

PRODUCTION AND LOGISTICS

In production and logistics, we quickly made changes to the number of employees and the provision of materials in response to the changing demand situation in 2015. Numerous measures were implemented as planned, following the decision made in 2014 to optimise the network of sites. Other areas of focus were workplace safety and ergonomics, product and process quality, and efficiency.

The Cologne plants, Germany Last year, we began various activities aimed at improving workplace safety and ergonomics at Cologne-Porz, our largest assembly site for production engines. We optimised the provision of materials and redesigned the picking zones. To optimise productivity, we replaced our driverless transport vehicles in the test bay. We expanded the employee information system that we had implemented in 2014. In addition, we stepped up both responsive and preventive measures aimed at improving quality.

Component manufacture Relocation of the components produced in the Cologne-Deutz plant has begun – one of the measures to optimise the network of sites. The main activity is the construction of a new 13,500m² shaft centre at our Cologne-Porz site, where crankshaft and camshaft manufacture will be located from mid-2016. As part of the detailed planning process, we optimised the layout of machines and the organisation of work using kaizen techniques and also improved their ergonomics.

The Herschbach component plant saw its largest individual capital expenditure project in recent years come on stream in 2015. It involves an ultra-modern processing centre with a pallet storage system in which all kinds of complex engine add-on components can be manufactured very cost-effectively in any batch size.

The plants in Ulm and Übersee on Lake Chiemsee, Germany As part of the site optimisation strategy, the Ulm plant is being expanded to become the plant for small production runs, focusing on DEUTZ Customised Solutions products, project business, exchange engines and models which are becoming obsolete. Assembly and order management were relocated to Ulm from Übersee on Lake Chiemsee in 2015. Despite the move, there was an increase in revenue from the reconditioned exchange engine business. Throughput times, which are critical in the Xchange process, were shortened and synergies were leveraged. All other functions will move from Übersee to Ulm in 2017.

The Zafra plant, Spain In future, our plant in Zafra (Spain) is to produce the crankcases for engines of up to four litres in addition to the other major engine components already manufactured

there, namely cylinder heads, conrods and gearwheels. In addition to the crankcase for the 2011 engine series, which is now being produced in Zafra rather than inhouse in Cologne, the 2.9 crankcase will also be manufactured in Spain in future.

The plants in Georgia, USA In 2015, production of ready-to-install system solutions tailored to customer-specific or segment-specific needs was transferred from Norcross, Georgia to Pendergrass, Georgia. As a result, all activities in the value creation process for the US market are now consolidated at one site. This enables us to leverage synergies between the existing exchange engine production operations in Pendergrass and the relocated assembly line. Processes throughout the logistics chain and in production were optimised at the same time.

Logistics Last year, we brought additional suppliers within the scope of our demand and capacity management system which, at the end of 2015, covered some 95 per cent of the total purchasing volume. We extended the relevant procedures and processes in order to improve the stability of supply from critical suppliers. In connection with the closure of the Cologne-Deutz site, we transferred the empties centre back to the inhouse operation in the Cologne area. This secured an additional 35 permanent positions. We worked with a logistics service provider to set up and implement distribution centre structures for deliveries of engines to North America. This is saving both time and costs.

QUALITY

Quality is anchored in our corporate principles The DEUTZ name has always stood for high quality standards in engines. We intend to continue to live up to this reputation.

For this reason, we decided to introduce a zero-error strategy in 2015. Our main aim in pursuing this quality assurance programme is to ensure we always meet our customers' expectations. The idea is to detect errors before they actually occur. And where errors do occur, we have to learn from them quickly in order not to make the same mistakes again. One of the challenges in this context is that we offer a large number of variants and our products are now highly complex.

Last year, we also restructured the product development process in order to greatly improve the methods used and to ensure the quality department is involved from an early stage. Optimised processes for drawing up specifications should help to ensure that customers' wishes are reflected even more accurately in product development.

In 2015, our external certification body carried out a monitoring audit in order to review our adherence to the ISO 9001 (quality management), 14001 (environmental management) and 50001 (energy management) standards. All criteria were again met.

This enabled the certificates to be renewed. The more wide-ranging requirements resulting from the revised ISO 9001:2015 and 14001:2015 standards are currently being integrated into the existing DEUTZ management system.

INTERNATIONAL JOINT VENTURES

China has been a very challenging market for some time. Growth forecasts have been revised down, and there is considerable capacity in the engine production sector. At the start of 2015, we decided to consolidate our Chinese production operations in our established DEUTZ (Dalian) Engine Co., Ltd. joint venture in Dalian, China, which has adequate capacity.

We have been operating the DEUTZ Dalian joint venture with the First Automotive Works Group, one of China's leading vehicle manufacturers, since 2007. Here, we produce three to eight litre diesel engines, mainly for automotive applications for the Chinese market. The unit sales figure for 2015 was just short of 75,000 engines, a year on year decrease of 29.5 per cent. DEUTZ Dalian's business performance was severely affected by market conditions in China, especially in the truck and construction machinery segments. An improved product mix brought in revenue equivalent to roughly €340 million, down by 5.6 per cent year on year. Measured in the local currency, the fall in revenue was 19.6 per cent compared with 2014. The company, accounted for under the equity method, had a negative impact of €7.0 million on the DEUTZ Group's operating profit, having contributed €3.5 million to operating profit in 2014. We expect the market situation to remain challenging but predict a smaller negative impact on operating profit. Nevertheless, capacity utilisation will continue to have a strong influence on earnings.

We made significant progress in consolidating our other Chinese production activities in the year under review. The DEUTZ Engine (China) Co., Ltd. joint venture in Linyi, China, was wound up at the end of 2015. We had originally founded the company, which never made any substantial investments, with AB Volvo.

At the end of 2015, we sold our WEIFANG WEICHAI-DEUTZ DIESEL ENGINE CO., LTD. joint venture in Weifang, China, to our previous co-shareholder, Weichai Power. The company only produces the 226B engine series under licence and we no longer considered it to be strategically important.

We have also begun the process of closing the DEUTZ Engine (Shandong) Co., Ltd. joint venture in Linyi, China, in which we have a 70 per cent shareholding. It is expected to be fully wound up during 2016. Implementation work in connection with this company was suspended and terminated at an early stage.

Overall, the winding-up and sale of the aforementioned companies – i.e. DEUTZ Engine China, WEIFANG WEICHAI-DEUTZ DIESEL ENGINE CO., LTD. and DEUTZ Engine (Shandong) Co., Ltd. – resulted in a small contribution to earnings in the reporting year.

DEUTZ AGCO MOTORES S.A. (DAMSA), our Argentinian joint venture with the AGCO Group, produces engines for the local market, with a particular focus on agricultural machinery, buses and industrial applications. In 2015, the company sold around 1,150 engines in very challenging market conditions. It generated revenue of around €19 million, which was about a fifth more than in 2014 owing to price increases. The company made a loss of €0.1 million.

We hold a stake of 30 per cent in D.D. Power Holdings (Pty) Ltd., our South African joint venture. This sales and service company is active in the local market, focusing on sectors such as the local mining business. In the year under review, the company achieved revenue of around €20 million and a profit of approximately €2.5 million, with both figures increasing year on year.

NEW ORDERS

DEUTZ Group: New orders

	€ million	
2015	1,225.9	
2014	1,379.0	
2013	1,649.7	
2012	1,237.1	
2011	1,479.3	

Decline in new orders compared with 2014 In 2015, the DEUTZ Group received orders worth €1,225.9 million, which was 11.1 per cent below the figure of €1,379.0 million achieved in the previous year. With the exception of the service business, where new orders rose by 7.2 per cent, all other application segments reported a decrease in new orders compared with 2014. New orders were down by 20.0 per cent in the Mobile Machinery application segment, by 8.9 per cent in the Stationary Equipment application segment and by 4.1 per cent in the Agricultural Machinery application segment. There was also a small decrease in the Automotive application segment of 1.3 per cent.