

China, a Better Market with a Huge Business Potential 中国市场存在巨大商机

—— Interview with Mr. Jeffrey Ang, the Vice President of MAN Diesel & Turbo Group, the Managing Director of MDT China, and the Head of Region Asia Pacific Engine & Marine Systems

—— 访德国曼恩集团副总裁、中国区董事总经理、发动机与船运系统亚太区能力中心负责人洪金源先生

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德国曼恩集团副总裁、中国区董事总经理、发动机与船运系统亚太区能力中心负责人洪金源先生 Mr. Jeffrey Ang, the Vice President of MAN Diesel & Turbo Group, the Managing Director of MDT China, and the Head of Region Asia Pacific Engine & Marine Systems

最近几年，中国经济已经由高速增长转向高质量发展阶段，市场也由喧嚣走向平稳。面对变化了的市场，多数企业希望找到品质和成本之间的最佳平衡点，以应对“基本饱和”的市场挑战。这

一变化也被迅速传导至中国的海运市场，包括为船运企业提供机械设备的制造型企业。本刊记者近日在曼恩供应链管理（上海）有限公司采访时，其集团副总裁、中国区董事总经理、发动机与船运系统亚太区能力中心

负责人洪金源先生表示，无论是过去还是现在，德国曼恩集团在中国市场的出色表现证明，在任何市场环境下只要始终坚持将客户放在第一位就能取得成功。

总部位于德国奥格斯堡的曼柴油机与

透平集团是世界领先的大缸径柴油和燃气发动机及透平机械供应商，迄今为止，已经有超过 250 年的悠久发展历史，2015 年的营业收入约为 33 亿欧元，近两年还在持续增长。曼恩集团在全球拥有一百多家分支机构，主要位于德国、丹麦、法国、瑞士、捷克、印度和中国，大约 14500 名员工分布在全球各地，服务和产品涵盖了船舶推进系统、基于发电机的电厂和针对油气和流程工业的涡轮机组。MAN PrimeServ 服务品牌向世界各地的客户提供售后服务。在两冲程和四冲程船用及固定应用发动机、增压器、螺旋桨、燃气及蒸汽轮机、压缩机和化学反应釜等各个领域引领行业潮流。尤其是曼恩的发动机正在驱动世界贸易，其中低速发动机是集装箱船和邮轮市场的佼佼者，占有很大的市场份额，甚至可以说超过 50% 的全球贸易额是由 MDT 的发动机驱动的。在全球船运设备市场，德国曼恩集团是最受国际船运生产巨头喜欢的船运设备和定制化解决方案供应商。

在与本刊记者的交流中，温和、儒雅的洪金源先生系统而全面地阐述了曼恩集团之所以能够成为全球行业领袖的主要因素。

记者：贵公司何时进入中国市场？有哪些业务和合作项目？发展成就如何？

洪金源先生：自 1898 年我们的前身向唐山（现河北省）供应第一台活寒蒸汽发动机以来，我们已经在中国成功开展了近 120 年业务。没有几家公司能够做到像曼恩集团一样与中国维持着这样长的业务关系。

对我来说，我们最大的成功是在一个多世纪的时间里，无论时局如何变化，我们



都是推动中国经济的一部分。

在船舶领域，我们在中国有 20 家专利厂建造我们的发动机。这些发动机与欧洲生产的质量相同，但却由中国制造。我们和很多中国船厂有紧密的合作。

其中最久远的伙伴关系可以追溯到 1980 年，距今已有 35 年。第一个与中国船舶工业集团的专利合同涵盖了本地化生产柴油发动机和增压器。

我们的发电厂业务为工业客户和企业提供分布式能源发电解决方案。我们也为油气产业从油井到陆地管道运输提供高端的技术。

但我们也是个本地的雇主。今天，有超过 600 名员工在上海、北京、大连、舟山、福州、广州的办公室工作，常州的生产基地还生产压缩机、涡轮机、齿轮系统和增压器。

记者：中国是一个有 13 亿人口，又是一个消费和制造业大国，面对京城激烈的市场，贵公司遵循的是怎样的创新、发展理念？

洪金源先生：超过两个世纪以来，创

新是我们文化的一部分。在超过 250 年的企业历史中，曼柴油机与透平一直被工程和开创性的精神所驱动。我们的客户信任我们久经测试的产品品质和创新理念。

我们正努力成为一个方案提供者，2016 年我们启动了“大本营 3000+”项目。这一项目的目的是为我们公司朝低碳化和数字化的全球趋势做好准备。我们已经是世界领先的发动机制造商，而现在正努力成为世界领先的系统供应商，比如供应全套船用推进系统，在这个项目执行中我们最近宣布对 Aspin Kemp Associates 的投资，这是一家加拿大的专业公司，是全球领先的船用混合推进系统的电池集成供应商。即它的系统可以完美整合我们的发动机、电动发动机和电池贮存。

记者：在科技创新实力、设计研发水平以及服务和打造品牌形象方面有何竞争优势？请重点谈谈贵公司产品的先进性和应用范围？

洪金源先生：首先，我们是效率的领导者。我们最新的燃气发动机 MAN51/60GTS，配备两级增压器，是世界上最强劲也最节能的燃气发动机，有效率为 51%。

其次，我们是世界上最早使用 3D 打印出复杂金属部件的公司，运用于我们 MGT6100 燃气轮机产品系列。我们正在建立“加法制造的 MAN 中心”，它是一个产品和地点独立的专业中心，位于在奥伯豪森的透平机械工厂。设计专家、材料专家和生工程在“MANCAM”共同研究，将加法制造的优势扩大到其他部件和产品，比如压缩机叶片或发动机燃油喷嘴。

我们已经成功发展和调试了全球第一个油气领域的水下压缩机组。这个压缩机在海底，水下 300 米处运行，而不是用平台运行。与传统的平台上游设施或 FPSO（浮式生产、贮藏、卸载）相比，水下技术不近节省了投资成本，也提高了回收率，并且能节能减排。我们是唯一一个成功试水，并且成熟运用这一技术的供应商。这两台水下压缩机在我们的客户 Statoil 那里已经不间断地工作了超过 25000 小时。

我们帮助我们的船舶客户降低排放：在船用领域我们正在推广燃气发动机。我们的客户可以选择一系列的气体燃料，包括天然气和乙烷。基于此我们想为客户提供最大的灵活性，并同时让我们的客户符合日益紧缩的排放标准。

记者：经济学家认为，市场经济的一个重要公式是：科技成果+商业智慧=财富。



请结合多年的管理实践，谈谈商业智慧和管理艺术在企业发展中的重要价值？

洪金源先生：第一，快速而灵活。如果我们观察现在的经济，所有事物正在飞速发展。数字化的核心要义是让你的公司和业务模式有能力适应这一发展速度。所以第一要快速而灵活。

第二，接近客户，拥抱改变。新的技术带来新的业务模式，但不一定只会带来改变。如果新技术能满足早就存在的客户需求，那它才会成功。所以倾听客户需求是根本。没有一家公司能高枕无忧地相信他们将会永远一成不变地获得相同利润。时代在改变。当重大改变发生时，最好的位置是刚好比它领先一些。

第三，创新意识。在工业领域我们需要开阔的思路和双眼去迎接新的业务结构和合作模式。我们仍喜欢将“创新”认为是单一企业家需要的。但现在合作中的创新，以



轮机正在帮助能源发电减少排放，提高效率。

MAN 提供的燃气分布式发电厂正在取代火电厂；在上汽大众安亭的车间，使用了我们四台 6.9 兆瓦的分布式系统 MGT6200；产生的电力可以达到这全国最大汽车生产基地之一每年 25% 的需求；

界。鲁道夫·迪塞尔在 1897 年创造出第一台发动机的燃油效率只有 25%。今天我们的最新燃气发动机可以达到 51%。技术和工程是我们的核心，我们也一直努力寻求技术进步。

在巴黎协定中，各国领导人决定众志成城，面对气候变化。美国也许已经退出了，但其余国家，尤其是中国和德国，将继续坚定不移地携手前进。

对我们来说，这既是责任，也是机遇。我们希望帮助客户适应改变，为他们提供在低碳世界获得成功的专业知识和技术。能在这条道路上成为中国人民的伙伴，我们感到十分骄傲。

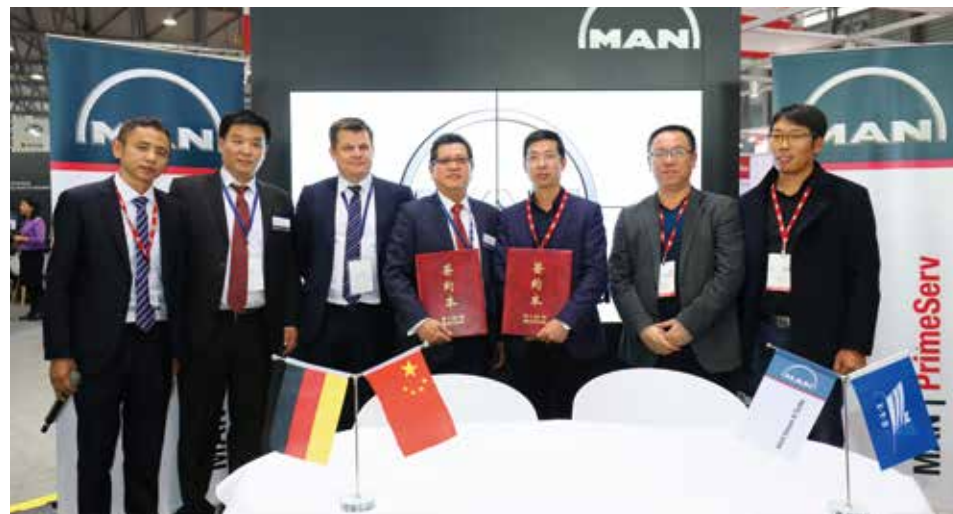
记者：中国已成为全世界最具吸引力的投资目的地并为全球经济提供活力，投资环境优越，市场空间巨大，贵公司有何新的在华发展计划和战略调整？

洪金源先生：中国已经是我们最重要的市场之一，每年占比超过 12% 的总收入。我们在这里也看到巨大的商机，希望能与中国经济更相辅相成。

在过去的百年间，我们一直是中国经济的强有力的合作伙伴。我们也是一个本地化的雇主。现在有 600 多名员工在曼柴油机与透平位于上海、北京、大连、舟山、福州、广州的办公室及常州工厂工作，生产压缩机、涡轮机、齿轮系统和增压器。

我们已经上海自贸区投资了一个保税仓库，将配备最先进的 SAP 系统，这个仓库会定位为亚太区的物流总部。我们将会更快速地将备件运输到亚太区各个港口城市。

另外，上海的战略地位也将提升到亚太区总部。今后我们将拥有更大的自主权，不断提升自我，为客户谋求更多便利。



及特定的不畏试验的文化也是创新。创造一个类似于这样的企业文化无疑是一个管理者的任务。

记者：中国政府提出了“美丽中国”这一环保概念，为此出台环境保护政策。那么贵公司在打造环保产品方面将有何种作为？

洪金源先生：我们正在推动航运能源向更环保发展，也正在推广低排放燃油。比如液化天然气和我们的双燃料发动机，为船东和运营者提供除了重燃油之外的更多选择，以此显著减少二氧化碳、氮氧化物和二氧化硫的排放。

除了燃油，我们的发动机有市场上最高效的动力和环保技术。

能源发电：我们的燃气发动机和燃气

每年可以减少 60,000 吨二氧化碳的排放；在长沙和淮安还有新的安装项目；最近在东莞和淮安都有新的订单。

记者：创造财富不是企业发展的唯一目的，而真正有意义的是企业给社会提供的服务和对社会承担的责任，那么贵公司的社会责任感主要体现在哪些方面？

洪金源先生：我们公司在成立的 250 年以来一直致力于创造更美好的世



In recent years, the Chinese economy has upgraded from speed-featured model to quality-orientated model, and its pattern has turned stable from up-roaring. Facing the changing market, majority of enterprises hope to get an optimal balance between quality and cost, coping with the challenges in such "basically-saturated" market. The wave of the change above has also spread to the Chinese maritime transport market, even fluttered the machinery and equipment manufacturers serving ship transport firms. Recently Mr. Jeffrey Ang, the Vice President of MAN Diesel & Turbo Group (MDT), the Managing Director of MDT China, and the Head of MDT Region Asia Pacific Engine & Marine Systems was interviewed by Multinationals in China (MNC) at MAN Diesel & Turbo Shanghai Logistics Co., Ltd, and expressed that MDT, proven by its excellent performance in the Chinese market, is bound to succeed as long as sticking to the principle "client first" in any market environment.

Based in Augsburg, Germany, MAN Diesel & Turbo Group has a history of over 250 years and remains the world leading supplier of large bore diesel and gas engines. Its operating revenue was about 3.3 Euro in 2015 and sustains fast growth in the following years. MDT distributes and employs over 100 branch businesses and about 14500 staffs in Germany, Danmark, France, Switzerland, Czech, India and China, and delivers quality service and products to marine propulsion systems, motor-based power plants and turbosets with oil/gas power and process over the world. It also sets up service brand MAN PrimeServ to provide after service to clients around the world. MDT has always kept the leading position in fields like double-stroke and four-stroke engines for ship and fixed applications, turbo chargers, screw-propellers, gas and steam turbines, air compressors and chemical reactors. Its engines take a key driving role in the world trade, and particularly its slow speed engines with a great market share keep outstanding



in container carrier and passenger liner markets. So to speak, over 50% global volume of trade is "driven" by MDT's engines. MDT is well accepted as a ship transport equipment and customized solution provider by international ship transports in the global ship transport equipment market.

In the interview with Multinationals in China, Ang comprehensively addresses the key factors for MDT to be the global leader in the ship transport equipment industry.

MNC: What business does your company carry out in the Chinese market? Any co-operation projects? What have been achieved?

Ang: We are successfully doing business in China since 1898 when

one of MAN's predecessor companies shipped its first piston steam engine to Tangshan (now Hebei Province). That's almost 120 years. Only a few companies can look back on such long business relations with China.

To me our biggest achievement is to be a partner of the Chinese economy for more than a century and through all the turmoil and changes that took place during that period of time

On the marine side we work with our 20 licensees in China, who build our engines. So the engines are of proven European quality,

but are genuinely Chinese products. We also work closely with a lot of Chinese shipyards.

The oldest of these partnerships date back to 1980 and has lasted for more than 35 years already. First licensing agreement with the China State Shipbuilding Corporation (CSSC/CSTC) covering the local production of diesel engines and turbochargers.

Through our power plants business we provide decentralized energy generation solutions to industrial customers and utilities. And we have close bonds with the oil and gas industry where we offer high end technology from the well to onshore pipeline transportation.

But we also are a local employer.



Today, over 600 employees work in MAN Diesel & Turbo offices in Shanghai, Beijing, Dalian, Zhoushan, Fuzhou and Guangzhou as well as in the MAN Diesel & Turbo production site in Changzhou, fabricating compressors, turbines, gear systems and turbochargers.

MNC: With a population of 1.3 billion, China is both a manufacturing and consuming country. Facing a competitive market, what innovation and development concept does your company follow?

Ang: Innovation is part of our culture for more than two centuries: Throughout its more than 250 years of corporate history, MAN Diesel & Turbo has always been driven by its engineering and pioneering spirit. Our customers trust in the tested and proven genuine quality and innovative spirit of our products.

We are on our way to become a solution provider: 2016 we have kicked off a global future program called 'Basecamp 3000+'. Goal of this program is to further prepare the company to cater the global trends of decarbonization and digitization. We are already the world's leading engine producer. We are on our way to become the world's leading system supplier, e.g. for complete marine propulsion systems. In the course of this program we have recently announced an investment in Aspin Kemp Associates, a highly specialized company from Canada which



is a global leader in battery integration for marine hybrid propulsion systems, i.e. systems, which seamlessly integrate our engine, an electrical generator and battery storage.

MNC: What are the competitive advantages in the field of technology innovation, de-sign and R&D, service and brand image? Please focus on the technology advantage and product application range.

Ang: Firstly, we are the leader in efficiency: Our latest gas engine with two-stage turbocharging, MAN 51/60G TS, is the most powerful and at the same time the most fuel efficient gas engine in the world, with an efficiency of 51%.

Secondly, we are the the first company in the world that have started to implement complex metallic components from 3-D printing in the series production of our gas turbine MGT 6100. We are currently building the "MAN Center for Additive Manufacturing," a product and location-independent expert center based at the company's turbo-machinery works in Oberhausen. Design specialists, materials experts and production engineers come together at "MANCAM" to extend the benefits of additive manufacturing to further components and products, for example

compressor impellers or fuel nozzles for engines.

We have successfully developed and commissioned the world's first subsea compressor unit for the Oil & Gas industry. Instead of using a plat-form this compressor operates on the seabed, 300m below the surface. Compared to conventional upstream facilities on platforms or FPSOs (Floating Production, Storage and Offloading), the subsea technology not only saves investment costs, but also raises recovery rates while reducing energy consumption and CO2 emissions of oil

and gas production. We are the only supplier who can offer this technology not as a pilot, but as proven and tested technology. The two subsea compressors our customer Statoil is operating have been running more than 25.000 hours nonstop already without any downtime.

We help our marine customers to master decarbonization: We are driving the switch to gas in the marine industry. Our customers can choose from a variety of gaseous fuels, stretching from natural gas to ethane. That way we are offering a maximum of flexibility while granting at the same time that our customers meet the tightening emission standards.

MNC: Economists believe in an important formula of market economy that wealth is a combination of scientific and technological achievements plus business intelligence. Please share with your years of management practice, the important value of business intelligence and management art in enterprise development.

Ang: Firstly, be fast and be flexible: If we look at the world and the economy today, things are increasingly moving at an exponentially rapid pace. At the actual heart of what is mostly referred to as "digitalization" is the ability to adapt your company and business model to that pace. So the first rule is: Be fast and be flexible.

Secondly, be close to your customers and embrace change: new technology enables new business models, but do not necessarily drive change alone. New technologies are successful if they meet a need on the customer's side that was already there, so it is essential to

listen to your customer. No company can sit back and believe they will be making the same profits from the same business models forever. Things are going to change. And when a major change comes, the best position to be in is just slightly ahead of it.

Thirdly, be innovative: as an industry we need to open our minds and eyes to new business structures and models of collaboration. We still like to think of 'innovation' in terms of single entrepreneurs. Yet today innovation occurs through collaboration, and the cu-ration of a particular type of culture that is not afraid to experiment. To create a corporate culture like that is of course a management task.

MNC: The Chinese government has put forward the concept of "beautiful China", and introduced environmental protection policies for this purpose. What will your company do in creating environmentally friendly products?

Ang: We are driving the maritime energy transition to a more environmentally ship-ping both politically and technologically:

- We are promoting low emission fuels, e.g. LNG and our dual-fuel engines offer ship-owners and operators further alternatives to HFO, delivering significant reductions in CO2, NOx and SO2 emissions.

- Regardless of the fuel used, our engines have the highest efficiency, power concentration and environmental profile in the market.

- Energy Generation: our gas engines and turbines are helping to reduce emissions and increase efficiency in energy generation:



- Gas fired CHP power plants by MAN are replacing coal fired generation

- In Anting the Shanghai Volkswagen Automotive Company Ltd. utilizes four 6.9 MW MGT6200 in a cogeneration (CHP) system.

- Produced electricity covers 25% of the annual demand of one of the biggest automobile production sites in China

- Reduces CO2 emission by 60,000 tons per year

- Further Installations in Changsha and Huai'an

- Latest wins in Dongguan City and Huaian

MNC: Wealth creation is not the sole purpose of enterprise development. What really matters is the service the enterprise provides to society and the responsibility it undertakes to society. What is your company's sense of social responsibility?

Ang: For 250 years now our company has helped to build a world that works better. When Rudolf Diesel built his first engine in 1897 it had a fuel efficiency of roughly 25%. Today our latest generation gas engine has

an efficiency of 51%. Technology and engineering is at the heart of what we do, it's in our DNA and of course the goal of any engineer is to improve things.

In the Paris agreement the leaders of the world have agreed to fight climate change. The US may have dropped out of that agreement, but the rest of the world -

especially China and Germany - are still standing strong and leading the way.

For us this means taking on responsibility as much as we see it as an opportunity. We want to help our customers to master the changes ahead and provide them with the expertise and technology they need to shine and succeed in a decarbonized

world. And we are a proud partner of the Chinese people on that path.

MNC: China has become the world's most attractive investment destination, by providing vitality to the global economy, favorable investment environment and an immense market space. What are your new development plans and strategic adjustments in China?

Ang: China is one of the most important markets for us already, accounting for more than 12% of our total revenue. And we see great growth opportunities here and want to deepen our partnership with the Chinese economy.

We are a strong and proud partner of the Chinese economy and have been so for the past century. We also are a local employer. Today, over 600 employees work in MAN Diesel & Turbo offices in Shanghai, Beijing, Dalian, Zhoushan, Fuzhou and Guangzhou as well as in the MAN Diesel & Turbo production site in Changzhou, fabricating compressors, turbines, gear systems and turbochargers.

We have established a bonded warehouse in Shanghai Free Trade Zone. Such bonded warehouse, equipped with leading-edge SAP system, will operate as the logistics center for the Asia-Pacific Region. Through this warehouse, we will more rapidly deliver the products to the ports over the Asia-Pacific Region.

Additionally, our company in Shanghai will be upgraded as the headquarters for Asia Pacific region. From now on we will have a greater decision-making power and continuously improve ourselves, providing client with more convenient services.

