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The future of transportation

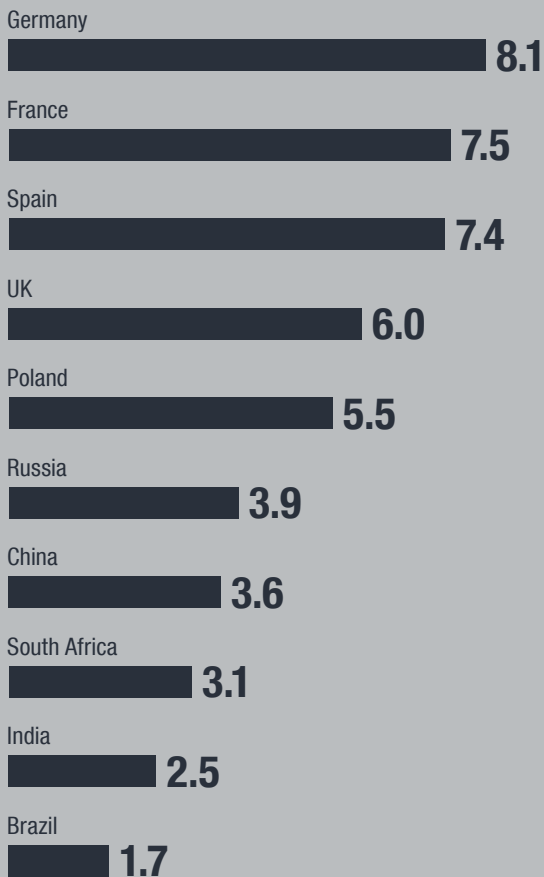
In 2010, MAN prepared a global report on the future of transportation in cooperation with The Economist. MAN wanted to find out where the international transportation and logistics industry sees the greatest need for action. 220 senior managers of companies from ten countries were surveyed with the assistance of the Economist Intelligence Unit. The report, entitled “Keeping traffic flowing. Transport efficiency to 2030,” is available to download from MAN’s website at www.man.eu.

TRANSPORTATION ON THE ROAD NETWORK

Infrastructure quality

Germany has the most efficient transportation infrastructure according to a global benchmarking study of the traffic situation in ten countries.

10.0: very good, 0: very poor

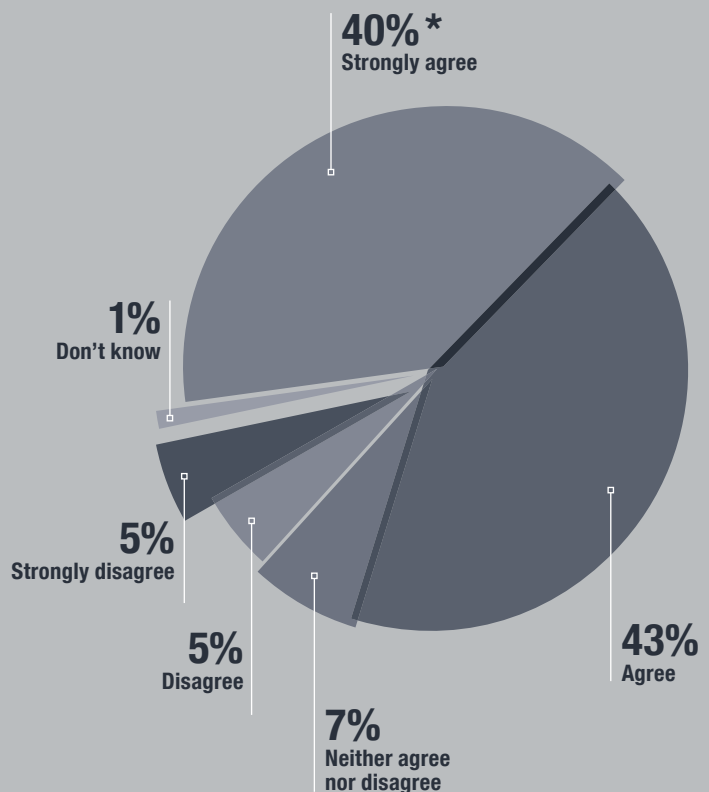


LOGISTICAL CHALLENGE

Investment and growth

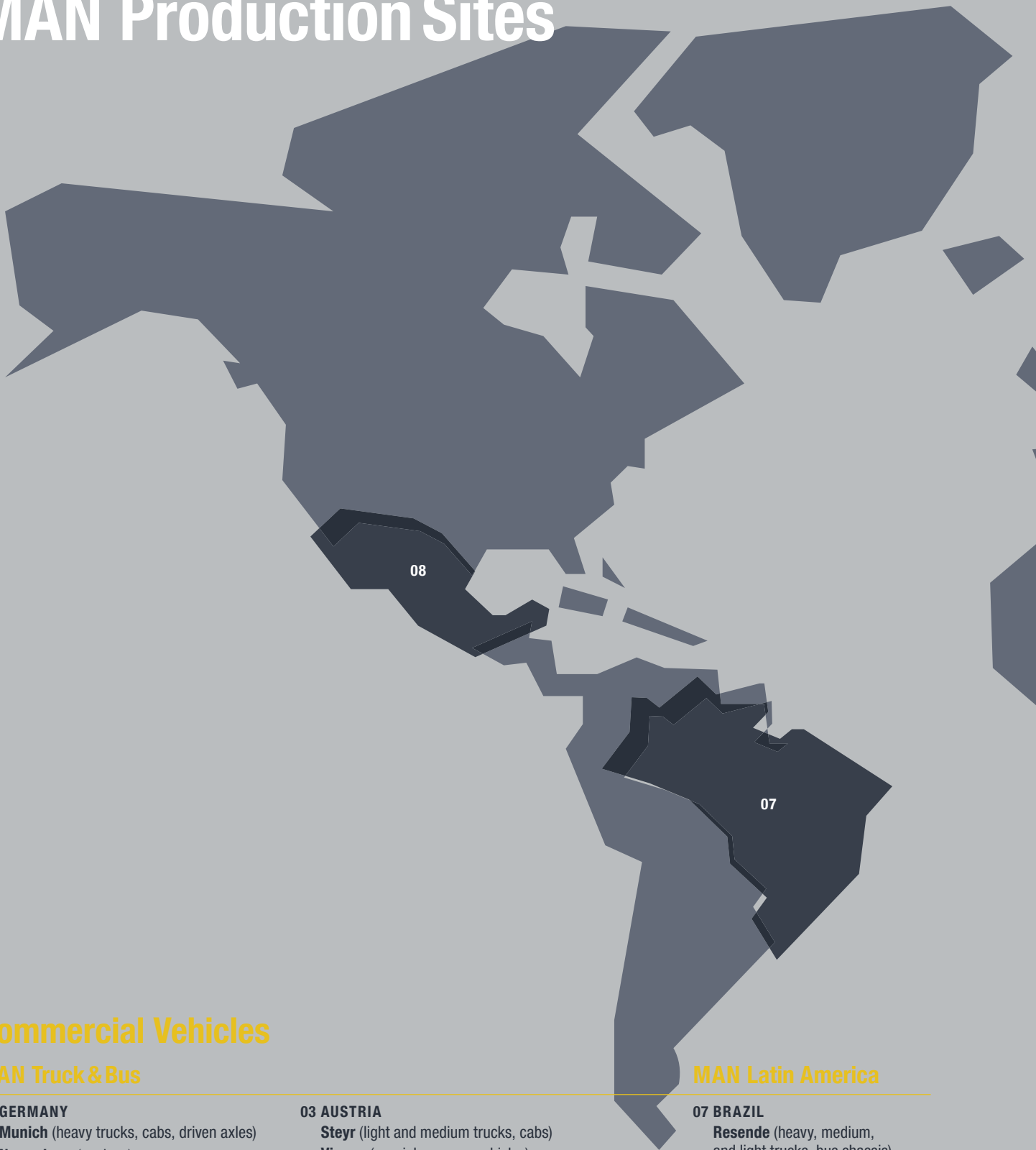
To what extent do you agree or disagree with the following statement as it relates to your organization: “The availability and quality of transport infrastructure affects where we locate and expand our business.”

* The percentages may not sum to 100 percent, owing to rounding.



The World of MAN

MAN Production Sites



Commercial Vehicles

MAN Truck & Bus

01 GERMANY

Munich (heavy trucks, cabs, driven axles)

Nuremberg (engines)

Plauen (premium coaches, double-decker scheduled-service buses and coaches)

Salzgitter (heavy trucks, bus chassis, and components)

02 INDIA

Pithampur (heavy trucks)

03 AUSTRIA

Steyr (light and medium trucks, cabs)

Vienna (special-purpose vehicles)

04 POLAND

Cracow (heavy trucks)

Poznan (city buses, intercity buses, floor assemblies)

Starachowice (city bus body shells, intercity buses, and floor assemblies.)

05 SOUTH AFRICA

Olifantsfontein (intercity and municipal buses)

Pinetown (heavy, medium, and light trucks, bus chassis)

06 TURKEY

Ankara (coaches, intercity and municipal buses)

MAN Latin America

07 BRAZIL

Resende (heavy, medium, and light trucks, bus chassis)

08 MEXICO

Querétaro (bus and truck assembly)



Power Engineering

MAN Diesel & Turbo

01 GERMANY

- Augsburg** (large-bore diesel engines, turbochargers)
- Berlin** (compressors)
- Deggendorf** (chemical reactors, special apparatus)
- Hamburg** (steam turbines)
- Oberhausen** (compressors, gas, and steam turbines)

02 INDIA

- Aurangabad** (large-bore diesel engines)

09 CHINA

- Changzhou** (compressors)
- Shanghai** (turbochargers for large-bore diesel engines)

10 DENMARK

- Frederikshavn** (propulsion systems)
- Copenhagen** (turbochargers for large-bore diesel engines)

11 FRANCE

- Saint-Nazaire** (large-bore diesel engines)

12 SWITZERLAND

- Zurich** (compressors, vacuum blowers)

13 CZECH REPUBLIC

- Velká Bíteš** (turbochargers for large-bore diesel engines)

Renk

01 GERMANY

- Augsburg** (transmissions/gears, testing systems)
- Hanover** (slide bearings, couplings)
- Rheine** (gears, couplings)

The World of MAN

Strategy & Strengths

Focus on transportation and energy

MAN's core products—commercial vehicles, turbomachinery, diesel engines, and gear units—allow it to focus on market segments with sustainable and global growth opportunities in its Commercial Vehicles and Power Engineering business areas.

Technology leadership

Continuous investment in research and development secure MAN's technology leadership—a strategic success factor: The Group identifies future requirements at an early stage and transforms them into trailblazing new solutions.

Profitable international growth

MAN has a presence on all five continents and focuses on continued and international growth, especially in the BRIC countries. Cooperations within the Group leverage economies of scope in purchasing and development.

Adding long-term value

MAN is aware of its responsibility for the environment, its employees, and society. This is reflected in all elements of MAN's corporate strategy and enables the Group to add long-term value.

Industrial Governance

MAN's efficient Industrial Governance System controls how duties and responsibilities are allocated between the MAN Group's Corporate Center and its divisions. It strikes a balance between central strategic management with overarching shared services and decentralized operational functions, as well as a modern leadership culture. The foundation for this system is the basic values shared by MAN's brand and culture.

MAN SERVICE CENTERS

Serving our customers worldwide

MAN ensures the best possible local service for its customers throughout the world thanks to a close-knit network of service centers and the extensive technical expertise of its employees. This applies as much to trucks and buses as to turbomachinery and marine diesel engines.

MAN Truck & Bus

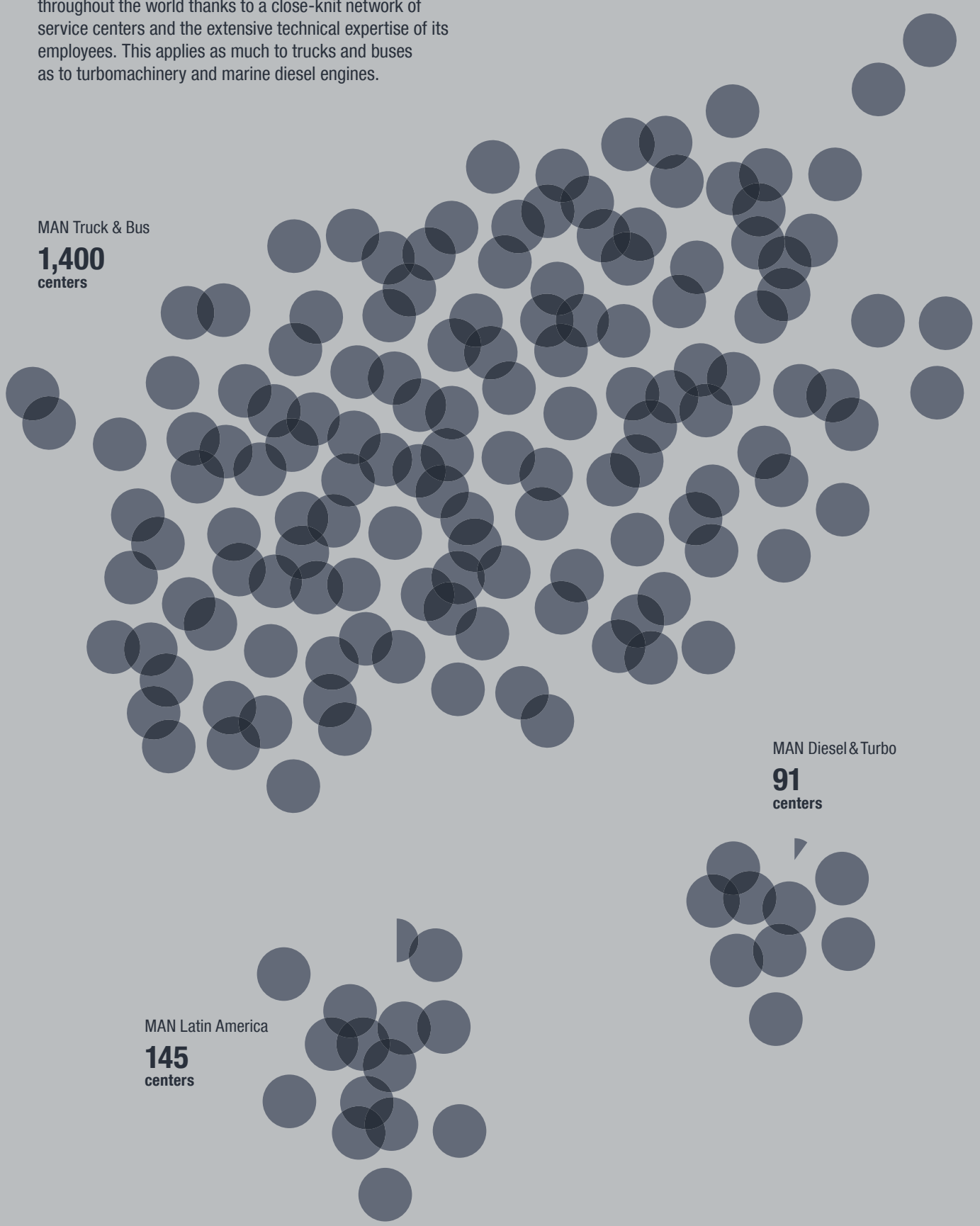
1,400
centers

MAN Diesel & Turbo

91
centers

MAN Latin America

145
centers



The World of MAN

MAN SE Annual Review

A look back at 2010

At MAN, 2010 was dominated by the economic upturn. The Company's results picked up and were accompanied by successful technological innovations and the launch of sustainability management, among other things.

1st quarter

EIB and MAN agree on loan for eco-friendly technologies

The Luxembourg-based European Investment Bank (EIB) and the MAN Group conclude a loan agreement for €300 million to stimulate research in the commercial vehicles field. The funds are for the development and launch of reduced-emission and fuel-efficient drives for trucks and buses.

MAN Latin America increases production

MAN Latin America expands its capacity at the Resende plant in Brazil and introduces a third shift in March. The plant's capacity is raised to 72,000 trucks and bus chassis a year. In making the move, MAN responds to the growing demand for commercial vehicles in Latin America, and Brazil in particular.

Merger to form MAN Diesel & Turbo SE completed

The merger announced between MAN Diesel SE and MAN Turbo AG to form MAN Diesel & Turbo SE, based in Augsburg, is completed in March, the corresponding entry having been made in the register of companies. The process of amalgamating the two former MAN sister companies into one enterprise is thus achieved.



2nd quarter

MAN 2010 Annual General Meeting

At the 2010 Annual General Meeting in Munich, MAN CEO Georg Pachta-Reyhofen reports that, despite the extremely difficult economic situation, MAN recorded an operating profit of €0.5 billion and that the Commercial Vehicles business area was also profitable.

MAN opens new engine development center in Nuremberg (photo bottom left)

MAN Nutzfahrzeuge's new development center at its Nuremberg site aims to further improve the company's standing as the technological leader in the field of commercial vehicle and industrial engines. The new building houses 16 test beds for engines and one for vehicles, development laboratories, and workspace for 150 employees on an area covering 10,000 square meters.

Rheinmetall MAN Military Vehicles GmbH established

MAN Nutzfahrzeuge AG and Rheinmetall AG form a joint company for military wheeled vehicles. Rheinmetall has a stake of 51 percent and MAN Nutzfahrzeuge 49 percent in the new company, which is headquartered in Munich and known as Rheinmetall MAN Military Vehicles GmbH (RMMV).

Munich starts using the first MAN hybrid city bus

The Münchner Verkehrsgesellschaft (MVG—Munich Transport Corporation) puts the first MAN Lion's City Hybrid into service, making Munich the first metropolis in Europe to use the new MAN Lion's City Hybrid in regular service. The new bus consumes up to 30 percent less fuel than a conventional city bus.

Engines for the different environmental standards worldwide are optimized and certified at MAN Truck & Bus's new testing facilities in Nuremberg.



MAN unveiled its Concept S truck study at the IAA in Hanover. The streamlined design saves up to 25 percent in fuel.

3rd quarter

MAN Supervisory Board extends Dr. Georg Pacht-Reyhofen's contract by five years

In July, the Supervisory Board of MAN SE extends Dr. Georg Pacht-Reyhofen's appointment as CEO of MAN SE by five years, until June 30, 2016. Dr. Pacht-Reyhofen has been a member of the MAN SE Executive Board since July 1, 2006, and CEO of both MAN SE and MAN Nutzfahrzeuge AG since January 1, 2010.

MAN brand campaign (photo bottom right)

MAN launches the "We are your MAN" brand and innovation campaign in August, which comprises advertisements on TV, in daily and financial newspapers, on the Internet, and on billboards. The aim of the campaign is to depict MAN's innovation in a surprising and credible manner. Every motif is captioned with an unusual question to which the answer is: We are your MAN.

MAN cooperates with five Bundesliga teams

Just in time for the 2010/2011 German soccer season, the MAN Group concludes partnerships with five First Division teams. The Company cooperates with FC Bayern Munich, Hamburg SV, Borussia Dortmund, VfL Wolfsburg, and 1. FC Kaiserslautern as their exclusive commercial vehicle partner. As a result, a total of nine of 18 First Division teams now travel in MAN coaches.

Appearance at the IAA and SMM trade fairs (photo top)

The MAN Concept S design study causes a stir at the International Commercial Vehicles Motor Show (IAA), demonstrating that aerodynamics can drastically cut the fuel consumed by diesel trucks as well as the CO₂ emitted. At the world's most important shipping trade fair, SMM, MAN Diesel & Turbo shows just how the extremely strict "Tier III" emissions specifications—set down by the International Maritime Organization (IMO) and coming into force from 2016 onwards for coastal regions—are already being complied with today.

Corporate responsibility strategy

MAN SE presents its corporate responsibility (CR) objectives and plans in a strategy report entitled "Our Responsibility." Following the creation of a central, group-wide function for CR at the start of 2010, this is another step in pursuing the strategic approach of sustainable value creation as an integral part of the Company's strategy with concrete milestones and by making it transparent.

4th quarter

Listing in Carbon Disclosure Project's climate protection index

International investor group Carbon Disclosure Project lists MAN in the Carbon Disclosure Leadership Index (CDLI) of German companies for the first time. The CDLI comprises only those companies that stand out due to particularly transparent and detailed reporting about dealing with the opportunities and risks involved in climate change.

New Code of Conduct

MAN combines its corporate compliance principles in an updated Code of Conduct. The document is distributed to staff worldwide in all relevant languages and is designed to ensure that neither the business activities of individual employees nor those of MAN as a company conflict with laws, regulations, or ethical standards.

MAN Nutzfahrzeuge becomes MAN Truck & Bus

The successful strategy of international growth conducted by MAN Nutzfahrzeuge AG is to be reflected in the company's name. For this reason, the commercial vehicles manufacturer is renamed: from December 28, 2010, it is to be known as MAN Truck & Bus AG. The new name means that the company's brand presence will be standardized internationally and that it will be better perceived.



The "We are your MAN" campaign showcases MAN Group innovations.

Commercial Vehicles Efficiency of the Future



Reducing truck fuel consumption by 25%? We are your MAN.

MAN at the MA Commercial Vehicle show:
28.-30.10.2011 Hall 10, Stand 014.

Engineering the Future - since 1718
www.man-trucks.com

Streamlined trucks consume less fuel. The aerodynamic properties of MAN's Concept S study reduce overall fuel consumption by a quarter.

Commercial Vehicles

Efficiency of the Future

Freight Forwarder Thomas Baumgarten calculates the efficiency of his MAN trucks down to the last cent per kilometer.



transport specialist. “As a result of more stringent environmental regulations, diesel engines today require about 40 percent less fuel than they did back in 1970,” says Dr. Georg Pachta-Reyhofen, Chief Executive Officer of MAN Truck & Bus. And further progress continues to be made. The 2010 International Commercial Vehicles Motor Show (IAA) in Hanover saw MAN present its spectacular Concept S truck solution. Its streamlined silhouette cuts fuel consumption and CO₂ emissions by as much as 25 percent. And MAN has many more innovations that are making an increasingly active contribution to transport efficiency: they include smart TipMatic gears, the MAN HydroDrive front wheel drive option and a telematics system that advises the driver in real time of the most economical way to handle the vehicle.

“The winter there is something else, I tell you!” When Thomas Baumgarten climbs into his MAN TGX in Hanover, it is as if he is going on a polar expedition, equipped with provisions for several days, a shovel, and two telephones. “In Scandinavia, you never know what you’re in for: black ice, snowdrifts, you name it. Better safe than sorry—considering it’s minus 40 degrees Celsius and some 1,500 kilometers on the road,” says the 48-year-old driver. He and his brother Andreas run a freight forwarding firm based in Pattensen, near Hanover. For 14 years now, their road transport fleet has provided close to regular services from northern Germany to Sweden and Finland between November and April for the automotive and supplier industry. They deliver vehicles to test centers on the Arctic Circle for various brands. Driving dynamics in winter, engines, gears,

“Transport efficiency is the measure of all things for our company.”

Freight Forwarder Thomas Baumgarten

brakes, electronics, and tires—there’s nothing that won’t be put to the test under extreme conditions in that region. The freight forwarder also has to think about the heavy demands placed on these test vehicles by an Arctic winter when it comes to his own truck fleet. “Transport efficiency,” says Baumgarten, “is the measure of all things for our company.”

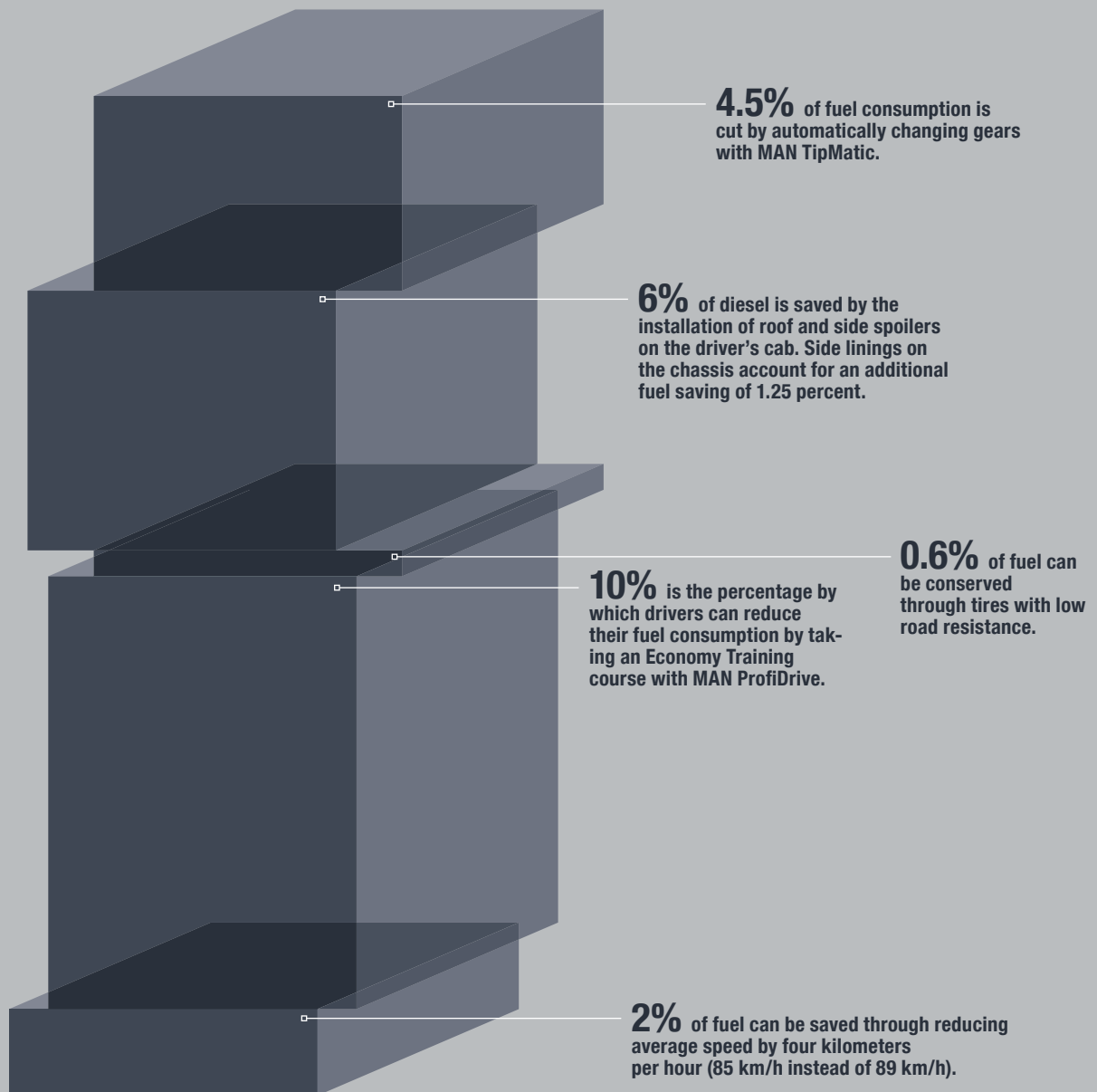
With its TGX EfficientLine, MAN focuses on reducing the TCO (total cost of ownership), for example. This semi-trailer tractor model uses up to three liters of diesel less per 100 kilometers. When traveling 150,000 kilometers annually over a service life of four years, the savings add up to 18,000 liters of diesel and 47 tons of CO₂. This was a winning argument for the

“During my long trips through the Arctic winter, I am constantly surprised by how this high tech works,” comments Thomas Baumgarten. “My gut might tell me that we’d cover the ground quicker with low gears and high rotary speeds. Yet it’s actually the other way around: efficient technology is constantly improving performance in the low-speed range, while also cutting costs.” This pleases freight forwarder and trucker Baumgarten. He can now set off on his polar expedition, ideally equipped.

POTENTIAL SAVINGS

Focus on economy and efficiency

In the highly competitive transportation and logistics industries, the overall costs matter—from first purchasing to finally selling the vehicle. Reducing fuel consumption therefore represents a crucially important factor for efficient business.



Percentages shown are average values.

Commercial Vehicles

Mobility of the Future

MAN's coaches bring many top soccer pros, like the Bayern Munich players, to their games—a comfort their junior counterparts also like to enjoy.

Making a 300 million euro transfer every Saturday? We are your MAN.





Commercial Vehicles

Mobility of the Future



“The kids love it when there’s
a great movie showing on board.”

Coach Driver Steffen Groß

Looking after the D1 team is no small feat. The young soccer stars of Hürth FC are on their way to a tournament in Jülich and make for a fidgety bunch. While the lads are so wound up they would rather run the 50 kilometers dribbling the ball, Team Coach Christian Schulzki has opted for a more comfortable solution: Like the pros, the eleven- to twelve-year-olds are taking an MAN Lion's Coach. Bags are quickly stowed away in the luggage space, and Marius, Malte, Nicki, Felix, and the rest have already taken control of the bus. They are a pleasure to drive for Steffen Groß of Hofacker Touristik, a coach operator based in Reichshof-Heidberg near Gummersbach in Germany. Aged 46, he has been driving coaches all over Europe for the past 16 years. He knows all too well that his passengers have varying requirements. The kids might be a bit noisy, but at least they are not fussy. "They have their sandwiches and drinks in their rucksacks, and love it when there's a great movie showing on board," he comments.

MAN's flagship Lion's Coach does indeed offer maximum comfort, however long or short the journey. In the world of soccer, the great role models of the Hürth children have long appreciated its advantages. Since 2010, five German soccer teams—Bayern Munich, VfL Wolfsburg, Hamburg SV, 1. FC Kaiserslautern and Borussia Dortmund—have been using this "home on wheels" to get to their matches. "Our players can only do their best



Comfortable, innovative, and safe: Steffen Groß knows all about the benefits of coaches.

on the field if they are relaxed when they reach their destination," says Bayern Munich President Uli Hoeneß, explaining why the club opts for MAN.

The Bavarian team relies on the premium model, the Lion's Coach L Supreme. The coach is equipped with a lane guard system (LGS), which is designed to help drivers stay in their lanes, and also features ABS and ESP, automated TipMatic gears and front and rear view cameras. The luxurious interior boasts 30 leather seats, retractable tables with electrically adjustable leg rests, satellite TV, a DVD system with four 19-inch flat screens, as well as wi-fi. Over the players' heads, 500 luminous diodes create a starry galaxy. Maximum comfort is also becoming increasingly popular on the coach market. "This mode of transport offers passengers a mini world where everything is just as it should be," says Richard Eberhardt, President of the RDA coach tourism association. "In short: it's a feel-good world on wheels with more than enough room between the seats and lots of space for luggage."

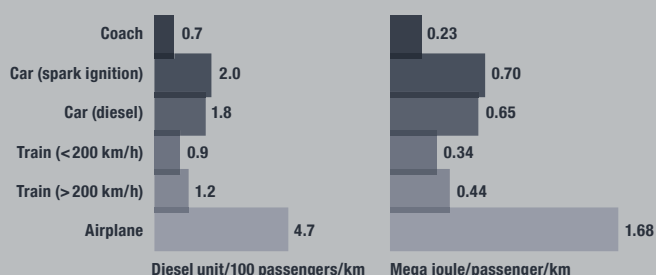
Drivers also appreciate comfort. Steffen Groß certainly waxes enthusiastically about his Lion's Coach as he drives to Jülich. "The cockpit is generously designed, there's lots of leg room, plus a great view through the panoramic windshields. And the new suspension system makes for very quiet operation." It becomes obvious just how smoothly the coach runs shortly before Jülich. The Hürth D1 junior soccer stars have dozed off. Let's not disturb them: they'll be dreaming of scoring goals and winning big in the tournament.

ENERGY COMPARISON OF TRANSPORTATION MEANS


Clean in the fast lane

Coaches are top of the class when it comes to environmental protection. At full capacity, they use 0.9 liters of diesel fuel per 100 kilometers and passenger, making them the best choice by far in terms of fuel consumption—and the one with the lowest CO₂ emissions—when compared with cars, airplanes, and even trains.

Source: ifeu institute 2009



Commercial Vehicles Innovation of the Future

A blue MAN Lion's City Hybrid bus is shown at night, moving through a city street. The bus is illuminated from within, and its destination sign displays "Universität". A passenger is visible inside, reading a newspaper. The background shows blurred city lights and other vehicles, suggesting motion.

Brake, accelerate, brake:
the MAN Lion's City Hybrid is made for
the city as it simply converts energy
from braking into electricity.



Commercial Vehicles

Innovation of the Future



Clean commute: the MAN Lion's City Hybrid pulls away from a bus stop quietly without emitting any exhaust fumes.

“You need to learn how to strategically operate the gas and brake pedals.”

Hybrid Bus Driver Peter Nortz

A quick flick through the paper, and then it's off to a business lecture for Johanna Heyden who is on the 154 bus to Ludwig-Maximilian University in Munich. She almost forgets to get off at her stop since the bus makes hardly any noise as it slows to a halt. This MAN Lion's City Hybrid is the first model of its kind to provide scheduled services for the Munich public transport authority.

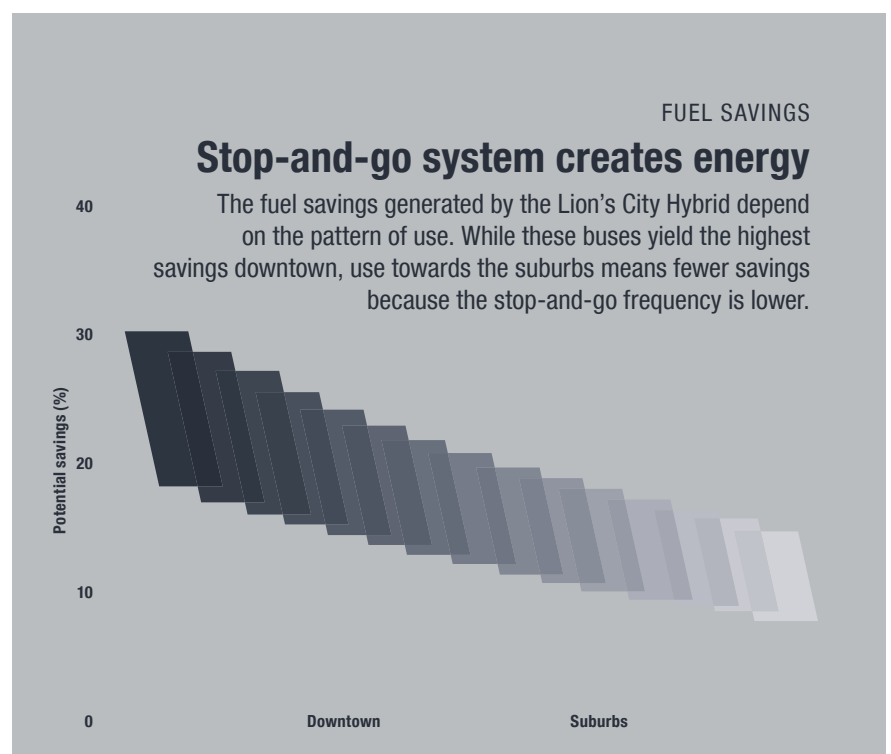
Back in 1975—when hardly anyone saw the need for alternative drive systems—MAN engineers were already working on the Hybrid. For a long time, recovering the energy released in braking, converting it into electrical power, and storing it, proved uneconomical due to cost and the very limited service life of rechargeable batteries. Which is why MAN opted for an innovative solution: the Lion's City Hybrid uses high-performance condensers, known as ultracaps, to store the energy. To save space, they are accommodated on the roof of the bus, are practically maintenance-free, significantly lighter than regular battery packs and have a service life of up to 12 years.

Peter Nortz thinks the new technology makes for a rather special driving experience. Formerly a traffic supervisor for the city of Munich, he is one of the first 10 drivers to have been trained in operating the new bus. “It drives wonderfully,” he enthuses. The bus glides along without almost a sound, providing a unique form of luxury. Nortz says it still takes some getting used to for the passengers. “Many are baffled to find their bus suddenly appear in front of them at

the stop.” It's the perfect solution for urban transport, he says. Nowhere else do vehicles have to brake to a standstill as frequently as they do downtown. As a result, no other vehicles need to accelerate as often from a standstill either. The Lion's City Hybrid, however, can move for several hundred meters on nothing but electrical power and without any emissions, until more output is needed and the combustion engine ignites automatically. Intelligent energy utilization, such as the automated starting and stopping of the engine, adds to the efficiency of the system. Compared with a conventionally operated municipal bus, the Lion's City Hybrid saves up to 30 percent fuel, which

is almost 10,000 liters of diesel a year. “Driving this vehicle does require you to tune into it,” adds Nortz. “You need to learn how to strategically operate the gas and brake pedals, so that energy consumption is in the green while en route.” Many drivers believed that the diesel-electric engine would not have enough power, says the driver. “But that's not true at all,” he assures. “The Lion's City Hybrid is a powerful vehicle, and performs exceedingly well—even at the low end of the speedometer.”

At the stop for the university, Nortz opens the doors. The bus sits idle, its engine turning itself off. Johanna Heyden disembarks with a nod to the driver and then proceeds to her business management lecture, where the subject today is cost accounting. The 154 line has already shown her how environmental awareness and innovative ideas can drive the economical solutions of the future.

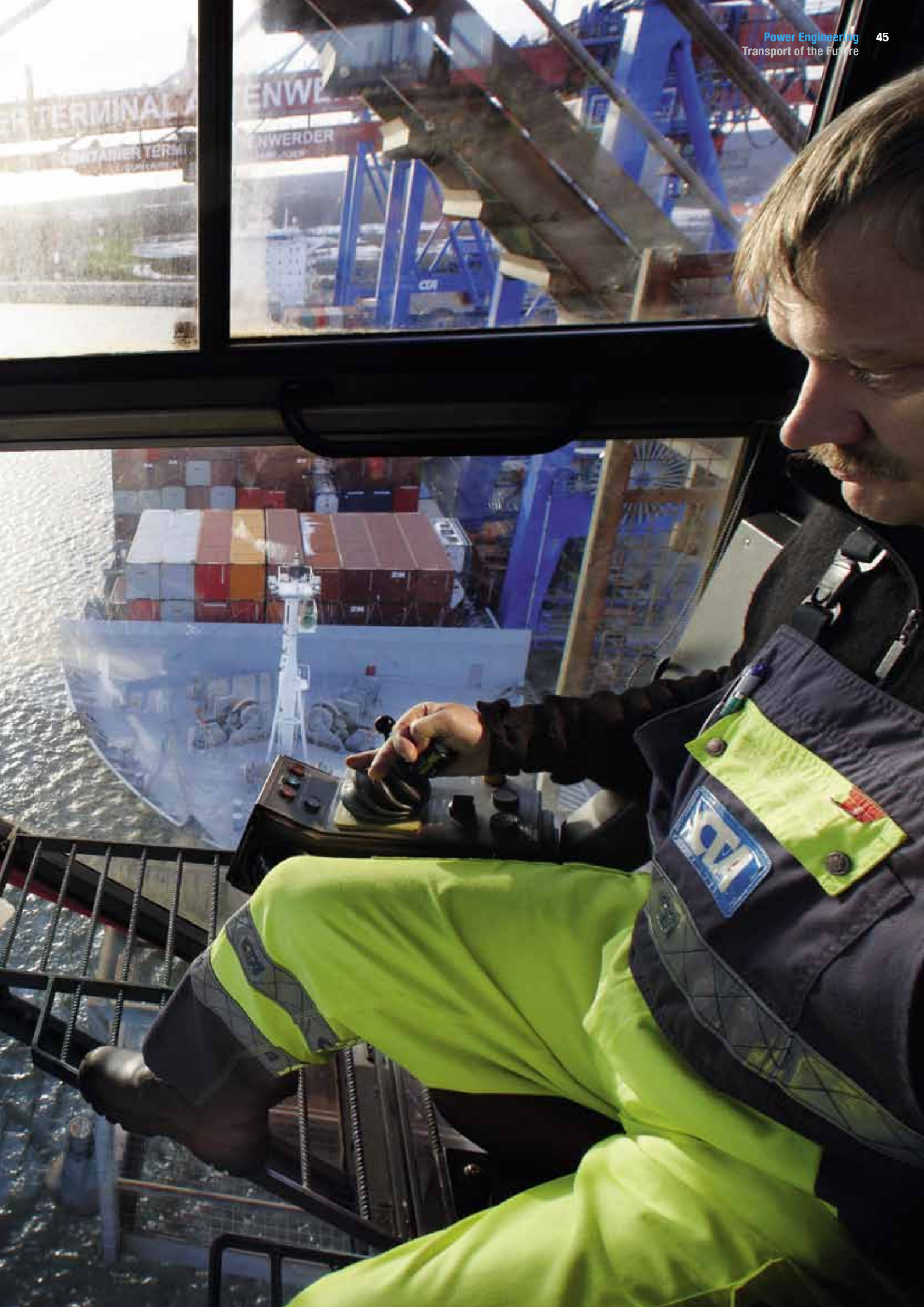


Power Engineering Transport of the Future



Moving 50% of the world's
trade with a 100-year-old idea?
We are your
MAN

About 95 percent of global trade is transported via ships — with every second vessel on the world's seas powered by an MAN diesel engine.



Power Engineering

Transport of the Future



Full steam ahead: Hendrik K \ddot{u} lb is pleased with the economic impetus.

“The economy has picked up. Our port is booming once again.”

Port Operative Hendrik Külß

Global trade pulls right up to Hendrik Külß. The 51-year-old container bridge operator supervises a bridge at CTA, the HHLA Container Terminal Altenwerder in Hamburg. Perched on his container bridge, at a height of roughly 40 meters above the Ballinkai quay, he loads and unloads freight ships from around the globe at one of the world’s most state-of-the-art terminals. Operations here are in full swing. As many as three trading vessels dock here every day—and they are “big tubs,” as Külß puts it—measuring up to 350 meters in length and 44 meters in width. Each can accommodate some 9,000 containers. There is much to do for the teams here around the clock seven days a week.

“**The economy** has picked up. Our port is booming once again,” says a pleased Külß. He lowers the spreader, a telescope frame for picking up containers, down into the hold to grab the next freight box. During the year of crisis that was 2009, this happened far less frequently. A mere four or five ships moored at the Ballinkai—in a week. Yet the pace of expediting goods on board actually continued to accelerate during the crisis, as increasingly larger ships did not want to lose their cost advantages by staying in port for extended periods of time. The crisis has not knocked the global trend off course: the growth of the global economy and increase in the world’s population continue to produce steadily rising flows of goods. Container ships, tankers and bulk goods freighters carry around 95 percent of transcontinental goods. Ships transport nearly eight billion tons of goods to all corners of the world every year.



More than half of all newly built diesel engines designated for seagoing vessels are manufactured by MAN Diesel & Turbo. Due to progressive technology, the two-stroke and four-stroke engines are cleaner than ever before. And environmental requirements are becoming ever more stringent. The International Maritime Organization (IMO) has decreed that by 2016, nitrogen emissions of maritime traffic must be reduced by 80 percent. To meet high ecological standards, MAN Diesel & Turbo has been reconditioning even decades-old engines to meet present-day specifications. Known as retrofitting, this process is one of the services offered under the MAN PrimeServ after-sales brand. In addition, MAN Diesel & Turbo’s dual-fuel

engines serve as trailblazers for the ecological progress of maritime shipping. In many liquid gas tankers of today, for example, gas evaporating from the cargo tanks is not lost but used to operate the drive engine in an energy-efficient way.

This is good news for Hendrik Külß at the Ballinkai quay. After all, he was a sea-faring man himself until 1979, which is why he sees these innovative engines as the dawning of a new age for the shipping industry. He believes that it will keep global trade coming right up to his container bridge—to both load and unload its cargo.

Power Engineering Energy of the Future

STROER

Illuminating Tower Bridge
with waste?
We are your MAN.



With an MAN power turbine
to England's largest
waste-to-energy facility
www.man-diesel.com



MAN Diesel & Turbo's steam turbines generate electrical power from energy-rich waste components like paper, plastics, textiles, and wood.





Power Engineering

Energy of the Future



Energy from waste: a clean and locally available form of energy for Harbichi Zazaria

“We sort all unwanted items, if possible, and separate them by recyclable material.”

Refuse Collector Harbichi Zazaria

It's cold, wet, and early in the morning. Frankfurt is still asleep. Harbichi Zazaria, however, has been wide awake for a good while. The young Moroccan and his team are heading for a housing complex in the city. They will be collecting bulk items today. Zazaria collects recyclable materials for the Werkstatt Frankfurt association. This socially committed company prepares the unemployed for re-entry into working life and specializes in electrical equipment as well as furniture. Since 1989, it has been collecting about 7,000 tons of waste every year with the help of 300 employees. “We dismantle and sort all unwanted items, if possible, and separate them by recyclable material,” says Zazaria. Besides wood, metals such as copper, scrap iron, and aluminum are of particular interest. “The rest is combustible waste for the thermal recovery in waste incineration plants that generate electricity and district heating,” says Christian Jungk, Head of the Frankfurt Recycling Center.

For a long time, incineration plants were considered toxic nuisances. Filter systems and processing technology have come a long way since then, however. “Waste to energy” is the process of generating heat and electricity from refuse, and it is a

concept that Frankfurt is familiar with. Steam turbines supplied by MAN Diesel & Turbo ensure efficient cogeneration. “The energy mix of the future will change,” explains Dr. Hans-O. Jeske, Executive Board member of MAN Diesel & Turbo. “When it comes to boosting efficiency in energy utilization, we can make a valuable contribution with our products.” Even today, MAN Diesel & Turbo's turbines already reach an efficiency level of up to 27 percent. “If district heat can also be sourced for apartments and buildings, the effectiveness of the plant's incineration process can be further improved, surpassing that of modern coal-fired power stations,” emphasizes Jeske.

Intelligent waste management based on the “waste to energy” principle is necessary for social, political and ecological reasons. Throughout the European Union, there are still rather major differences in waste disposal. In Germany, 48 percent of municipal waste is recycled instead of heading for the incineration plant. Yet it is merely 18 percent in France, and just 11 percent in Italy. According to the step-by-step plan laid down by the new EU waste disposal directive, only 35 percent of domestic waste with energy potential will be allowed to end up in landfills by 2016. So, 65 percent will have to be incinerated, recycled or composted. Industry experts therefore anticipate a boom for the manufacturers of waste incineration systems and their component suppliers.

A new day is dawning in Frankfurt. Zazaria and his colleagues have already loaded up the bulk items and their collection vehicle is taking them to be recycled. Getting up early for the sake of recycling is worthwhile for the young Moroccan. His trips transport him directly into the future of energy production.

MUNICIPAL WASTE IN THE EUROPEAN UNION

What happens to the refuse?

In Europe, about 500 kilos of refuse per person end up in a variety of waste containers every year. The Danes are at the top of the list with 802 kilos while Czech citizens are the role models, coming in last with merely 306 kilos. There are also major differences in the treatment of waste. Denmark has the highest incineration rate and Germany the highest percentage of recycling. In Bulgaria, all waste still ends up in landfill sites to this very day.

Source: Eurostat 2009

