

We do not anticipate being faced again with such a complex challenge as that presented by the EU Stage IV/US Tier 4 emissions standards in future; rather, we expect to be able to market these engines well into the next decade. Going forward, developments will be influenced to a lesser extent by emissions legislation and, instead, will be driven by business decisions to a greater degree. We will continue to strive for technologically leading designs and to further improve the performance of our engines without increasing their size in future.

Expansion of the product portfolio We intend to enhance our product range with further developments. One of these is the TCD2.2, a three-cylinder engine that we are developing on the basis of the existing four-cylinder engine with a 2.9 litre capacity. In addition, we will offer smaller engines not only in a diesel variant but also in a liquefied petroleum gas (LPG) variant. The latter is a particularly interesting option for forklift trucks and other material handling applications.

Preliminary development work at a high level Exhaustive research and development will continue to provide the bedrock for DEUTZ's position at the forefront of innovation within the sector. Following the successful completion of work on the latest emissions standard, we can now turn our attention to other matters. The focus will be on electronics and software development as well as the enhancement of our exhaust aftertreatment technology in order to further reduce the space required for its installation.

New technical designs We are constantly developing new, innovative approaches and have recently expanded our activity in the field of alternative fuels. For example, we have developed the prototype for an engine powered by compressed natural gas (CNG), based on the TCD 3.6, and fitted it in a tractor. We carried out this project, which was supported by the German Foundation for the Environment, in cooperation with the University of Rostock and the SAME DEUTZ-FAHR Group. The tractor was showcased at Agritechnica in Hannover in November 2015.

Intellectual property rights safeguard our know-how We protect our know-how from unauthorised outside use by means of patents, patent applications and utility models. In 2015, we submitted 19 new patent applications, seven of which were in Germany. We now hold a total of 153 patents registered in Germany and 262 registered elsewhere.

PROCUREMENT

In 2015, purchasing continued to focus on improving the competitiveness of the engine portfolio by reducing material costs. We took decisive action as part of our defined material group strategies, primarily in relation to the model series in the segment for engines with capacities of up to four litres. Requirements for security of supply and supplier performance were further tightened, too.

Fall in commodity prices The price of cast-iron scrap continued to fall sharply in the year under review. The decrease in aluminium and copper prices was less pronounced. Platinum prices were significantly lower compared with previous years. The price of palladium followed a similar trajectory in 2015, although this element is far less important to DEUTZ than platinum. All average annual values lay below the range we had forecast. Overall, commodity prices have only a limited influence on the procurement prices for parts from suppliers because there is a very high element of value added.

Since the introduction of Tier 4, the proportion of product categories accounted for by EAT components has been rising. Nonetheless, foundry products (particularly cylinder heads and engine blocks), fuel injection equipment (predominantly pumps and valves) and measurement & control devices (for example mechanical and electronic regulators and sensors) make up the bulk of the overall volume of materials purchased.

Last year, we particularly focused on the procurement strategies for fuel injection, ECU, EAT and AGR. The more technology-intensive components have developed rapidly in recent years. Price structures have therefore changed over the past five years, and what were once new market players are becoming established suppliers. A structured process for selecting suppliers, conducting negotiations and awarding contracts has enabled us to avoid competitive disadvantages and ensure we have chosen the right strategic partners.

We have stepped up our level of procurement from emerging markets because prices in the manufacturing sector are coming under slight pressure as a result of the Chinese economic slowdown. We took advantage of this situation and were thus able to further reduce costs.

Supplier performance stabilised at a high level with further improvements Close collaboration between logistics and purchasing enabled us to improve average supplier performance over the year, with this metric rising by three percentage points compared with the previous year to over 97 per cent. This meant we largely avoided extra costs caused by short-term under-supply or delays.

Enduring improvement in supplier quality Our parts per million (ppm) rate as a performance indicator for defective parts was below 1,000 ppm for the fourth year in succession and thus remained at a historical low. This success is due to the rigorous and ongoing monthly evaluation of suppliers as well as the implementation of measures to improve supplier quality.