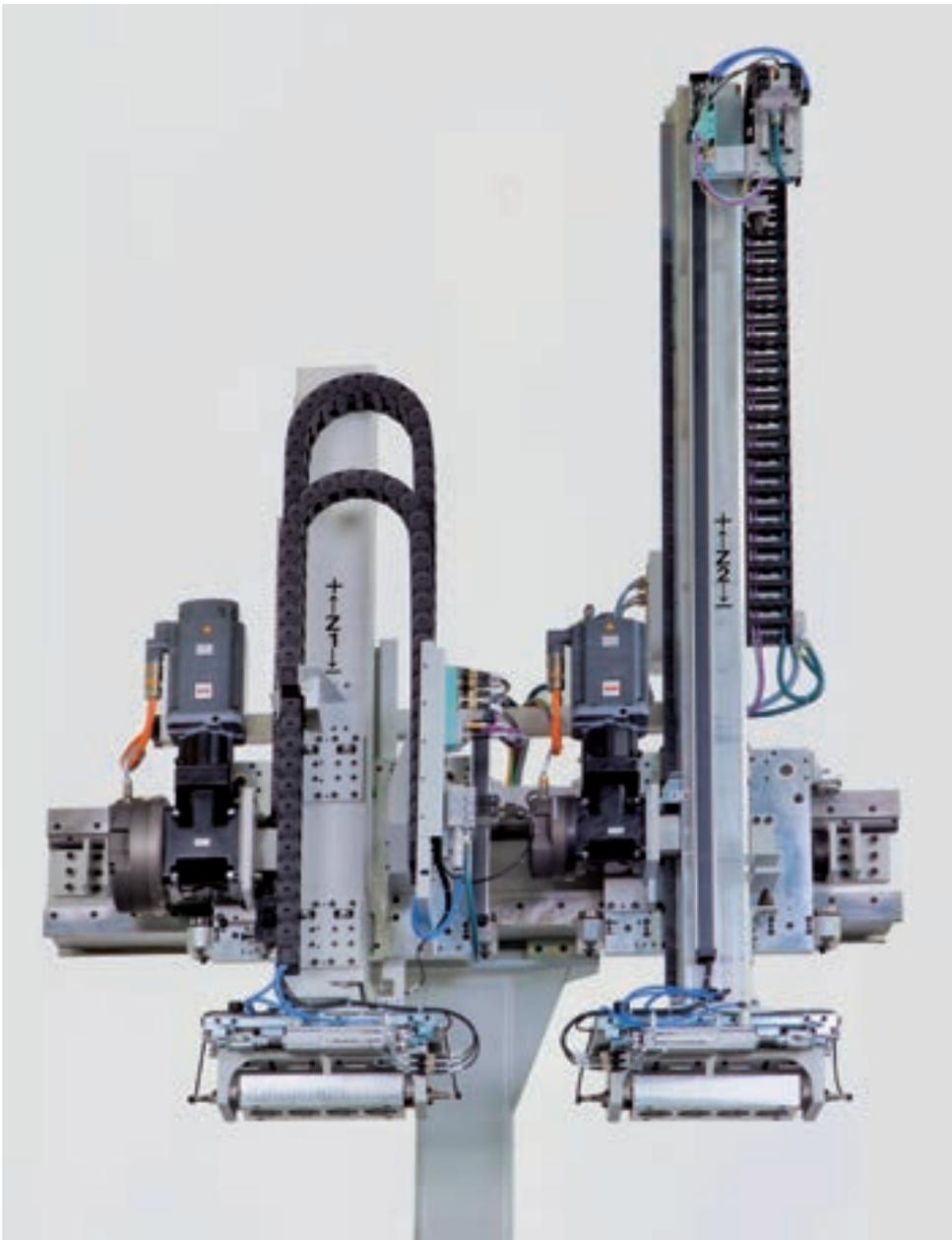
The division's investments in the 2013 business year were in the region of 7.1 million €. This sum was mainly devoted to the acquisition of machines and plant at the Kempten location. In Bangalore, India, production was extended and a new office building with rooms for training was completed.

Until the end of the third quarter of 2013, orders received by the division were not significantly higher than in the previous year. There was an increase in orders in hand for automation systems. Against this, reluctance to invest in machine tools casted a shadow on the division's order situation.

The German Association of Machinery and Plant Manufacturers (VDMA) forecasts a 3% increase in machine construction in Germany for 2014. The American Association for Manufacturing Technology expect positive results

for 2014. Factors favouring this upturn are lower energy costs in the United States and sound growth in a number of key business sectors such as the automobile industry. The division is unlikely to match the high turnover recorded in the previous two years. An increase in the degree of machine tool

standardisation is intended to access potential among the division's customers. The products exhibited at the 2013 'EMO' generated keen interest following this trade fair, and this is expected to have a positive effect on demand in the current year.



Telescopic axis for facilities with low ceilings



Domestic appliances



Domestic appliances

With a turnover of 909.4 million €, the domestic appliances division was able to record a slight increase in the 2013 business year. Compared with the previous year's exceptionally good result, revenue from sales of refrigerators and freezers went up by 19.5 million € or 2.2%. Worldwide sales last year totalled approximately 2.2 million appliances.

In Western Europe, the Group's largest sales region, an increase in turnover was achieved again. Whereas sales revenue dropped slightly below the previous year's level in France, Austria and the Netherlands, there was growth in Germany and particularly in Switzerland. The increase in Germany was mainly due to the completely renewed built-in appliance programme. In Italy and Great Britain, turnover remained at the previous year's level, but dropped below that level in Belgium. The consequences of the Euro crisis were still detectable in some Southern European countries: turnover dropped again, for instance, in Spain and Greece.

The positive trend in Scandinavian countries continued in 2013, with most satisfactory sales revenue earned in Sweden, Denmark and Norway. Finland did not share in this development but suffered a drop in turnover.

After several years of continuous growth, the division was not able to maintain this trend in Eastern Europe, its second-largest sales region.

The main drop in turnover took place in Russia, the division's most important market in this region. Business there was adversely affected by changes in exchange-rate parities and the consequent pressure on prices. 2013 was a very successful year for the division in the Czech Republic, and growth was also recorded in the Ukraine and in Poland.

In the Far East/Australia region turnover reached a level slightly higher than in the previous year. Following a downturn in 2012, Australia was very successful in the review year; it is this sales region's most important market. Malaysia and Indonesia too recorded above-average increases in turnover. In contrast to this, turnover dropped noticeably in Thailand, another of the division's major markets in the Far East/Australia region, due to lower sales of ice cream chests.

On the American continent, Liebherr achieved a most satisfactory increase in turnover, and was therefore able to match the previous year's positive trend. Turnover in the USA and Canada in fact grew even more strongly. There was an



The IKBP 3554 BioFresh refrigerator is suitable for integration and qualifies for the best energy efficiency class A+++

exceptional increase in turnover from sales of commercial appliances in Chile, though this was based on a low starting figure from the previous year. A similar development pattern was noted in Mexico and Panama. In Brazil, on the other hand, the economy weakened and there was a general reduction in demand for the division's products, so that sales revenue lay slightly below the previous year's value.

A further drop in turnover occurred in Africa. In Ethiopia and Algeria, for example, sales earnings were well below the figure achieved in the 2012 business year. In South Africa a significant upturn took place, following weak performance in the previous year. Building up its own

sales company there will enable the division to regain more of its previous dynamism. Turnover from Egypt also yielded a most satisfactory result.

The division's overall performance in the Near and Middle East was positive. Although turnover went down in Israel, the region's largest market for Liebherr domestic appliances, this was made good by above-average growth on other markets.

For many years now, optimising energy consumption has been one of the development priorities in the domestic appliance area. Liebherr offers the most extensive programme of refrigerators and freezers making efficient use of



The new supermarket chests combine sales-promoting presentation of goods with convenient user ergonomics

energy. Dynamic sales confirm that energy consumption is a decisive purchasing factor. During the 2013 development period, the number of appliances in the best energy efficiency category A+++ was increased from eleven to a new total of 45 models. Notable examples are the two combined BioFresh models CBP 4043 and CBPef 4043; with an energy consumption of only 130 kWh, they are the most economical appliances on the market, and 20 % more economical than the class A+++ limit.

Introduced successfully in 2013, the built-in appliances programme was extended to include two new BioFresh models for 102 cm and 158 cm wide niches. The built-in freezer programme was entirely reorganised, and consists of seven fixed-door models for installation in niches from 72 cm to 178 cm wide, a model with door attached to the outer cabinet and a model suitable for decor application, for the 88-cm wide niche. All appliances qualify for efficiency class A++ and are therefore extremely economical. Also added to the programme were three models with NoFrost technology; in these the food to be frozen is cooled by refrigerated air recirculation, and the moisture it contains discharged externally. The "SoftSystem" integrated into these appliances prevents the door from being slammed violently and closes it automatically when an opening angle of 30° is reached.

In recent years the standalone models in particular have, by the use of high-quality materials allied to attractive product design, acquired a special position in modern kitchen and living areas. With its big range of models, some with stainless steel or glass fronts, Liebherr can supply appliances capable of satisfying just about every customer's wish and matching the setting in which it is to be used. Two models in black stainless steel, the CBNPbs 3756 and CNPbs 4013, have also joined the programme. The "SmartSteel" high-quality surface finish ensures that finger marks are scarcely visible on these appliances. In addition, the surfaces are easy to clean and much more resistant to scratching. The CBNPbs 3756 model received the 2014 "Red Dot Design Award" award.

Development work on table-height refrigerators mainly concerned standardisation and production optimisation, together with the introduction of new inside-door brakes on "Comfort" and "Premium" appliances. On certain models, for instance the TP 1720 and TP 1724, energy consumption was optimised, so that these appliances too now qualify for the best energy efficiency class A+++.

The 55-cm wide "TopFreezer" programme was also given new inside door brakes and its energy consumption optimised to qualify for the economical efficiency class A++.

The wine cabinet programme's development emphasis, after renewal of the standalone models in 2013, was on the under-worktop appliances and a standalone tabletop model. Since these models are normally operated in a kitchen environment, noise reduction was a development priority. By optimising components such as fans and compressors, noise emissions were reduced by as much as 5 db(A).

Among the new models in the wine cabinet programme was the UWT 1682 Vinidor, with "TipOpen" technology, a model for installation under a table top and especially suitable for integration into kitchens without projecting handles. When the glass door is touched lightly, it opens by a few centimetres and can then be opened fully. This cabinet has two wine safes, in each of which the temperature setting can be varied between +5°C and +20°C. In this way both red and white wines can be stored at their optimum temperatures.

In the commercial area, work went ahead in 2013 on the development of supermarket chests; in April 2013 the division supplied the first appliances for field testing. At the 2014 'Euro-Shop' trade fair in Düsseldorf, Germany, Liebherr exhibited the new-generation chest models to the public for the first time. These appliances, which combine functionality with modern design, have as their notable features the optimum presentation and handling of goods, low energy consumption, an innovative automatic defrosting system and new, intelligent electronics. On the appliances for commercial use the process of standardisation for the medium-size appliance programme was continued, with the aims

of achieving increased customer benefit, lower energy consumption and enhanced appliance design.

At the 2014 'Analytica' in Munich, Germany, the leading international trade fair for laboratory technology, analysis and biotechnology, Liebherr exhibited the results of new development work in the laboratory and medicinal areas. The focus was on explosion-proofed models. New laboratory equipment with an explosion-proof interior such as the LCexv 4010 laboratory combination is especially suitable for the storage of explosive or highly flammable substances. Also exhibited there were the new, extremely economical "MediLine" models with recirculated air cooling and an integral temperature display. New features include an innovative LED lighting concept for glass-door models; this can achieve an energy saving of as much as 20% compared with conventional fluorescent tubes.

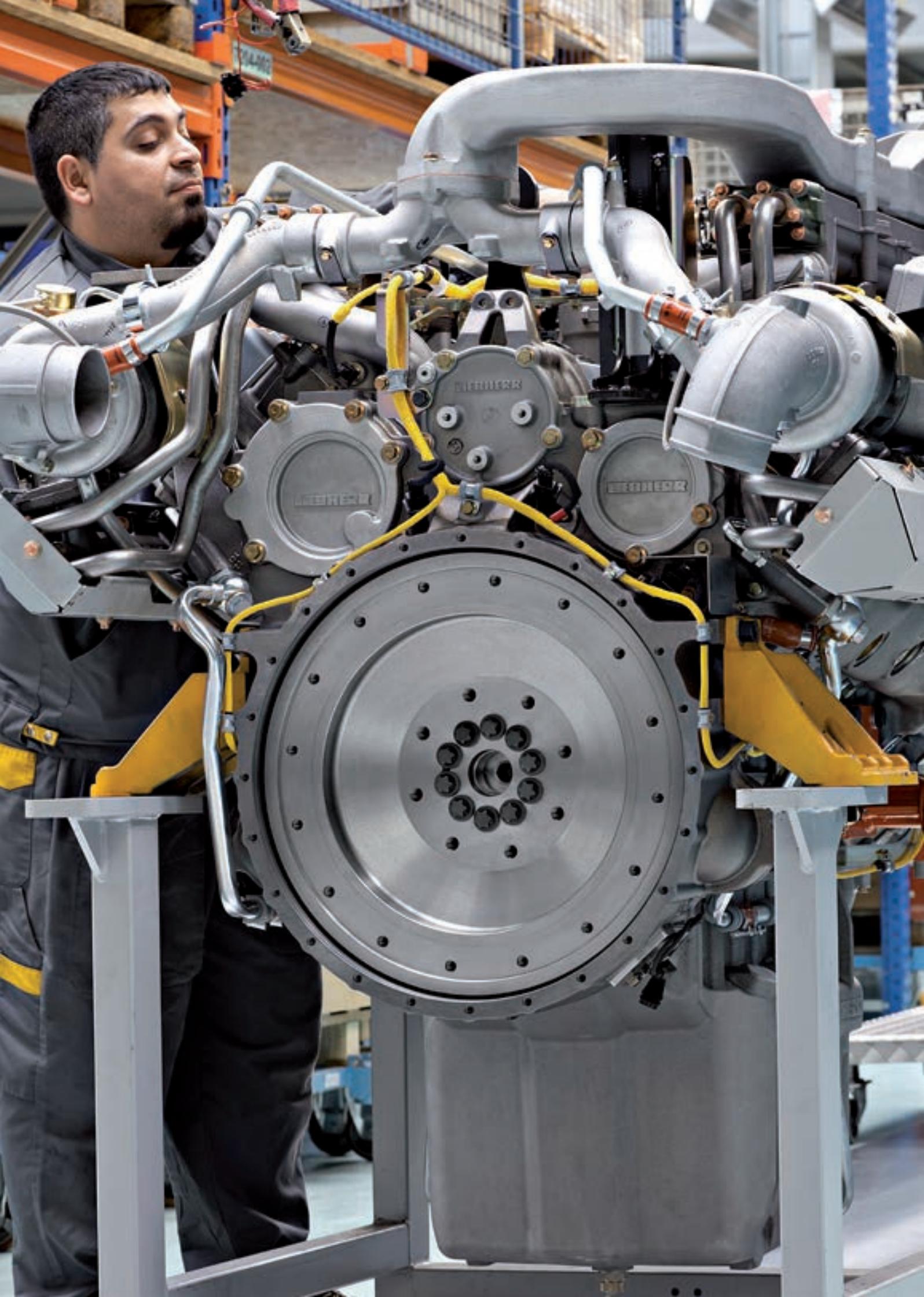
The division's investment volume in the past business year came to 37.2 million €. In Ochsenhausen, Germany, and in Radinovo, Bulgaria, there was specific investment in highly automated plant and machinery for sheet metal processing. Planning for a new logistics centre also began in Bulgaria. In Lienz, Austria, there was investment in an ultra-modern foam production plant for the insulation applied to the appliances' bodies and doors, and also on equipment for the development and production of supermarket chests. In Kluang, Malaysia, tools and fixtures were acquired for the production of new wine cabinets and upright freezers, and also for modifications to the existing model programme to satisfy the needs of specific customers.

In 2014 the domestic appliances division expects sales volume to drop slightly but turnover to remain at approximately the previous year's level. The trend reflects on the one hand the more severe competition encountered on certain major European sales markets for appliances at entry-level prices, and on the other hand the move toward energy-saving refrigerators and freezers in classes A++ and A+++.

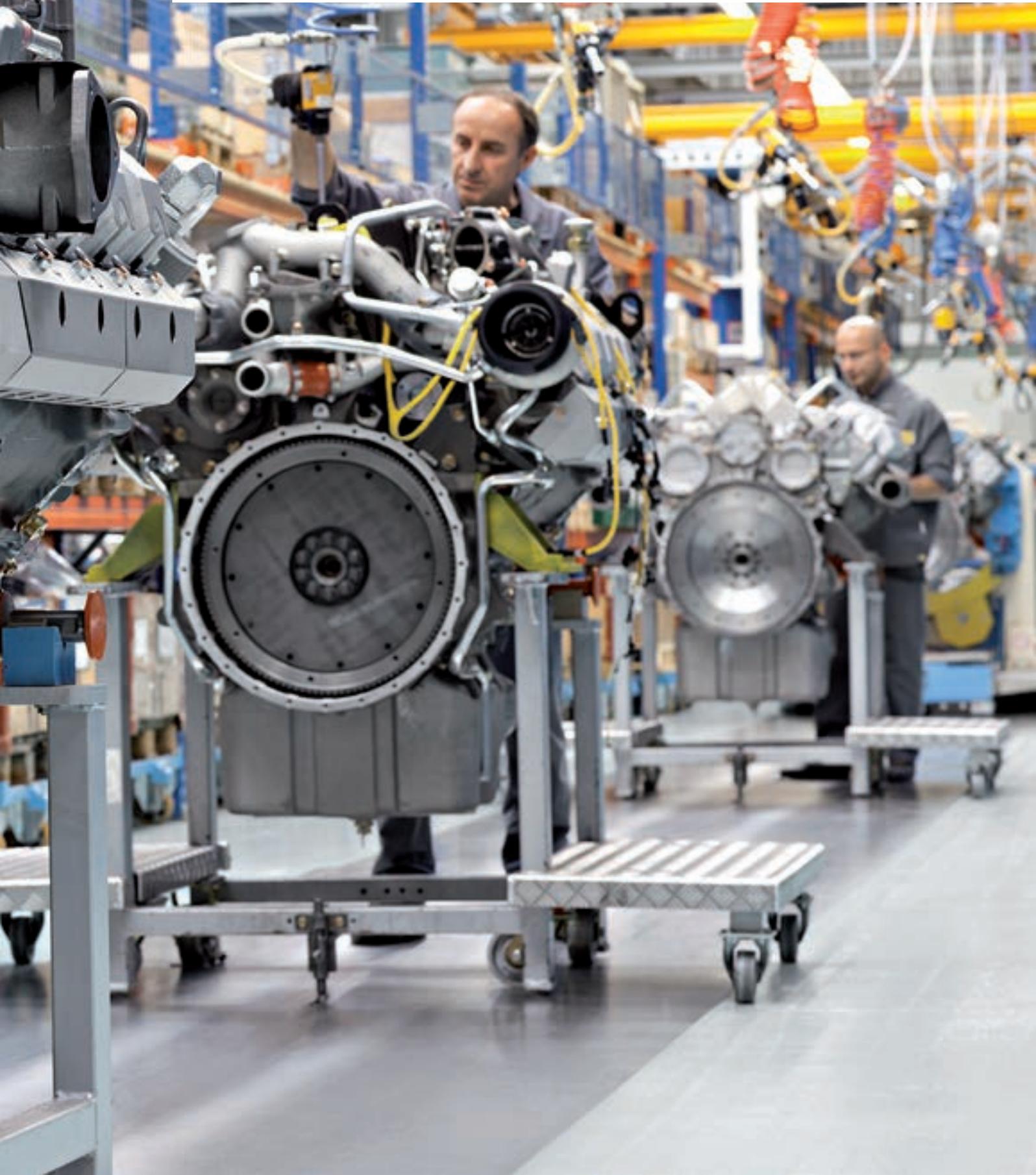
In these energy efficiency classes Liebherr has an opportunity to increase its appeal by pointing to a targeted increase in customer benefit. There will be higher investment in research and development, and in the creation of innovative products. With a new, highly efficient supermarket chest now reaching the market, additional growth potential can be accessed in the commercial appliance area.



“TipOpen” technology on the UWT 1682 Vinidor under-worktop multi-temperature wine cabinet is especially suitable for installation with kitchen furniture that has no projecting handles



Components



Components

In the 2013 business year the components division undertook a large number of new and ongoing developments in the field of drive and control systems technology. At the same time several construction projects aimed at increasing capacity were started or continued.

Within the Liebherr Group, the division is responsible for developing and producing drive and control system components. The product programme is divided into 14 business areas, and comprises diesel and gas engines, fuel injection systems, axial piston pumps and motors, hydraulic cylinders, large-diameter bearings, drives, electrical machines, switchgear, electronic and power electronic components and software for industry and aviation. The performance portfolio is rounded off by reconditioning of used components – the so-called remanufacturing – and after-sales services.

The division offers its products to the manufacturers of machines for heavy off-road duties and of industrial machinery. The application areas include cranes, construction machines and mining equipment, and also machines for agriculture and forestry. Other areas of activity are maritime applications, decentral energy supply systems such as combined heat and power units and biogas installations, wind turbines and aviation and transportation technology.

The division operates development and production locations in Germany, France, Mexico, China and Switzerland. Liebherr-Components AG, which has its registered offices in Nussbaumen, Switzerland, is the central sales and service company for support to customers outside the Liebherr Group. The service and sales organisation has locations in the USA, Russia and China, and is being steadily expanded.

During 2013 preparations were made to transfer the development and production of hydraulic cylinders from Liebherr-Hydraulikbagger GmbH in Kirchdorf an der Iller, Germany, to a newly established company, Liebherr-Components Kirchdorf GmbH; the changeover was completed in January 2014.

A large number of new and ongoing development projects were started or continued in 2013. For example, the revision and restructuring of the diesel engine programme was largely completed, the aim being to comply with the Stage IV/Tier 4f emission limits that entered into force in 2014. There is a

standardised basic engine on which exhaust-gas aftertreatment can be installed to satisfy the emission requirements that apply in various regions or markets. For markets in which Stage IV/Tier 4f limits apply, engines are equipped with Liebherr's SCRonly system; for Stage IIIA compliant with compact external exhaust gas recirculation and in markets without exhaust emission legislation, the basic engine version can be used. Systematic extension of the modular concept has also led to an additional 4-cylinder engine with a displacement of eight litres. At the moment the product programme consists of four in-line and two V-engines with power outputs between 160 kW and 750 kW.

The next performance stage of the common rail fuel injection systems for diesel engines was also developed. It is now possible to satisfy extreme requirements, with injection pressures up to a maximum of 2,200 bar. The injectors have solenoid actuation for extremely fine fuel atomisation, and were developed and are manufactured by Liebherr. The opening and closing flanks that determine nozzle needle speed can be adjusted separately. The system performs a stable multiple injection cycle with reduced pre- and post-injection intervals.



The G9508 8-cylinder gas engine, with an ignition system specially developed for Liebherr

Management of the new generation of diesel engines is by means of a Liebherr engine control unit that unifies all engine functions and also exhaust gas post-treatment, fuel injection and the functions of equipment close to the engine in a single unit. This permits optimal monitoring of functions and direct fault diagnosis.

In addition to the engine-management control unit, the division has developed a transmission control unit for agricultural machinery to series production maturity and also a new-generation telematics unit (LiTU). This uses modern data transmission and position-determining technologies such as GPS, and provides a link with Liebherr's global telematics service (LiDAT).

In the course of development work for the aerospace and transportation systems division, three new products entered series production. The first of these is the dissimilar actuator control electronics for the Superjet 100, which displays all safety-relevant flight control functions. The second concerned the rudder control electronics for the Bombardier company's CRJ 1000 regional jet, which contribute greatly to the "fly-by-wire" concept. The new control unit for the undercarriage of the Bombardier CSeries civil aircraft regulates and monitors not only electronic undercarriage elements but also sensors on the aircraft's doors and flaps. In the power electronics area an electronic drive unit for electric turbochargers was completed, and is being tested on vehicles with a fuel-cell driveline.

Activities in the drive, electrical machines and switchgear areas were devoted to preliminary development work on diesel-electric drivelines for

mobile applications. These drive systems are based on a combination of diesel engine and generator, drive control using frequency converters, traction motors and wheel or travel-gear transmissions. Compared with the equivalent hydraulic systems, their superior efficiency offers considerable scope for fuel saving. For the R 9XX concept hybrid crawler excavator seen at the 2013 'Bauma' trade fair, a drive concept combining the advantages of electrical and hydraulic systems was developed and patented. In addition to hydraulic pressure accumulators it stores electrical energy in "super-cap" systems of Liebherr's own design.

At the 2013 'Agritechnica' trade fair for agricultural technology held in Hanover, Germany, the division exhibited the new complete equipment and further options for gas-fuelled engines; this greatly simplifies integration into combined heat and power units and biogas plant. In addition to the use of stainless steel for the turbocharger and charge-air intercooler, the gas engines now have a throttle butterfly with actuator, an ignition system with anti-knock control, a gas mixer and an engine management unit. The turbochargers have been reconfigured for more efficient exchange cycles; as a result, the gas engines have a mechanical efficiency rating of 42 %.

In the hydraulic cylinder area, a cost-optimised excavator cylinder and a light-weight cylinder for mining excavators were developed, and also an electrical signal transmission device for crane support cylinders. This transmits signals from a force sensor through the hydraulic cylinder to the crane system by means of a movable contact, so that the load can be computed at any time.

At the end of 2013 Liebherr signed an agreement with the Russian company Kamaz OJSC for the development and production of a series of 6-cylinder, 12-litre diesel engines. These engines will be specially adapted for use in Kamaz trucks and special-purpose vehicles for the oil and gas industry. Liebherr will also make a motor-vehicle gas engine available.

The division began or continued with construction work on several new and extension buildings in 2013. In August 2013 Liebherr-Components Biberach GmbH started construction work on an additional production plant near Biberach an der Riss, Germany, with a view to satisfying growing demand for switchgear, electric motors and generators – product areas located until now in the existing factory. On the site with an area of 14.5 hectares two production buildings of 10,000 m² each and an administrative building will

be erected initially. In Colmar, France, construction work on a production facility for diesel engines continued.

Liebherr Machines Bulle SA will extend its production facility considerably by 2020. The extension will in particular significantly increase diesel engine and fuel injection systems capacity. The new plant area for the development and production of fuel injection systems with an area of 9,000 m² is scheduled for completion in 2016. To ensure reliable deliveries in the long term, investments included a logistics centre for electronic components in Lindau, Germany.

In view of increasing business activity in the construction machinery area and the generally positive outlook for the Group, the division will utilise its available capacities to an increasing extent in the current year.



Gear rings for Liebherr's large diameter bearings are produced on the company's own gear cutting machines

Summary of Group companies

Summary of Group companies

Group holding company

- **Liebherr-International AG**
Bulle, Switzerland

Earthmoving

- **Liebherr-EMtec GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr-Hydraulikbagger GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr-France SAS**
Colmar, France
- **Liebherr-Werk Bischofshofen GmbH**
Bischofshofen, Austria
- **Liebherr-Werk Telfs GmbH**
Telfs, Austria
- **Liebherr Brasil Ltda.**
Guaratinguetá, Brazil
- **Liebherr Machinery (Dalian) Co., Ltd.**
Dalian, PR China
- **Liebherr-Nizhny Novgorod OOO**
Nizhny Novgorod, Russia
- **Liebherr-Mining Equipment Colmar SAS**
Colmar, France
- **Liebherr Construction Equipment Co.**
Newport News, VA/USA
- **Liebherr-Australia Pty. Ltd.**
Adelaide, Australia
- **Liebherr-EMtec Italia S.p.A.**
Lallio, Italy
- **Liebherr-Sverige AB**
Västerås, Sweden
- **Liebherr-Stavební stroje CZ s.r.o.**
Brno, Czech Republic
- **Liebherr-Építőipari Gépek Magyarország Kft.**
Győr, Hungary
- **Liebherr-Polska sp. z o.o.**
Ruda Śląska, Poland

- **Liebherr-Romania S.R.L.**
Bucharest, Romania
- **Liebherr-Finland Oy Ab**
Helsinki, Finland
- **Liebherr-Argentina S.A.**
Buenos Aires, Argentina
- **Liebherr-Baumaschinen Vertriebs- und Service GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr-Mining Ghana Limited**
Accra, Ghana
- **Liebherr-Nigeria Ltd.**
Abuja, Nigeria (90 %)
- **Liebherr-Nouvelle-Calédonie SAS**
Nouméa, New Caledonia
- **Liebherr-Mietpartner GmbH**
Ludwigshafen am Rhein, Germany
- **Liebherr-Location France SAS**
Niederhergheim, France
- **Liebherr-Rental Ltd.**
Biggleswade, UK
- **Liebherr-Wohnungsbau GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr-Logistics GmbH**
Kirchdorf an der Iller, Germany

Mining

- **Liebherr-Mining Equipment SAS**
Colmar, France
- **Liebherr Mining Equipment Newport News Co.**
Newport News, VA/USA
- **Liebherr Chile SpA**
Santiago de Chile, Chile
- **PT. Liebherr-Indonesia Perkasa**
Balikpapan, Indonesia
- **Liebherr-Colombia SAS**
Bogotá D.C., Colombia
- **Liebherr-Mozambique Lda.**
Maputo, Mozambique
- **Liebherr Mining & Construction Equipment, Inc.**
Newport News, VA/USA

Mobile cranes

- **Liebherr-Werk Ehingen GmbH**
Ehingen/Donau, Germany
- **Liebherr-Nederland B.V.**
Amersfoort, Netherlands
- **Liebherr Italia S.p.A.**
Monfalcone, Italy
- **Liebherr-Grues Mobiles SAS**
Niederhergheim, France
- **Liebherr Japan Co., Ltd.**
Yokohama, Japan
- **Liebherr Mobile Cranes Korea Ltd.**
Seoul, Korea
- **Liebherr Cranes, Inc.**
Newport News, VA/USA
- **Liebherr-Danmark ApS**
Hedensted, Denmark
- **Liebherr Mexico S. de R.L. de C.V.**
Mexico City, Mexico
- **Liebherr Maroc SARL**
Casablanca, Morocco*

Tower cranes

- **Liebherr-Werk Biberach GmbH**
Biberach an der Riss, Germany
- **Liebherr Industrias Metálicas, S.A.**
Pamplona, Spain
- **Liebherr CMCTec India Private Limited**
Pune, India
- **Liebherr-Grues à Tour SAS**
Niederhergheim, France

Concrete technology

- **Liebherr-Mischtechnik GmbH**
Bad Schussenried, Germany
- **Liebherr (Thailand) Co., Ltd.**
Rayong, Thailand
- **Liebherr Machinery (Xuzhou) Co., Ltd.**
Xuzhou, PR China
- **Xuzhou Liebherr Concrete Machinery Co., Ltd.**
Xuzhou, PR China (50%)

- **Liebherr-Betonpumpen GmbH**
Neu-Ulm, Germany
- **Liebherr-Malaxage & Techniques SAS**
Niederhergheim, France
- **Liebherr Concrete Technology Co.**
Newport News, VA/USA

Maritime cranes

- **Liebherr-MCCtec GmbH**
Nenzing, Austria
- **Liebherr-Werk Nenzing GmbH**
Nenzing, Austria
- **Liebherr Container Cranes Ltd.**
Killarney, Ireland
- **Liebherr Sunderland Works Ltd.**
Sunderland, UK
- **Liebherr-MCCtec Rostock GmbH**
Rostock, Germany
- **Liebherr-Nenzing Service GmbH**
Hamburg, Germany
- **Liebherr-Maritime Benelux B.V.**
Amersfoort, Netherlands
- **Liebherr-Nenzing Equipements SAS**
Niederhergheim, France
- **Liebherr (HKG) Limited**
Hongkong SAR, PR China
- **Liebherr India Private Limited**
Mumbai, India
- **Liebherr Nenzing Crane Co.**
Medley, FL, and Houston, TX/USA
- **Liebherr Makine Ticaret Servis Limited Şirketi**
Istanbul, Turkey
- **Liebherr-Azeri LLC**
Baku City, Azerbaijan
- **Liebherr Kasachstan TOO**
Almaty, Kazakhstan

Domestic appliances

- **Liebherr-Hausgeräte GmbH**
Ochsenhausen, Germany
- **Liebherr-Hausgeräte Ochsenhausen GmbH**
Ochsenhausen, Germany
- **Liebherr-Hausgeräte Lienz GmbH**
Lienz, Austria
- **Liebherr-Hausgeräte Marica EOOD**
Radinovo, Bulgaria
- **Liebherr Appliances Kluang SDN. BHD.**
Kluang, Malaysia
- **Liebherr Sales Kluang SDN. BHD.**
Kluang, Malaysia

Machine tools and automation systems

- **Liebherr-Verzahntechnik GmbH**
Kempten, Germany
- **Liebherr-Utensili s.r.l.**
Collegno, Italy
- **Liebherr Machine Tools India Private Limited**
Bangalore, India (60 %)
- **Liebherr Gear Technology, Inc.**
Saline, MI/USA
- **Liebherr Automation Systems Co.**
Saline, MI/USA

Aerospace and transportation systems

- **Liebherr-Aerospace & Transportation SAS**
Toulouse, France
- **Liebherr-Aerospace Lindenberg GmbH**
Lindenberg, Germany
- **Liebherr-Aerospace Toulouse SAS**
Toulouse, France
- **Liebherr Aerospace Brasil Ltda.**
Guaratinguetá, Brazil

- **Liebherr-Transportation Systems GmbH & Co KG**
Korneuburg, Austria
- **Liebherr-Aerospace Nizhny Novgorod OOO**
Nizhny Novgorod, Russia (75.1 %)
- **Zhejiang Liebherr Zhongche Transportation Systems Co., Ltd.**
Zhuji, PR China (50 %)
- **Liebherr-Transportation Systems Marica EOOD**
Radinovo, Bulgaria
- **Liebherr LAMC Aviation (Changsha) Co., Ltd.**
Changsha, PR China (50 %)
- **Liebherr-Transportation Systems Mannheim GmbH**
Mannheim, Germany
- **Liebherr Aerospace Saline, Inc.**
Saline, MI/USA

Components

- **Liebherr-Component Technologies AG**
Bulle, Switzerland
- **Liebherr Machines Bulle SA**
Bulle, Switzerland
- **Liebherr-Elektronik GmbH**
Lindau, Germany
- **Liebherr-Ettlingen GmbH**
Ettlingen, Germany
- **Liebherr Monterrey, S. de R.L. de C.V.**
Monterrey, Mexico
- **Liebherr-Components Biberach GmbH**
Biberach an der Riss, Germany
- **Liebherr-Components Colmar SAS**
Colmar, France
- **Liebherr-Components Kirchdorf GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr Servicios Monterrey, S. de R.L. de C.V.**
Monterrey, Mexico
- **Liebherr Components North America Co.**
Saline, MI/USA
- **Liebherr-Components AG**
Nussbaumen, Switzerland

Other companies

- **Liebherr-Export AG**
Nussbaumen, Switzerland
- **Liebherr-Industrieanlagen AG**
Bulle, Switzerland
- **Liebherr-Intertrading AG**
Bulle, Switzerland
- **Liebherr-Baumaschinen AG**
Reiden, Switzerland
- **Liebherr-Service AG**
Nussbaumen, Switzerland
- **Liebherr-Great Britain Ltd.**
Biggleswade, UK
- **Liebherr-Iberica, S.L.**
Azuqueca de Henares, Spain
- **Liebherr-Máquinas de Construção Portugal, Lda.**
Benavente, Portugal
- **Liebherr-Russland OOO**
Moscow, Russia
- **Liebherr-Canada Ltd.**
Burlington, ON/Canada
- **Liebherr-Singapore Pte. Ltd.**
Singapore
- **Liebherr Machinery Service (Shanghai) Co. Ltd.**
Shanghai, PR China
- **EURL Liebherr Algérie**
Algier, Algeria
- **Liebherr-Africa (Pty.) Ltd.**
Springs, Republic of South Africa
- **Saudi Liebherr Company Ltd.**
Jeddah, Saudi Arabia (60%)
- **Liebherr-Construction Equipment Ireland Limited**
Rathcoole, Ireland
- **Liebherr Middle East, FZE.**
Dubai, United Arab Emirates

- **Liebherr-International Deutschland GmbH**
Biberach an der Riss, Germany
- **Liebherr-IT Services GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr-International Austria GmbH**
Bischofshofen, Austria
- **Liebherr-America, Inc.**
Newport News, VA/USA
- **Mariso Bulle SA**
Bulle, Switzerland
- **HL Farm, LLC**
Newport News, VA/USA
- **Liebherr-Purchasing Services GmbH**
Kirchdorf an der Iller, Germany
- **Liebherr Purchasing (Dalian) Co., Ltd.**
Dalian, PR China

Hotels

- **Liebherr-Hotels AG**
Bulle, Switzerland
- **Interalpen-Hotel Tyrol GmbH**
Telfs-Buchen, Austria
- **Hotel Löwen Schruns GmbH**
Schruns, Austria
- **Killarney Hotels Ltd.**
Killarney, Ireland

Key

- Group holding company
- Divisional controlling companies
- Production companies
- Sales and service companies
- Service providers, real estate companies

Company marked *
has been founded in 2014.

Consolidated financial statements

Consolidated balance sheet as at December 31

ASSETS	Notes	Dec. 31, 2013		Dec. 31, 2012 (R)	
		1,000 €	%	1,000 €	%
Non-current assets					
Intangible assets and land rights	3.1	40,869	0.4	32,212	0.3
Tangible assets	3.2				
Land and buildings incl. buildings on third-party land		1,511,727	13.1	1,480,995	13.3
Other tangible assets incl. payments made in advance and assets under construction		1,713,889	14.9	1,605,055	14.4
Financial assets	3.5				
Shares in associated companies		11,035	0.1	24,313	0.2
Non-current marketable securities		38,057	0.3	34,425	0.3
Other loans		72,840	0.6	32,801	0.3
Deferred tax assets	7	132,178	1.1	137,953	1.1
Total non-current assets		3,520,595	30.5	3,347,754	29.9
Current assets					
Inventories	4.1				
Raw materials and supplies		1,333,462	11.7	1,275,534	11.4
Work in progress		787,622	6.8	821,342	7.3
Finished goods and merchandise		1,418,253	12.4	1,511,618	13.5
Payments made in advance for inventories		4,158	0.0	6,087	0.1
Receivables and other current assets					
Accounts receivable trade	4.2./4.3	1,518,132	13.2	1,512,299	13.5
Income tax paid in advance	7	66,624	0.6	34,686	0.3
Miscellaneous other assets	4.3/4.5	393,445	3.4	454,206	4.1
Prepaid expenses		16,491	0.1	18,452	0.2
Marketable securities and other financial assets	4.4	1,026,782	8.9	930,626	8.3
Liquid funds	4.6	1,433,312	12.4	1,274,629	11.4
Total current assets		7,998,281	69.5	7,839,479	70.1
Total assets		11,518,876	100.0	11,187,233	100.0

(R): Adjustments due to first-time adoption of IAS 19 revised.

EQUITY AND LIABILITIES	Notes	Dec. 31, 2013		Dec. 31, 2012 (R)	
		1,000 €	%	1,000 €	%
Equity					
Subscribed capital		62,000	0.5	62,000	0.6
Value fluctuations on financial instruments	5	42,532	0.4	31,180	0.3
Foreign exchange translation differences	2.3	101,911	0.8	219,620	2.0
Revenue reserve		5,861,158	50.9	5,399,174	48.2
Net result		364,156	3.2	549,840	4.9
Equity of Liebherr-International AG shareholders		6,431,757	55.8	6,261,814	56.0
Non-controlling interests		9,800	0.1	11,823	0.1
Total equity		6,441,557	55.9	6,273,637	56.1
Non-current liabilities					
Financial liabilities	6	1,403,461	12.3	607,919	5.4
Post-employment benefits	8	426,750	3.7	443,861	4.0
Deferred tax liabilities	7	92,053	0.8	76,639	0.7
Provisions	9	48,061	0.4	45,804	0.4
Other liabilities	4.5/6	129,731	1.1	177,481	1.6
Total non-current liabilities		2,100,056	18.3	1,351,704	12.1
Current liabilities					
Financial liabilities	6	838,479	7.3	1,411,352	12.7
Payments received in advance for orders		370,281	3.2	332,211	3.0
Accounts payable trade		634,092	5.5	665,077	5.9
Income tax liabilities	7	54,188	0.5	67,856	0.6
Provisions	9	569,723	4.8	586,227	5.2
Other liabilities	4.5/6	478,782	4.2	462,525	4.1
Deferred income		31,718	0.3	36,644	0.3
Total current liabilities		2,977,263	25.8	3,561,892	31.8
Total equity and liabilities		11,518,876	100.0	11,187,233	100.0

(R): Adjustments due to first-time adoption of IAS 19 revised.

Consolidated income statement

for the year ended December 31

	Notes	2013		2012 (R)	
		1,000 €	%	1,000 €	%
Sales revenue	10	8,963,626	95.7	9,090,200	90.8
Increase/decrease of work in progress/finished goods		- 122,992	- 1.3	305,827	3.1
Other own work capitalised		246,162	2.7	336,610	3.4
Other operating income		275,850	2.9	277,899	2.7
Operating income		9,362,646	100.0	10,010,536	100.0
Cost of materials					
Cost of raw materials, supplies and purchased merchandise		- 4,049,632	- 43.3	- 4,632,808	- 46.3
Cost of purchased services		- 414,884	- 4.4	- 457,061	- 4.6
Personnel expenses					
Wages and salaries		- 1,707,270	- 18.2	- 1,616,902	- 16.2
Social security and other pension cost		- 393,190	- 4.2	- 369,290	- 3.7
Depreciation on non-current assets	3	- 405,341	- 4.3	- 434,377	- 4.3
Other operating expenses		- 1,741,556	- 18.6	- 1,737,085	- 17.3
Operating expenses		- 8,711,873	- 93.0	- 9,247,523	- 92.4
Operating result		650,773	7.0	763,013	7.6
Finance income		382,405	4.1	419,949	4.2
Finance cost		- 462,459	- 4.9	- 365,672	- 3.7
Result from associated companies		- 4,215	0.0	- 923	0.0
Finance result		- 84,269	- 0.8	53,354	0.5
Result before income taxes		566,504	6.2	816,367	8.1
Taxes on income	7	- 202,417	- 2.2	- 264,399	- 2.6
Net result		364,087	4.0	551,968	5.5
Of which					
Shareholders of Liebherr-International AG		364,156	4.0	549,840	5.5
Non-controlling interests		- 69	0.0	2,128	0.0

(R): Adjustments due to first-time adoption of IAS 19 revised.

Consolidated statement of comprehensive income

for the year ended December 31

1,000 €	2013	2012 (R)
Net result	364,087	551,968
Post-employment benefit	28,668	- 91,830
Deferred tax	- 3,052	19,530
Items not recycled to profit or loss	25,616	- 72,300
Foreign exchange translation differences	- 117,344	- 9,343
Change in fair value of cash flow hedges	25,959	40,219
Deferred tax	- 14,773	- 8,035
Items recycled to profit or loss	- 106,158	22,841
Other comprehensive income for the year	- 80,542	- 49,459
Comprehensive income for the year	283,545	502,509
Of which		
Shareholders of Liebherr-International AG	283,414	500,615
Non-controlling interests	131	1,894

(R): Adjustments due to first-time adoption of IAS 19 revised.

Consolidated statement of changes in equity

1,000 €	Subscribed capital	Value fluctuations on financial instruments	Foreign exchange translation differences	Revenue reserves	Equity of Liebherr-International AG shareholders	Non-controlling interests	Group equity
Dec. 31, 2011 (R)	62,000	- 1,004	228,729	5,587,849	5,877,574	12,370	5,889,944
Net result				549,840	549,840	2,128	551,968
Other comprehensive income	-	32,184	- 9,109	- 72,300	- 49,225	- 234	- 49,459
Comprehensive income	-	32,184	- 9,109	477,540	500,615	1,894	502,509
Dividends				- 116,375	- 116,375	- 2,441	- 118,816
Dec. 31, 2012 (R)	62,000	31,180	219,620	5,949,014	6,261,814	11,823	6,273,637
Net result				364,156	364,156	- 69	364,087
Other comprehensive income	-	11,352	- 117,709	25,615	- 80,742	200	- 80,542
Comprehensive income	-	11,352	- 117,709	389,771	283,414	131	283,545
Dividends				- 113,471	- 113,471	- 2,154	- 115,625
Dec. 31, 2013	62,000	42,532	101,911	6,225,314	6,431,757	9,800	6,441,557

(R): Adjustments due to first-time adoption of IAS 19 revised.

Consolidated cash flow statement

for the year ended December 31

1,000 €	2013	2012 (R)
Net result	364,087	551,968
+ Depreciation on non-current assets	405,341	434,377
+ Depreciation on marketable securities (current assets)	6,305	1,728
- Write-up on marketable securities (current assets)	- 17,133	- 45,881
- Gain/+ Loss on disposal of non-current assets	1,322	3,212
- Gain/+ Loss on disposal of marketable securities (current assets)	- 20,180	- 14,705
+ Increase/- Decrease provisions and post-employment benefits	3,278	79,002
- Other non-liquid income/+ expenses	94,745	- 19,530
+ Decrease/- Increase of stock	- 80,368	- 421,383
+ Decrease/- Increase of receivables and other current assets	56,037	- 108,850
+ Increase/- Decrease of liabilities (excl. financial liabilities)	1,629	- 88,928
+ Sales of rental fleet	166,087	159,086
- Payments for investments in rental fleet	- 237,289	- 333,011
Total of reconciliation	379,774	- 354,883
Net cash flow from operating activities	743,861	197,085
- Payments for investments in intangible and tangible assets	- 557,486	- 502,917
- Payments for investments in financial assets	- 1,917	- 14,656
- Payments for investments in marketable securities (current assets)	- 471,870	- 487,094
+ Proceeds from sales of intangible and tangible assets	9,536	13,349
+ Proceeds from sales of financial assets	5,685	1,419
+ Proceeds from sales of marketable securities (current assets)	399,683	710,037
Net cash flow used in investing activities	- 616,369	- 279,862
- Dividends paid, other distributions and equity capital repaid	- 115,625	- 118,816
+ Proceeds from current or non-current financial liabilities	588,725	285,050
- Repayment of current or non-current financial liabilities	- 414,279	- 189,307
Net cash flow from financing activities	58,821	- 23,073
Net increase/ decrease in liquid funds	186,314	- 105,850
Foreign exchange translation difference on liquid funds at beginning of period and on cash flow	- 27,631	- 1,705
Liquid funds at beginning of period	1,274,629	1,382,184
Liquid funds at end of period	1,433,312	1,274,629
Income tax paid and reimbursed	- 251,636	- 288,013
Interest paid	- 68,620	- 71,220
Interest received	53,832	50,537
Payments for investments in leased assets	- 35,201	- 17,905

(R): Adjustments due to first-time adoption of IAS 19 revised.

Notes to the consolidated financial statements

1 Corporate information and business activity

The company was founded in 1949 by Dr. Hans Liebherr. Currently, the family business has more than 39,000 employees working in more than 130 companies across the world. The share capital of Liebherr-International AG, Bulle, Switzerland, amounting to 62 million € (100 million CHF) is held exclusively by the Liebherr family.

For the construction sector and the mining industry, the Group develops, produces and distributes worldwide construction cranes, mobile cranes, crawler cranes, hydraulic excavators, material handlers, duty cycle crawler cranes, wheel loaders, crawler loaders and tractors, pipelayers, telescopic handlers, mining trucks as well as concrete mixing plants, concrete pumps and truck mixers. In addition, Liebherr develops, produces and distributes worldwide ship cranes, floating cranes, offshore cranes, container and mobile harbour cranes for the cargo handling industry. The activities range across machine tools, automation systems and engineering projects in the machine and plant construction industry, and landing gears, flight control and actuation systems as well as air management systems in the aerospace industry. Furthermore, Liebherr manufactures equipment for rail vehicles in the transportation technology area. For household and commercial refrigeration and freezing, Liebherr produces a variety of products with high benefits for the end users. In the component area the Group specialises in the development, design and manufacture of products in the mechanical, hydraulic and electric drive and control categories. Moreover, Liebherr operates six hotels in Ireland, Austria and Germany.

2 Accounting Policies

2.1 General principles

The Group's consolidated financial statements for the year ended December 31, 2013, are prepared following the standards of the International Accounting Standards Board (IASB) in London.

They are in accordance with all International Financial Reporting Standards (IFRS) and interpretations by the International Financial Reporting Interpretations Committee (IFRIC) applicable for annual periods beginning on or after January 1, 2013. IAS 19 (IAS 19 revised), issued in 2011 and applicable for annual periods beginning on or after January 1, 2013, has been adopted for the first time. The first-time adoption of IAS 19 revised implies retrospective application for fiscal year 2012. Therefore, prior year reported values have been adjusted correspondingly and are labeled with (R).

The accounting and reporting principles applied to these consolidated financial statements comply with Swiss Corporation Law as well as with IFRS. The prior year values are prepared in accordance with the same principles, insofar as newly applicable standards also apply to prior periods.

The annual financial statements are prepared according to the historical cost principle with transactions being recognised and reported in the period when they occur. Any divergence from this principle is specifically mentioned. The reporting period of Liebherr-International AG and its subsidiaries ends on December 31. The presentation currency is the Euro, as it is the predominant currency in the Group.

To improve comprehensibility and relevance several details required by IFRS are summarised in the notes. These details are disclosed correctly in the original Group consolidated financial statements.

2.2 Basis of consolidation

The consolidated financial statements are prepared based on the individual financial statements of Liebherr-International AG and its subsidiaries, which are audited by independent auditors and prepared using consistent accounting policies. The consolidated financial statements include the annual financial statements of Liebherr-International AG as a parent company and of all subsidiaries in which Liebherr-International AG directly or indirectly holds a majority of voting rights, or otherwise controls according to IFRS 10.

The following companies have newly been established during the financial year 2013 by means of start-up, acquisitions or restructuring and are included in the consolidation scope:

- Liebherr LAMC Aviation (Changsha) Co., Ltd., Changsha, China
- Liebherr Mexico S. de R.L. C.V., Mexico City, Mexico
- Liebherr Financial Services OOO, Moscow, Russia
- Liebherr-Aerospace Nizhny Novgorod OOO, Nizhny Novgorod, Russia
- GUS Financial Holding GmbH, Biberach, Germany
- Liebherr-Components Kirchdorf GmbH, Kirchdorf, Germany
- OOO SL Leasing, Moscow, Russia

Acquired companies are fully consolidated from the time when the Group has control according to IFRS 10. They are accounted for using the purchase method under which identifiable assets, liabilities and contingent liabilities are measured at fair value on the date of acquisition. Any remaining residual value is recorded as goodwill in the respective functional currency of the company acquired. Any goodwill is not systematically amortised, but is reviewed for impairment at least on an annual basis.

Sold companies are deconsolidated at the time the Group ceases to have control and any gain or loss is recognised in the income statement.

Investments for which the Group does not exercise control but a significant influence, are classified as associates and accounted for using the equity method. The Group's share of net assets of the associate is presented in the balance sheet under non-current assets and the share of profit of associates is shown in the income statement under result from associated companies.

The consolidated financial statements include the following investments in associated companies as at the reporting date:

- Slyx Liebherr SA (AFL), Douala, Cameroon
- Eisengiesserei Dinklage GmbH, Dinklage, Germany
- Fors AG, Studen, Switzerland
- Somatel-Liebherr Spa, Ain Smara, Algeria

2.3 Translation of foreign currency

Foreign currency transactions are recorded at the spot rate as of the transaction date. Monetary assets and liabilities in foreign currency are translated at the current exchange rate at balance sheet date. All gains and losses are taken to the income statement. Assets and liabilities in financial statements of subsidiaries prepared in foreign currencies are translated into Euro at the current exchange rate at balance sheet date. The translation of the income and cash flow statements is done by using the average exchange rate of the period. The exchange differences arising from the translation of the income statements are recorded in the statement of comprehensive income until the disposal of the foreign operation.

For the most significant foreign currencies, the following exchange rates have been applied:

			2013		2012	
			Year end rate in €	Average rate in €	Year end rate in €	Average rate in €
Switzerland	CHF	1	0.8146	0.8124	0.8284	0.8297
USA	USD	1	0.7251	0.7532	0.7579	0.7783
Great Britain	GBP	1	1.1995	1.1777	1.2253	1.2334
Japan	JPY	100	0.6910	0.7728	0.8802	0.9759

2.4 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. All purchases and sales of financial instruments are recorded on the trading date.

Financial assets and liabilities are recognised when the Liebherr Group becomes a party to the contractual obligations of the instrument. Financial assets are written off when the contractual rights to receive cash flows are fully transferred or expire. A transfer takes place when the rights to receive cash flows are transferred to a third party. If the rights to receive cash flows are neither transferred nor retained, the financial asset is written off when the Group has not retained control. If the Group retained control, a new asset is recognised to the extent of the Group's continuing involvement in the asset. A financial liability is only written off when the obligation under the liability is discharged, cancelled or expires.

The initial and subsequent measurement of the various financial instruments used by the Liebherr Group differs, depending on the classification in accordance with IAS 39.

Financial instruments at fair value through profit or loss

This category includes financial assets and liabilities designated upon initial recognition at fair value through profit or loss and financial assets inclusive of derivatives held for trading except for a derivative that is a designated and effective hedging instrument as defined by IAS 39. All financial instruments in this category are carried in the balance sheet at fair value with gains or losses arising from changes in fair value recognised in the income statement in the relevant period (finance income or finance cost). In general, fair values of financial instruments base on market prices (Level 1 inputs and Level 2 inputs of the fair value hierarchy). Should the market price not be readily available, recognised measurement models are used for its calculation. Such valuation techniques are rarely relevant for the Liebherr Group. There were no financial instruments whose fair values could not be determined with sufficient reliability.

Loans and receivables

In essence, this category represents loans granted by the Group and accounts receivable trade. Financial assets within this category are recognised at fair value plus transaction costs that are directly attributable to the acquisition or issue of the financial asset upon initial recognition and subsequently measured at amortised cost. At each balance sheet date or under certain circumstances (e.g. significant financial difficulties

of the debtor, insolvency proceedings against the debtor), the carrying amount of the financial instruments in this category is assessed for any impairment. Any impairment losses are recognised in the income statement. If there is objective substantial evidence in subsequent periods that the impairment of an asset is no longer applicable, the previously recorded impairment loss is to be reversed. However, the reversal of the impairment loss may not create a carrying value that exceeds what the carrying value would have been if normal amortisation charges had been considered (not considering the impairment).

Other financial liabilities

Other financial liabilities comprise all financial liabilities other than derivatives. Financial liabilities are recognised initially at fair value including transaction costs. They are subsequently measured at amortised cost using the effective interest method. In addition to actual interest payments, finance costs include annual compound interest and pro rata transaction costs.

Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss. This loss incurs when a specified debtor fails to make payments in accordance with the original or modified terms of a debt instrument. In some cases, the creditworthiness of customers is guaranteed by the Liebherr Group to the financing party, i.e. a financial guarantee contract is issued in accordance with IAS 39.

3 Non-current assets

3.1 Intangible assets and land rights

Intangible assets acquired separately are measured at acquisition cost on initial recognition. Internally generated intangible assets from which the Group expects to receive a future benefit and which can be measured reliably are capitalised at production cost. The production cost includes all costs directly attributable to the production process and a proportionate share of production-related overheads. Borrowing costs are not capitalised, as the definition of a qualified asset does not concern intangible assets.

Development costs for new products are not capitalised, as the future economic benefit can only be demonstrated after a regulatory approval and a successful launch of the products in the market.

All intangible assets are amortised over the lesser of their expected economic useful life or the contract length using the straight-line method. Intangible assets with indefinite useful lives are not amortised, but are tested for impairment annually.

The estimated useful lives of the major classes of intangible assets are as follows:

Concessions	3 years
Industrial property rights and similar rights	3 years
Licences	3 years
Software	3 - 5 years

3.2 Tangible assets

Tangible assets are measured at purchase value less cumulative depreciation and cumulative impairment losses. Depreciation systematically takes place according to the straight-line method over the useful life of the property. Land is not depreciated. Real estate not used for operational purposes is recognised as tangible asset, carried in the balance sheet and depreciated according to the same criteria as real estate used for operational purposes. Such property includes real estate (land and/or buildings or parts thereof) that is held for the purpose of generating rental income and/or for a future undefined purpose. Maintenance costs are capitalised when they extend the useful life or the production capacity of the asset. Other maintenance costs and minor repairs are recognised in the income statement as incurred.

The estimated useful lives in years of tangible assets are as follows:

Buildings	20 - 40 years
Machinery and equipment	5 - 21 years
Furniture	13 years
IT	3 - 5 years
Vehicles	8 - 11 years

Any gain or loss arising from the disposal of an asset is included in other operating income or expenses. The disposal of rental machines is recognised as revenue. The reversal of the related remaining book value from the disposal is treated as cost of materials. Tangible assets are derecognised upon disposal or when no future economic benefit is expected from their use.

Borrowing costs directly attributable to the purchase, construction or manufacturing of a qualified asset are capitalised during the period until the asset is brought into service and afterwards depreciated over the useful life of the asset. Other borrowing costs are treated as expenses.

Other equipment, factory and office equipment include mainly computer equipment, furniture, vehicles, transportation equipment, tools and fixtures.

The net book value of 3,226 million € (2012: 3,086 million €) corresponds to 54 % (2012: 55 %) of the historical cost. The recognised impairment loss mainly relates to a change in value of the rental equipment as well as of equipment with repurchase obligations. The carrying amount of tangible assets held under finance leases amounts to 145.8 million € (2012: 64.3 million €) and can basically be allocated to land and buildings as well as to technical equipment and machinery.

The carrying amount of land and buildings contains the capitalised borrowing costs amounting to 12.5 million € (2012: 12.6 million €).

Development of tangible assets as at Dec. 31, 2013:

1,000 €	Land and buildings	Technical equip. and machinery	Other equip., factory/office equip.	Adv. paym., as-sets under constr.	Total
Acquisition and production cost as at 1.1.	2,173,133	2,192,517	1,032,312	192,702	5,590,664
Additions	93,694	302,737	112,882	306,383	815,696
Disposals	- 4,563	- 223,189	- 54,039	- 3,948	- 285,739
Transfers	76,852	33,651	20,917	- 131,741	- 321
Foreign exchange difference	- 63,930	- 39,211	- 24,849	- 8,164	- 136,154
Acquisition and production cost as at 31.12.	2,275,186	2,266,505	1,087,223	355,232	5,984,146
Accum. depreciation and impairments as at 1.1.	692,138	1,156,046	656,430	-	2,504,614
Depreciation of the year	83,504	206,787	104,555	-	394,846
Accum. depreciation on disposals	- 2,304	- 54,359	- 48,563	-	- 105,226
Impairment	-	1,189	-	-	1,189
Transfers	224	- 1,697	1,468	-	- 5
Foreign exchange difference	- 10,103	- 15,382	- 11,403	-	- 36,888
Accumulated depreciation as at 31.12.	763,459	1,292,584	702,487	-	2,758,530
Net book value 31.12.	1,511,727	973,921	384,736	355,232	3,225,616

Development of tangible assets as at Dec. 31, 2012:

1,000 €	Land and buildings	Technical equip. and machinery	Other equip., factory/office equip.	Adv. paym., as-sets under constr.	Total
Acquisition and production cost as at 1.1.	1,931,855	2,089,704	924,513	230,985	5,177,057
Additions	114,796	428,348	119,256	175,989	838,389
Disposals	- 3,019	- 370,209	- 37,008	- 17,189	- 427,425
Transfers	126,494	43,960	28,380	- 197,491	1,343
Foreign exchange difference	3,007	714	- 2,829	408	1,300
Acquisition and production cost as at 31.12.	2,173,133	2,192,517	1,032,312	192,702	5,590,664
Accum. depreciation and impairments as at 1.1.	585,911	1,134,314	594,898	-	2,315,123
Depreciation of the year	80,488	220,069	95,004	-	395,561
Accum. depreciation on disposals	- 2,187	- 199,523	- 33,016	-	- 234,726
Impairment	28,039	1,442	739	-	30,220
Transfers	375	- 351	- 8	-	16
Foreign exchange difference	- 488	95	- 1,187	-	- 1,580
Accumulated depreciation as at 31.12.	692,138	1,156,046	656,430	-	2,504,614
Net book value 31.12.	1,480,995	1,036,471	375,882	192,702	3,086,050

3.3 Leasing

The Group primarily acts as a lessor of its self manufactured construction machinery, but is also a lessee for other tangible assets. The classification of leases adopted in IAS 17 is based on the extent to which risks and rewards incidental to ownership of a leased asset lie with the lessor or the lessee. Depending on the situation, the leased asset is recognised as finance or operating lease in the closing of the lessor or the lessee.

Self constructed assets capitalised under tangible assets but leased out under an operating lease are recognised at production cost. All other leased out equipment is recognised at acquisition cost. All rental equipment is depreciated using the straight-line method over the asset's useful life to the lower of the market value or the calculated residual value of the asset. Lease income from operating leases is recognised in income on a straight-line basis over the lease term. With regards to financial leases, a receivable at an amount equal to the net investment in the lease is recognised. Lease payments are divided into interest and principal payments.

Payments for operating lease contracts where the Liebherr Group is the lessee are recognised as an expense in the income statement on a straight-line basis over the lease term. Assets acquired under a finance lease are capitalised under IAS 17 at the fair value or, if lower, at the present value of the minimum lease payments at the commencement of the lease. At the same time the liability resulting from future minimum lease payments is recognised as a financial liability. The leased asset is depreciated using the straight-line method over the estimated useful life of the asset or over the lease term, if there is no reasonable certainty that the lessee will obtain ownership by the end of the lease.

If sale and lease-back transactions result in finance leases, any sales profit is deferred and amortised over the lease term. In case of operating leases, which are established at fair value, any profit or loss is recognised immediately.

3.4 Impairment of non-current assets

Impairment losses on intangible and tangible assets are recognised at each reporting date if there are indications that, following an event or due to changing circumstances, the book value is overvalued. If the carrying amount of an asset exceeds the recoverable amount (value in use or fair value less costs to sell) the asset is written down to this lower amount. If necessary, intangible and tangible assets are combined to cash generating units.

3.5 Financial assets

The financial assets include shares in associated companies, loans and non-current marketable securities. Shares in associated companies are accounted for using the equity method of accounting. Loans are carried at amortised cost. Non-current marketable securities are designated upon initial recognition at fair value through profit and loss. Management of these financial assets is in accordance with a documented investment strategy and their performance is assessed based on the change in fair value. This information is distributed internally to the key decision makers within the Group.

4 Current assets

4.1 Inventories

Inventories are recognised at acquisition/production cost. Production cost includes costs directly related to the units of production and a systematic allocation of fixed and variable production overheads. The allocation of fixed production overheads is mostly based on the normal capacity of the production facilities; otherwise it is based on the actual level of production. Selling costs, administrative overheads and borrowing costs are not capitalised. Raw materials and merchandise are generally measured at acquisition cost. For raw materials, the acquisition cost is the lower of the last purchase price and the weighted average price. Sufficient allowances are recorded for risks with regard to obsolescence and surplus-stock as well as for losses of pending transactions by depreciation or writing-down on the net realisable value.

4.2 Construction and service contracts

Construction and service contracts are recognised using the Percentage of Completion (PoC) method. They are recognised as revenues based on the agreed contract revenue by reference to the stage of completion and in accounts receivable, respectively accounts payable, net of prepayments received from customers. The stage of completion is determined based on the proportion of contract costs incurred for work performed as per balance sheet date to the estimated total contract costs or based on agreed milestones.

When the outcome of a construction contract cannot be estimated reliably, revenue is recognised only to the extent of incurred contract costs. The profit on such a contract is only recognised when the stage of completion allows for a reliable estimate of contract revenues and contract costs to be incurred to complete the contract.

4.3 Accounts receivable trade and other current assets

Accounts receivable trade and other current assets, if not derivatives, are classified as loans and receivables. An allowance for doubtful accounts is recognised when there is objective evidence that such receivables are not recoverable (e.g. due to bankruptcy, payment default or other financial difficulties of the debtor). The amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows. The allowance is based on internal group guidelines, according to which individual allowances must be deducted first. Based on the age of receivables, an additional systematic allowance between 20 % and 100 % is made on the residual balances according to the age of each receivable. The payment terms and outstanding receivables are regularly monitored locally by all subsidiaries. Security is additionally assured in the form of prepayments and down payments.

4.4 Marketable securities and other financial assets

The financial assets in these categories are classified based on an internal risk management and investment strategy as financial assets at fair value through profit and loss. The management of these assets is based on a written investment strategy and performance is measured on fair value. This information is distributed internally to the key decision makers within the Group.

1,000 €	2013	2012
Shares	277,071	238,923
Mutual funds	90,135	93,574
Fixed income securities	620,046	555,634
Other securities	37,313	40,071
Total securities and other financial assets at fair value	1,024,565	928,202
Fixed deposits with a residual term longer than 3 months	2,217	2,424
Total	1,026,782	930,626

4.5 Derivative financial instruments

Within the Liebherr Group, this position predominantly includes forward currency contracts, currency options, currency swaps, and interest rate swaps to hedge its foreign exchange and interest rate risks. All derivatives, if they do not qualify for hedge accounting in accordance with IAS 39, are classified as held for trading.

To hedge the interest and foreign currency risks resulting from its operational activities, financial transactions and investments, the Liebherr Group makes use of derivative financial instruments. The goal is to reduce volatility in the income statement. A hedging relationship must fulfil various criteria relating to the documentation, the probability of occurrence, the effectiveness of the hedging instrument and the reliability of the measurement in order to qualify for hedge accounting in accordance with IAS 39.

Under certain circumstances, a derivative financial instrument designated as a hedging instrument can be used to hedge the exposure to variability in cash flows that is attributable to a particular risk associated with a recognised asset or liability or a highly probable future transaction or the foreign currency risk in an unrecognised firm commitment. The Liebherr Group currently uses such hedging instruments classified as cash flow hedges only in the aerospace division. Thereby, the exposure to variability of future cash flows in foreign currencies which could have an effect on profit and loss is hedged. The effective portion of the gain or loss on the hedging instrument is recognised directly in the comprehensive income when the criteria for hedge accounting are fulfilled. Such amounts taken to equity are simultaneously transferred to the income statement when the hedged transaction affects profit or loss respectively upon initial recognition of an asset or a liability. If the forecasted transaction is no longer expected to occur, the hedge is no longer effective and amounts previously recognised in equity are transferred to the income statement. The ineffective portion of the gain or loss on the hedging instrument is recognised directly in the financial result.

4.6 Liquid funds

In addition to cash on hand and cash in banks, short term deposits with an original maturity of three months or less are considered as liquid funds.

4.7 Non-current assets held for sale

Non-current assets are classified as held for sale if the sale of these assets is highly probable within the next twelve months. They are measured at the lower of carrying amount and fair value less cost to sell.

5 Equity-value fluctuations on financial instruments

Under this position the effective portion of the gain or loss on the hedging instrument in a cash flow hedge is recorded in accordance with IAS 39 directly in other comprehensive income without being recorded in the income statement.

6 Financial liabilities, other liabilities

Financial liabilities include amongst others liabilities to banks, obligations under finance leases, liabilities arising from recourse factoring and bank liabilities from discounted bills of exchange. Both financial liabilities and other liabilities are reported gross and either classified as other financial liabilities or as financial liabilities at fair value through profit and loss. Payments received from sales with repurchase obligations against end users are also recognised in other liabilities.

1,000 €	current	non-current	Total 2013	current	non-current	Total 2012
Bank liabilities	733,135	1,349,162	2,082,297	1,317,867	558,140	1,876,007
Liabilities from finance leases	33,392	48,495	81,887	35,491	45,209	80,700
Liabilities from sale and lease-back	47,862	648	48,510	42,861	777	43,638
Accounts payable from non-genuine factoring	1,213	5,156	6,369	4,878	3,793	8,671
Bank liabilities from discounted bills	22,877	–	22,877	10,255	–	10,255
Other financial liabilities	110,095	20,026	130,121	100,811	14,986	115,797
Accounts payable trade	634,092	–	634,092	665,077	–	665,077
Liabilities from repurchase obligations with end users	–	109,704	109,704	–	162,495	162,495
Derivative financial instruments	18,193	–	18,193	14,711	15,973	30,684
Total	1,600,859	1,533,191	3,134,050	2,191,951	801,373	2,993,324

7 Income taxes

Income taxes include both current and deferred taxes which are recognised to determine the result for the period. Current income taxes (income or corporation tax, business tax and corresponding foreign taxes) are the amounts resulting from taxable income or loss to be paid to or recovered from the relevant tax authority.

Current income taxes for the actual period and prior periods are recognised as a liability to the extent that they have not yet been paid. If the amount already paid in respect of current and prior periods exceeds the amount due for those periods, the excess is recognised as an asset. The benefit relating to a tax loss that can be carried back to recover current tax of a previous period is recognised as an asset.

Current tax liabilities (tax assets) for the actual and prior periods are measured at the amount expected to be paid to (recovered from) the taxation authorities, using the tax rates (and tax laws) that have been enacted at the reporting date or that will be enacted in the near future. Current income taxes are recognised in the income statement, except current income taxes relating to items priorly recognised in other comprehensive income.

Deferred tax assets and liabilities are recognised in accordance with IAS 12 for temporary differences between the carrying amount of an asset or liability in the balance sheet and its tax base. The deferred tax assets also include future tax reductions from the expected use of losses brought forward. Deferred tax assets are only recognised if there is sufficient probability that future taxable profit will allow the deferred tax asset to be recovered. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled. The announcements of new tax rates (and new tax laws) by the government have been considered for the measurement of deferred tax assets and liabilities. The formal enactment is not relevant unless the temporary differences balance themselves under the old tax law.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred income tax asset to be recovered. Conversely, a previously unrecognised deferred tax asset is recognised to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred taxes are charged or credited directly to other comprehensive income if the taxes relate to items that are credited or charged directly to other comprehensive income in the same or a different period.

Deferred income tax assets and deferred income tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred income taxes relate to the same taxable entity and the same tax authority.

8 Employee benefits

Employee benefits consist of pension obligations, commitments related to anniversary bonuses and partial retirement agreements. There are various employee benefit plans in the Group, which are individually aligned with local conditions in their respective countries. They are financed either by means of contributions to legally independent pension/insurance funds, or by recognition as employee benefit liabilities in the balance sheet of the respective subsidiaries.

The net periodic costs with regard to defined contribution plans to be recognised in the income statement are the agreed contributions of the employer. In case of defined benefit plans, the period costs are determined by means of actuarial valuations by external experts using the projected unit credit method which are prepared on a regular basis.

The calculation of net periodic costs and employee benefit liabilities implies that statistical methods and variables are employed. These variables include, for example, estimations and assumptions concerning the discount rate. Furthermore, actuaries use a wide range of statistical information for actuarial calculation of employee benefit liabilities which can deviate significantly from actual results due to changes in market conditions, the economic situation as well as fluctuating rates of withdrawal and shorter or longer life expectancy of benefit plan participants.

The first-time adoption of IAS 19 revised had a material impact on the accounting of employee benefits. Key changes for Liebherr Group are related to the elimination of the so called 'corridor' approach and the corresponding recognition of remeasurements in other comprehensive income. Changes in the net defined benefit liability/asset are recognized fully including immediate recognition of defined benefit costs. Furthermore, IAS 19 revised require a disaggregation of the overall defined benefit.

Termination benefits related to partial retirement agreements are recognised at the present value of such obligations.

9 Provisions

Provisions are only recognised in the balance sheet if the Liebherr Group has an obligation to a third party that resulted from a past event, and if a reliable estimate of the obligation can be made. Possible losses from future events are not recognised in the balance sheet. Restructuring provisions are only recognised if the respective costs can be reliably determined by reference to a plan and if there is a corresponding obligation resulting from a contract or notification.

Provisions 2013 1,000 €	Warranty obligation	Compensation and product liability	Expected loss from pending transactions	Other selling provisions	Other provisions	Total
Current provisions	384,660	17,993	75,456	47,151	44,463	569,723
Non-current provisions	–	–	21,513	–	26,548	48,061
Total provisions	384,660	17,993	96,969	47,151	71,011	617,784
Reconciliation						
Dec. 31, 2012	363,725	20,481	81,519	86,772	79,534	632,031
Increase	133,636	10,361	52,660	21,733	24,366	242,756
Usage	- 90,367	- 5,793	- 33,008	- 16,772	- 11,758	- 157,698
Transfers	47,818	- 2,029	–	- 31,797	- 13,992	–
Reversal	- 66,269	- 4,742	- 4,581	- 11,774	- 8,141	- 95,507
Discounting	–	- 1	518	–	872	1,389
Foreign exchange differences	- 3,883	- 284	- 139	- 1,011	130	- 5,187
Dec. 31, 2013	384,660	17,993	96,969	47,151	71,011	617,784

Provisions 2012 1,000 €	Warranty obligation	Compensation and product liability	Expected loss from pending transactions	Other selling provisions	Other provisions	Total
Current provisions	363,725	20,481	69,228	86,772	46,021	586,227
Non-current provisions	–	–	12,291	–	33,513	45,804
Total provisions	363,725	20,481	81,519	86,772	79,534	632,031
Reconciliation						
Dec. 31, 2011	322,879	18,401	73,000	75,763	99,010	589,053
Increase	143,138	10,947	28,678	39,518	15,130	237,411
Usage	- 62,526	- 4,612	- 14,733	- 12,089	- 14,545	- 108,505
Transfers	2,813	122	–	–	- 2,935	–
Reversal	- 42,965	- 4,232	- 6,023	- 15,508	- 17,924	- 86,652
Discounting	–	–	502	–	1,331	1,833
Foreign exchange differences	386	- 145	95	- 912	- 533	- 1,109
Dec. 31, 2012	363,725	20,481	81,519	86,772	79,534	632,031

10 Revenue recognition and profit realisation

Revenue from goods and services is recognised when the related significant risks and rewards of ownership have been transferred to the buyer. Anticipated losses related to onerous contracts are provisioned. Revenue related to construction and service contracts is recognised and measured using the Percentage of Completion method (see Note 4.2).

Under financial leasing contracts where the Liebherr Group is the lessor, revenue is recognised at the lower of the regular selling price or the present value of the future minimum lease payments. Also, sales gains or losses are determined applying the same method as for direct sales transactions. The lease payments by the lessee are split into an interest and a principal portion. The interest portion is recognised based on a pattern reflecting a constant periodic return on the outstanding net investment of the lessor.

Revenue from operating leases is recognised on a straight-line basis over the lease term, unless another systematic basis is more representative of the time pattern in which the user benefit derived from the leased asset is diminished. As such, income from lease payments is recognised proportionally. The difference between payments received and income recognised is deferred.

Sales proceeds from rental equipment disclosed under non-current assets are not recognised until actual transfer of risks and rewards related to the assets occur.

Report of the statutory auditor

To the Board of Directors of
Liebherr-International AG, Bulle

Berne, 6 June 2014

Report of the independent auditor on the summary consolidated financial statements

The accompanying summary consolidated financial statements of Liebherr-International AG, Bulle, which comprise the balance sheet as at 31 December 2013, the income statement, statement of comprehensive income, cash flow statement and statement of changes in equity for the year then ended, and related summary notes, are derived from the consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS) and audited in accordance with International Standards on Auditing (ISA). We expressed an unmodified audit opinion on those consolidated financial statements in our report dated 6 June 2014.

The summary consolidated financial statements do not contain all the disclosures required by IFRS. Reading the summary consolidated financial statements, therefore, is not a substitute for reading the audited consolidated financial statements of Liebherr-International AG.

Board of Directors' responsibility

The Board of Directors is responsible for the preparation of a summary of the audited consolidated financial statements on the basis described in the notes to the summary consolidated financial statements.

Auditor's responsibility

Our responsibility is to express an opinion on the summary consolidated financial statements based on our procedures, which were conducted in accordance with International Standard on Auditing (ISA) 810, "Engagements to Report on Summary Financial Statements".

Opinion

In our opinion, the summary consolidated financial statements derived from the audited consolidated financial statements of Liebherr-International AG for the year ended 31 December 2013 are consistent, in all material respects, with those consolidated financial statements, on the basis described in the notes.

Ernst & Young AG

Roland Ruprecht
Licensed audit expert
(Auditor in charge)

Danielle Matter
Licensed audit expert

Company data

Liebherr-International AG

Head-office	CH-1630 Bulle/FR
Share capital	CHF 100,000,000
Shareholders	Liebherr family (100%)
Supervisory board	<p>Dr. h.c. Willi Liebherr, Chairman</p> <p>Dr. h.c. Isolde Liebherr, Vice-Chairman</p> <p>Hubert Liebherr</p> <p>Sophie Albrecht</p> <p>Jan Liebherr</p> <p>Patricia Ruff</p> <p>Stéphanie Wohlfarth</p>
Managing directors	<p>Andreas Boehm</p> <p>Stefan Heissler</p> <p>Uwe Rechtsteiner</p> <p>Denis Zosso</p>
Auditors	Ernst & Young AG, Berne

Five-year summary

in Mill. €	2013*	2012*	2011	2010	2009
Sales	8,963.6	9,090.2	8,334.0	7,587.0	6,961.0
Investments	830.0	853.8	669.1	544.1	636.4
Depreciation	405.3	434.4	376.3	348.4	333.3
Fixed assets	3,520.6	3,347.8	3,068.8	2,962.0	2,783.3
Current assets	7,998.3	7,839.5	7,567.8	6,663.2	6,072.4
Shareholders' equity	6,441.6	6,273.6	5,903.6	5,556.6	4,955.8
Liabilities	5,077.3	4,913.6	4,733.0	4,068.6	3,899.9
Net result	364.1	552.0	484.4	494.2	388.0
Personnel expenses	2,100.5	1,986.2	1,777.0	1,581.6	1,508.6
	2013	2012	2011	2010	2009
Employees	39,424	37,801	35,333	32,979	32,091

*Note: Only the 2013 and 2012 figures are based on IAS 19 revised.



Liebherr-International AG

CH-1630 Bulle/FR

Phone: +41 26 913 31 11

Telefax: +41 26 913 31 31

www.liebherr.com