### Facts & Figures

## 2013

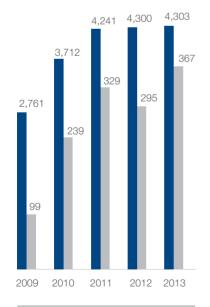




## At a glance

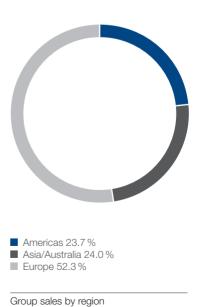
KNORR-BREMSE GROUP		2009	2010	2011	2012	2013
Sales	EUR mill.	2,761	3,712	4,241	4,300	4,303
Net income	EUR mill.	99	239	329	295	367
Workforce (as of 31.12*)		15,613	18,053	20,050	19,120	20,833
HR expenditure	EUR mill.	641	721	805	861	907
Balance sheet total	EUR mill.	1,664	2,194	2,530	2,615	2,869
Equity capital	EUR mill.	533	754	902	995	1,107
Investment (without financial assets)	EUR mill.	101	113	159	166	159
Depreciation	EUR mill.	118	147	165	160	125
Incoming orders	EUR mill.	3,185	4,040	4,073	3,948	4,752
R&D expenditure	EUR mill.	153	175	209	250	253

\*incl. HR leasing





■ Sales ■ Net income



## Global Presence

Knorr-Bremse has over 90 locations in 27 countries around the world.



Making mobility safe – this is the daily mission of Knorr-Bremse.

The Knorr-Bremse Group, with its company headquarters in Munich, is the world's leading manufacturer of braking systems for rail and commercial vehicles. For more than 100 years now the company has pioneered the development, production, marketing and servicing of state-of-the-art braking systems.

In the rail vehicle segment, the long-established company supplies sophisticated products for both rail vehicles used in local transport, such as metros and streetcars, as well as for freight trains, locomotives and passenger and high-speed trains. In addition to braking systems, the company also supplies intelligent door systems, air conditioning systems, control components and windscreen wipers, platform screen doors, friction materials and driver assistance systems. Knorr-Bremse also offers driving simulators and e-learning systems for optimum train crew training.



In the commercial vehicle segment, the bandwidth of innovative solutions ranges from com-plete braking systems including driver assistance systems (for example, ABS and ESP) through torsional vibration dampers to powertrain-related solutions, and transmission control systems. All of these solutions focus on increased efficiency and reduced fuel consumption. With all its products, Knorr-Bremse makes a significant contribution to safety on rail and road all over the world. More than a billion people around the globe rely daily on Knorr-Bremse systems.

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## At a Glance

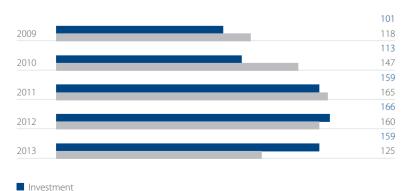
Consolidated global sales at the Knorr-Bremse Group once again reached more than EUR 4 billion in fiscal 2013. Against a background of negative currency effects, the figure level-pegged with the previous year at EUR 4.30, but this represented actual growth of 3% in real terms. Positive market trends meant that the value of incoming orders rose in all regions to a record level of EUR 4.75 billion.

Net income for the Knorr-Bremse Group rose to EUR 366.7 million in 2013 (2012: EUR 295.0 million) The net return on sales reached 8.5% (2012: 6.9%).

In 2012, the Knorr-Bremse Group invested EUR 159.5 million in fixed and intangible assets – a decrease of 3.8% compared with the previous year (2012: EUR 165.8 million). During the year Knorr-Bremse invested in modernizing its building stock

in global growth markets and opened six new plants.

Depreciation on intangible and fixed assets decreased across the Group, falling from EUR 159.8 million in 2012 to EUR 125.2 million in the year under review.



Depreciation

Investment and depreciation in EUR millions

# Executive Board & Supervisory Board

#### **Executive Board**

Dr. Michael Buscher, Chairman of the Executive Board since 01.07.2013 Klaus Deller

Dr. Dieter Wilhelm

Dr. Lorenz Zwingmann Executive Board Spokesman up to 30.06.2013

#### Supervisory Board

Heinz Hermann Thiele Munich

Chairman, Entrepreneur

Dr. Eduard Gerum\* Rosenheim

1st Deputy Chairman, Consultant to the Executive Board of Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

Manfred Wennemer Bensheim

2nd Deputy Chairman, Former Chairman of the Executive Board of Continental AG

Dr. Martin Kimmich\* Munich

Assistant Representative of the IG Metall Trade Union, Munich Office

Hans-Georg Härter Salzweg

Former Chairman of the Executive Board of ZF Friedrichshafen AG

Heinz Hausner\* Salzweg

Representative of the IG Metall Trade Union, Passau Office

**Wolfgang Tölsner** Uetersen (since 08.03.2013) Corporate Consultant

**Georg Weiberg** Stuttgart (since 07.11.2013) Retd. Head of Development Daimler Trucks Wolfgang Hubert\* Munich

Representative of the disabled, Chairman of the Works Council of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, Knorr-Bremse AG, KB Media GmbH. Knorr-Bremse IT-Services GmbH

Dr. Wolfram Mörsdorf Essen

Retd. Member of the Executive Board of ThyssenKrupp AG

Werner Ratzisberger\* Munich

Project engineer, mechanical surface treatment, Knorr-Bremse Systeme für Nutzfahrzeuge GmbH

Günter Wiese\* Berlin

Full-time Chairman of the Works Council of Knorr-Bremse Systeme für Schienenfahrzeuge GmbH, Berlin plant

Dr. Hans-Peter Binder Berg (until 08.03.2013)

Member of the Board of Management of Deutsche Bank AG, Munich Branch

**Dr. Michael Buscher** Meilen/ZH Switzerland (until 30.06.2013)

Chairman of the Board of Knorr-Bremse AG

<sup>\*</sup> Workforce representative



## People and Careers

All employees of the Knorr-Bremse Group have made a vital contribution to the positive growth of the Knorr-Bremse Group in recent years. Motivated employees who identify with the organization are the driving force behind innovation, quality and sustainable growth.

With their dedication and commitment Knorr-Bremse employees once again ensured success for the company in 2013. At the end of the year the Group employed a total workforce of 20,833 (18,499 excl. leasing) – which is an increase of 9.0% (excluding leasing 5.5%) over the previ-

ous year. In Germany, the number of employees rose from 3,750 to 4,087, which again represents approximately one fifth of the workforce. In Europe, Knorr-Bremse employed a total of 11,271 people at the end of 2013 – 54.1% of the total workforce. The number of employees in the



Size of workforce as of 31.12.2013



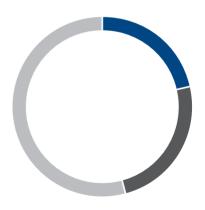


Americas rose in 2013 to 4,496 or 21.6% of the total workforce. And in Asia/Australia the figure for employees went up to 5,066 or 24.3% of the work-force.

## Pro-active human resources development

To achieve success, HR development must be able to draw on solid data and an accurate picture of employee productivity and commitment. Knorr-Bremse has therefore further refined its IT-based tools and programs for evaluation processes and potential management and rolled them out around the world – for instance as part of the Staff Dialogue. This new tool is being used to standardize the performance review process across the Group.

Targeted processes to identify employees with potential take place on the basis of uniform criteria within the Group. Following the "Staff Dialogue", individuals



■ Americas 21.6% ■ Asia/Australia 24.3% ■ Europe 54.1%

Group workforce by region on Dec. 31, 2013

who show potential are invited to internal assessment centers and appraised by experienced executives and external



experts. In this way Knorr-Bremse is able to systematically build up its own pool of young talent.

Leadership is also all about fostering and encouraging individuals, which is why during the year under review Knorr-Bremse expanded various programs designed to achieve this. One important promotion program for young executives is the International Management Potential Group (IMPG). In 2013 talented executives from international sites underwent further development, with training courses and projects aimed at strengthening their leadership capabilities and extending their international networking.

#### **Excellent leadership**

Fostering individual professional development is above all a management responsibility. With this in mind, Knorr-

Bremse has developed new Leadership Principles and communicated them throughout the Group. They guide all managers as they lead their staff – and shape the Company's strategy, culture and organization. The Principles address the five key aspects of leadership, which can be summarized as "Reflect", "Step Ahead", "Engage", "Develop" and "Execute".

For these global management training courses, Knorr-Bremse worked with renowned experts from the University of St. Gallen to develop uniform content and standards and roll them out across the Group. One of the courses' key topics is the principle of transformational leadership. This is based on the conviction that people are more motivated to perform a task when they understand how it fits into the big picture and contributes to the success of their company.



#### A culture of open dialogue

A culture of open dialogue is essential to constructive and successful teamwork. Knorr-Bremse fosters such a culture with its Leadership Feedback instrument. Around the world, this allows managers with at least five direct reports to receive feedback from their employees on their management performance. A total of 12,067 employees and 1,141 managers were invited to participate in Leadership Feedback in 2013. The second step called on all managers to discuss the results of the survey with their employees. In the year under review 937 workshops were held worldwide, with managers and employees working together to define measures for optimizing leadership and teamwork.

#### An attractive employer

Knorr-Bremse adopts a targeted approach to address these individual needs. At the

same time, there is a universal toolbox of measures that can be applied to make a company a more attractive place to work. In addition to remuneration and a working environment that encourages performance, work-life balance is a key factor in employee satisfaction - and therefore in employee motivation. Knorr-Bremse has expanded the number of initiatives in this area in recent years. With the aim of maintaining this high standard in the future and refining it where necessary, in the year under review Knorr-Bremse took part in the Hertie Foundation's "berufundfamilie" (career and family) audit and successfully obtained certification. A target agreement including specific measures was drawn up and this will serve as a basis for recertification in three years' time. In the summer of 2013 Knorr-Bremse also applied for Top Employers Institute certification in the field of engineering in Germany, and was certified for the first time at the beginning of 2014.

#### Thinking globally, acting locally

In an increasingly globalized world, opportunities for international job assignments contribute to the attractiveness of an employer. With its many international locations, Knorr-Bremse offers numerous opportunities of this kind. In 2013 some 100 employees were involved in the Company's international transfer program, in which they spend between six months and five years in one of over 90 foreign locations. At the same time, Knorr-Bremse also prioritizes the development of skill sets and responsibilities at each of its locations. In concrete terms, this means recruiting specialists primarily from local markets and filling plant manager and other management positions with regional talent wherever possible.





## Responsibility

Doing business with foresight, showing consideration for the environment, and treating others fairly – these principles have a long tradition at Knorr-Bremse. In order to ensure the company's future viability, Knorr-Bremse is actively working on a systematic sustainability program that stands for environmental compatibility and social commitment.

At Knorr-Bremse, corporate responsibility is divided into the following areas: Product responsibility, responsibility for the workforce, responsibility for the environment and climate and social responsibility.

Corporate responsibility (CR) is established in organizational terms at the most senior level of management at Knorr-Bremse. The top decision-making organ is the CR Council, which is made up of the Chair of the Executive Board, two representatives of each of the two corporate divisions and the head of the Corporate

Responsibility department. The Council defines the objectives and measures to be taken to achieve continuous improvement in all aspects of sustainability. Beyond that, a Group-wide network, the CR Round Table, facilitates inter-regional and cross-divisional exchange regarding strategic goals, current CR projects and communication of best practice examples.

All activities are based on the CR strategy, which outlines the specific goals of CR management at Knorr-Bremse. It defines six fields of action: strategy and management; employees and leadership;



products and partners; environment and climate; commitment and society; communication and Cooperation.

The CR strategy and CR goals are based, among other things, on the company's corporate values and the principles of the UN Global Compact, a voluntary business policy initiative created with the aim of ensuring that globalization is socially, environmentally and economically just. Knorr-Bremse signed up to the Global Compact in 2010.

## Setting things in motion – with world-wide aid projects

As part of society, Knorr-Bremse is committed to social and community issues. Knorr-Bremse Global Care was set up in 2005 in response to the tsunami disaster in South-East Asia. Since then it has devoted its efforts to supporting aid projects. As well as providing emergency disaster relief, the organization focuses on education and training and social infrastructure. These are areas in which it is possible to achieve lasting improvements in local

living conditions and support the development of independent individuals. With its financial resources and the expertise of Knorr-Bremse colleagues, Knorr-Bremse Global Care aims to create scope for development and help achieve a positive change in the lives of needy individuals. In the year under review, the organization supported 51 projects in 25 countries at a cost of EUR 1.85 million. When selecting projects, the basic aim is to support individual independence. Projects should enable the local people to take the initiative and bring about structural changes. This strengthens social cohesion, increases the long-term success of a project and often leads to follow-on projects initiated by the local communities themselves

#### **Current main areas of focus**

In 2013 Knorr-Bremse Global Care defined two main areas of focus that it regards as the key to improving the lives of people in need: education and water. Support for vocational training programs can give young people an opportunity to lead more independent lives; and by improving supplies of clean drinking water and taking appropriate sanitary and hygiene measures a basis can be created for healthier lives.

# Values and leadership principles

Responsible and sustainable corporate governance is closely linked to company-specific values and principles. Knorr-Bremse is therefore consistently working on further developing its corporate and leader-ship culture.

What sets Knorr-Bremse as a company and the people who work there apart? The Knorr-Bremse corporate values are clear landmarks that stand for the strengths of the company. They shape the conduct of its employees within the company and towards the outside world and set standards for their dealings with one another.

Courageous entrepreneurship with a focus on technological excellence, outstanding reliability, personal passion and responsibility – these five values define the DNA or corporate identity of Knorr-Bremse.

In 2013 the Knorr-Bremse leadership principles were further developed and correlated with the company's corporate values prior to implementation throughout the Group. The result is a set of principles tailored to our current needs that focus on five core aspects of leadership in line with the concept of transformational leadership. The principles support all managers in their direct dealings with colleagues and help them shape strategy, organization and corporate culture.



## Organizational structure

The Knorr-Bremse Group is structured by both division and by region. Under the umbrella of Knorr-Bremse AG on the one hand there are the cross-regional Rail Vehicle Systems and Commercial Vehicle Systems divisions and on the other hand the regional companies in Europe, North America, South America, and the Asia-Pacific region. This structure allows Knorr-Bremse to meet the specific requirements of the markets in these regions while at the same time realizing cross-locational and cross-regional synergy effects.

Knorr-Bremse AG							
Europe Africa Middle East	North America*	South America*	Asia/ Australia*				
Rail Vehicle Systems							
Commercial Systems	Vehicle	27					

<sup>\*</sup> Regional holding

## Rail Vehicle Systems

Knorr-Bremse Rail Vehicle Systems is the world's leading manufacturer of braking systems for mass transit and mainline rail networks. Knorr-Bremse systems are used in street cars and metros, locomotives, multiple units and freight cars as well as high-speed trains. At the end of 2013, the Rail Vehicle Systems division employed more than 12,000 people and achieved annual sales of EUR 2.25 billion.

#### Safety, innovation, customer benefit

Knorr-Bremse systems are in active service around the globe, ensuring greater safety and comfort in the rail transportation sector. For every type of rail vehicle and every application area worldwide, Knorr-Bremse offers customized solutions. During 2013, for example, two newly-developed valves for Russian freight transportation were brought to volume production – the AKb1 load-dependent brake valve and the KAB60 control valve. Both were the fruit of many years' work to develop a reliable and efficient product capable of operating under extreme conditions.

#### Comprehensive product portfolio

Along with braking systems, the products and services offered by the Knorr-Bremse Group also focus on innovative IFE train access systems, Westinghouse platform screen doors, HVAC systems from Group subsidiary Merak, and Sydac driving simulators. The rail vehicle product portfolio also includes state-of-the-art driver assist

systems, sanding systems and auxiliary equipment such as derailment detectors.

#### Reliable service partner

Under the brand name RailServices the company has merged all its service activities worldwide in order to be able to offer precisely customized service packages for every requirement. Flexibility and maximum customer benefit are the main focus of all activities with the goal of living up to the company's claim of being "service partner of choice". For Knorr-Bremse RailServices, providing service means that in future there will always be an expert at hand when a customer faces a problem that calls for a rapid response.



#### **Products**

#### Air supply

Compressors Air dryers

Air supply units

#### Bogie equipment

Brake pads

Brake discs

Brake calipers

Brake cylinders

Slack adjusters

Magnetic track brakes

Eddy-current brakes

#### Brake control

Control units
Brake control units

Sensors and diagnostics

#### **Hydraulics**

Hydraulic units

Brake actuators

Hydraulic suspension systems

#### **Auxiliary equipment**

Sanding systems Brake testing equipment Derailment detectors

#### **Further products**

Automatic door systems

Platform screen doors

**HVAC** systems

Power metering

Power resistors

Rail vehicle driving simulators

LEADER driver assist system

COMORAN bogie monitoring and

diagnostics

Windscreen wiper and wash systems

Signal systems for railroad crossings

Railway signals

On-board computers

Current and voltage transformers



Global sales for the Rail Vehicle Systems division in EUR millions

## Commercial Vehicle Systems

Knorr-Bremse Commercial Vehicle Systems offers its customers braking systems for trucks, buses, trailers, and agricultural vehicles. In the area of chassis systems, Knorr-Bremse is a leader in both electronic controls and driver assistance systems, as well as in air treatment, and makes a significant contribution to road safety. Additional product areas are powertrain systems, and torsional vibration dampers for diesel engines. With more than 8,300 employees, the division achieved sales of EUR 2.07 billion in 2013.

#### Safety, innovation, customer benefit

In 2013 Knorr-Bremse further expanded its international collaboration with well-known OE manufacturers involved in developing new platforms. Knorr-Bremse's North American subsidiary Bendix also launched the Safety Direct web portal – an innovative system for analyzing accidents involving commercial vehicles.

#### Trailers and special vehicles

Knorr-Bremse ensures the safety not only of trucks and tractors but also of trailers and semi-trailers. At the heart of the trailer braking system is TEBS – the trailer electronic braking system – which combines electronic control, pneumatics and part of the sensor system into a central unit. At the end of 2013 a new feature of TEBS – iLvL – went into volume production. This enables the trailer to be easily adjusted electronically to different ramp heights via the pneumatic suspension system.

#### **Active Service**

Within its Active Service program, Knorr-Bremse unites all its aftermarket activities for distributors, workshops, fleet managers and drivers under one roof with a focus on OE-quality products as well as criteria such as safety and economy. During the year under review the focus was on further merging of all aftermarket activities, including the newly-created remanufacturing function. A new joint venture – Alltrucks – was also launched with the medium-term aim of creating a full-service repair shop concept for trucks.





#### **Products**

#### **Torsional vibration dampers**

#### Compressors

### Clutch actuation and transmission control

#### Throttle valve

#### Air treatment

EAC (electronic air treatment unit)

#### **Electronic systems**

ABS (anti-lock braking system)
ACC (adaptive cruise control)
AFRS (autonomous emergency bra

AEBS (autonomous emergency brake system)

ASR (traction control)

EBS (electronic braking)

ELC (electronic level control)

ESP (electronic stability program

LDW (lane departure warning)

RSP (roll stability program)

TPMS (tire pressure and temperature monitoring system)

TRM (trailer roadtrain module)

#### **Valves**

Disc brakes

**Drum brakes** 

Slack adjusters

Actuators



Global sales for the Commercial Vehicle Systems division in EUR millions

# Research & Development

As befits a technological company, Knorr-Bremse further expanded its R&D activities during 2013 – always in close collaboration with its customers. Expenditure on research, development and project planning during the year under review amounted to EUR 252.5 million (2012: FUR 249.7 million) and accounted for 5.9% of revenues.

As the global technology leader in the fields of braking systems for rail and commercial vehicles, Knorr-Bremse develops innovative products distinguished by their safety, high quality, reliability and customer value.

In order to maintain a consistently high level of innovation and development, Knorr-Bremse works closely with partners in the field of research, including Budapest University of Technology and Economics, Berlin Technical University, the German National Aeronautics and Space Research Centre, RWTH Aachen University

ty and the University of Technology and Technical University of Munich.

In line with Knorr-Bremse's regional approach, the company's development capacity in countries such as India and China was further expanded in 2013. During the course of the year the Knorr-Bremse Technology Center India (TCI), which provides development expertise to both company divisions, was officially opened.



R&D expenditure in EUR millions

## Knorr Excellence

Excellence cannot be taken for granted – it is both a challenge and a commitment. From the outset, striving for outstanding performance has been part of the self-image of Knorr-Bremse. Today it applies to all of the Group's areas of activity and business processes. And we are doing our best to keep it that way. Knorr Excellence is a world-wide program that safeguards our good name.

Outstanding products and services are based on personal and technological excellence. Also essential is an ability to identify new needs at an early stage and find creative solutions that keep pace with market developments and social trends and go beyond the current state of the art. But all this calls for a culture of innovation and perfection. In Knorr Excellence, Knorr-Bremse has devised a program that ensures the optimization of all business areas and processes across the Group.

Knorr Excellence is a cross-functional program that allows people to speak the same language with respect to innovations, to define a common goal, and finally to reach a joint understanding of how to achieve that goal. In strategic terms, the program focuses on the development of management systems that guarantee high performance standards. Through a focus on continuous learning and improvement, a system of excellence is gradually built up. In 2013, two new Knorr Excellence initiatives were launched: Engineering Excellence and Aftermarket Excellence. Further progress was also made with the Q-First quality initiative, Global Purchasing Excellence, Supply Chain Excellence, Finance & IT Excellence, the worldwide energy efficiency initiative (Efficient Cut of CO<sub>2</sub>) and the People Excellence initiative established in 2011 for HR and executive development.

## History

#### 1905

Georg Knorr founds Knorr-Bremse GmbH in Berlin

#### 1918 - 1926

Knorr-Bremse sets new technological standards for freight trains with its pneumatic brakes. Knorr-Bremse becomes Europe's biggest manufacturer of braking systems for rail vehicles.

#### 1922

Development of the pneumatic braking system for commercial vehicles begins.

#### 1931 - 1939

The Hildebrand-Knorr braking system for rail vehicles (HIK brake) sweeps the market and becomes the standard system in 17 different countries.

By 1939, 90% of all German trucks from 7t – 16t are equipped with Knorr-Bremse brakes.

#### 1945

The Knorr-Bremse plant in Berlin is confiscated and dismantled at the end of the 2nd World War.

#### 1945 - 1953

The development and manufacture of braking equipment resumes in the western part of Germany. Company headquarters move to Munich.

#### 1960 - 1980

Knorr-Bremse plays a leading role in the development of braking technology for rail and commercial vehicles. Knorr-Bremse establishes the new UIC standard with its KE control valve.

#### 1985

Heinz Hermann Thiele acquires the majority of the shares previously held by Dr. Jens von Bandemer and gradually becomes sole owner of Knorr-Bremse. Together with the company's international orientation, the focus on the two divisions, Rail Vehicle Systems and Commercial Vehicle Systems, that Thiele initiates makes Knorr-Bremse the world's leading manufacturer of braking systems in both segments.

#### 1996

Volume production of pneumatic disc brakes for commercial vehicles begins.

#### 1999

The commercial vehicle brakes division of Robert Bosch GmbH is integrated into Knorr-Bremse, complementing the company's activities in the field of electronic brake control.

#### 2002

In 2002 Knorr-Bremse acquires Bendix Commercial Vehicle Systems, one of the leading US manufacturers of air brakes and ABS anti-lock braking systems for commercial vehicles.

#### 2005

Knorr-Bremse celebrates its centenary.

In response to the tsunami disaster in Southeast Asia, Knorr-Bremse sets up the charity Knorr-Bremse Global Care.

#### 2009

The company celebrates the 150th anniversary of the birth of its founder Georg Knorr.

#### 2010

Knorr-Bremse strengthens its air conditioning systems business through the strategic acquisition of the Sigma Coachair Group.

Knorr-Bremse opens new production plants in the Czech Republic and Hungary, using state-of-the-art production and logistics concepts.

Knorr-Bremse signs up to the UN Global Compact and adopts a Group-wide Corporate Responsibility Strategy.

#### 2011

30 years of ABS and 10 years of ESP – Knorr-Bremse celebrates two important anniversaries.

A control valve specially developed for freight transportation in Russia is released for field testing by Knorr-Bremse.

#### 2012

Knorr-Bremse introduces new corporate values which describe what the company is about: entrepreneurship, technological excellence, reliability, passion and responsibility.

Bendix celebrates 10 years of belonging to the Knorr-Bremse Group.

The Group-wide Value Stream Academy is opened at the company's Czech location in Liberec.

#### 2013

The Knorr-Bremse Group continues its extensive program of investment in state-of-the-art production plant and buildings by opening six new facilities. The aim is to strategically expand and strengthen the company's global development and production network so as to increase capacity and secure the long-term future of the Group.















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