2+6 HEADQUARTERS GLOBAL SALES & 80 PARTNERS FOR SERVICE **30,000** CUSTOMERS

TIAN WORLDWIDE

WORLDWIDE CONTACT:

CHINA

ASIA

AMERICA

AFRICA

AUSTRALIA

EUROPE







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ADVANTAGE Ilssue 26

TECHNOLOGY TO THE POINT





FLEXIBLE SOLUTIO

2022

Halle 15, A57

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mail.haitian.com

20/21



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TECHNOLOGY TO THE POINT

FLEXIBLE

SOLUTIONS

SMART

PUBLISHING DETAILS

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LATEST NEWS



e-Mobility

Haitian Precision provides complete solution for electric vehicles

With the subsidies from politicians and people's growing interest in climate and environmental protection, the market for electric cars is experiencing strong growth. This not only increases the demand for corresponding vehicle parts and components for e-mobility, but also the need for the (further) development of industrial equipment tailored to it.

By linking internal synergies, the Haitian Group has succeeded in driving corresponding preparations in the e-automotive industry. For example, Haitian die casting machines have been used to implement an integrated solution for oversized structural parts at the Chongqing Dajiang Millison (CDM) workshop. The solution combines riveting, stamping, welding, forging and other vehicle manufacturing processes to produce a lightweight rear floor. After casting, Haitian Precision's CNC performs the precision process on the assembly surface and removes burrs.

In addition, a customized CNC from Haitian Precision is used to manufacture the core parts, including the powertrain in the electric vehicle - consisting of motor, control unit, battery. Here, large scale solutions focus on the critical parts such as CTC (Cell to Chassis), control unit, motor housing, front and rear beams, anti-collision beams etc. To be competitive in terms of cost, quality and efficiency, automated processing along with lean supply chain is essential.

In the age of e-mobility, innovations in digitalization, modularity and lightweight construction mean the future. Haitian combines sustainable value creation and resource conservation to continue supporting the modernization of the electric car market through comprehensive solutions.

INSIDE



Think global, care local

Haitian International has redefined availability and delivery reliability.

Speed and reliability are core values of the Haitian International Group brand. The global infrastructure network of our own sites and logistics and service partners plays a key role in this.

Congestion at ports, disrupted supply chains – uncertain logistics parameters around the globe. Triggered by the pandemic and exacerbated by political tensions, the quality of supply has not exactly taken a turn for the better. With its "2+6 strategy" and developed synergies within the Group, Haitian International began to rethink logistics years ago and created alternative structures.

2+6 = efficient communication, short delivery routes, high availability

The concept is working. The "2+6 strategy" marks the pillars of the global presence of the world market leader: 6 regional headquarters (Singapore, Japan, India, Germany, Turkey, Mexico) in important sales markets where machines are built and/or

assembled, as well as 2 headquarters in Ningbo, East China and Shunde, South China, where development, production and manufacturing are carried out on an even larger scale. The heart of this decentralized Manufacturing Power is a regionalized manufacturing platform, developed across the Group under the Haitian Machinery brand. More importantly, the regional headquarters will enable the Group to create a more efficient platform for communicating with its local customers and to respond quickly to customized solutions.

The network of all production sites, application centers and service bases in 60 countries around the world succeeds in providing customers with optimum supply and support throughout the entire product life cycle. From initial delivery and onsite customizing to product experience, technical application diversity and support.

Read more

High synergies within the Haitian Group

This is possible because Haitian has evolved from

a dedicated machine manufacturer to a partner

and system provider for intelligent manufacturing

in more than 50 years on the market. Because ba-

sic principles such as material and process tech-

nologies are given priority in the in-house research

institute, and because creative platforms bundle

the interdisciplinary exchange within the Haitian

Group. The goal has always been to strengthen

the company's own innovative power and the sus-

tainable development of the divisions.

smart factory.





Today, the Group can offer processors a wide range of solutions – from a single source. In the manufacture of injection molding machines, automation, CNC machines, die casting machines and drive systems. But also in the planning and design of intelligent production lines, up to the complete

"We have built an extensive platform within the group to provide innovative power to support the sustainable development of each industry."



Zhang Jianming, visionary and chairman of the entire Haitian Group at the opening of the regional site in Singapore

Smart Technology

- ✓ Intelligent injection molding machines
- ✓ Intelligent features by Motion Plus
- Continuous development of software and hardware

While the current machine portfolio already covers almost all requirements in the plastics processing industry, Haitian International is pushing ahead with new developments of its machine series. In addition to two European machine premieres showcasing the wide range of applications for Haitian machines, Haitian International will be exhibiting for the first time intelligent machine functions that enable plastics processors to achieve additional energy savings



Highlights: very large mold area and clamping force range (4,500 to 66,000 kN), energy-efficient servo-hydraulic drive. A 350 g transport box made of regranulated HDPE mixed with "Tetrapak" recyclate is produced live.

TECHNOLOGY TO THE POINT



Ready for the future

ing of the future.

greater efficiency and sustainability.

06



SMART FLEXIBLE INTEGRATION TECHNOLOGY

Sophisticated equipment for strong competitive advantages,

The ideal image of modern manufacturing is charac-

terized by the desire for more efficiency, more reli-

ability, more productivity - but also by the demand

for more environmental compatibility, sustainability.

Digital intelligence is the key to the plastics process-

Haitian International developed sophisticated ma-

chine and system technologies with intelligent

motion and process control (Motion Plus). Sophisti-

cated means: intensively researched in cooperation

SUSTAINABLE SOLUTIONS

with leading institutions and extensively optimized

Whether with 1 machine or with 10,000 - servo-hy-

draulic or electric-hybrid or all-electric: with Haitian

and Zhafir, modern manufacturing systems can be

optimized for the future and maintained at a high

level. Also remotely: Remote Assistant and Feature

Updates by remote are already available with 4G for

China and in preparation for international markets.

in practice.







Highlights: wide range of applications, large spectrum (3,600 to 33,000 kN), excellent process stability. Specially developed for the high quality requirements of automotive and white goods. Live production of a wishbone holder made of regranulate PP GF 30.





and more efficient processes. For instance, an intelligent energy management function. Furthermore, the company will introduce other features such as intelligent process optimization, plasticizing efficiency or clamping force optimization and thereby give an outlook to the next machine generation. Haitian International's declared goal: To offer smart features as standard function at no extra charge.

Zhafir Zeres Multi Series

European premiere: electric multi-component solution as R version

Highlights: low space requirement, high flexibility for integration of automation, easy access to mold area, high flexibility for 1K or 2K.

Live produced scale housing made of ABS/TPE, incl. recycled special ABS copolymers.

Zhafir Zeres Medical Series

Electric turnkey cleanroom solutions

Highlights: integrated hydraulics (optimal for molds with core pulls), constant injection up to 500 mm/s, short dry cycle times. Live production, equipped with a Laminar Flow Box from Petek, a spring element made of PP.

Zhafir Jenius Series

Electric hybrid two-platen solution

Haitian Mars K Series

High-speed solution for packaging and thin-walled parts

Highlights: Injection up to 1000 mm/s, innovative injection unit with integrated direct pressure accumulator, superconductive quartz heating system for precise temperature control. A 25 g lightweight food container including lid made of PP is produced live with IML.

Haitian Jupiter Series

Space-saving two-platen solution for large/heavy parts

Flexible Integration

- Tube Factory/Cloud services
 Open integration via OPC UA standards (Euromap + GB/T)
- ✓ Flexible application with intelligent manufacturing ecosystem

flexible systems to quickly and easily integrate the machine into any MES. Or the other way around. System solutions from Haitian and Zhafir are dethe application solutions, which are sophisticated in and GB/T 39483.2-2020. the broad field, is a systemic openness of unprece-

Intelligent injection molding technologies offer dented dimensions: the extremely high digital connectivity (Connectivity Plus) allows our customers to be maximally flexible in their connection to automation/peripherals while remaining manufactursigned to be extremely flexible and offer open OPC er-independent. The internally designed interface is UA standards for integrating the machine into com- highly compatible with Euromap (77, 82, 83) as well plex smart manufacturing systems. At the core of as with the Chinese standards GB/T 39483.1-2020

Sustainable Solutions

✓ Increasing the energy efficiency of drive technology ✓ Industry-specific application solutions ✓ Less CO, emissions

Climate protection and sustainability are key goals In parallel, we will reduce the carbon footprint of our in industrial production, worldwide, and a responsible approach to the environment and available resources is also the focus of research work at Haitian International. We will continue to invest in the development of energy-efficient drives, improving them solutions. again and again.







NEW: MES-partner for Europe

ICON s.r.l. is our MES partner, mainly for the European market. ICON MES interacts with all kinds of machines and equipment, both new and old. Depending on the available communication protocol, it allows real-time monitoring of the production progress, process variables, work parameters and alarms. The process recipe and job data are transmitted to the machine in compliance with Industrie 4.0 bidirectionality requirements.





machines and provide efficient solutions for the use of innovative and recycled materials. Last but not least, Haitian will work even more closely with its customers and focus even more on application-specific







Connectineers for intelligent factories

Behind Haitian Smart Solutions stands an innovative team of engineers and IT experts for intelligent solutions in digitalization and system networking. Highly competent consultants from planning to complete equipment, as a turnkey partner and application coaching for the manufacturing industry.

Smart Factory, Advanced Manufacturing and Processing – powerful key technologies have grown out of the visions of the leading industrial giants, opening up new competitive opportunities for the manufacturing industry worldwide. The basis for success is the system-based networking and control of machines and peripherals – the core business of Haitian Smart Solutions.

The dynamic team is able to implement smart factories on a turnkey basis - all inclusive. From consulting and full plant planning (piping, peripherals, machines, robots and automation systems, Intelligent Warehouse Systems, Go Factory software and complete MES systems, etc.) to technical implementation, individual coaching and application support.

This means that companies in the plastics processing industry always receive pinpoint support on their way to an intelligently networked factory, depending on their needs. Hilectro robots and automation systems from Haitian Drive Systems form supporting pillars in the planning and realization of modern logistics, process and production sites.



Consistent expansion of services

Beyond the three core businesses, Haitian Smart Solutions is increasingly developing into a holistic partner for plastics processing companies. It looks like they want to compete with the expert teams from Zhafir and Haitian.

On the contrary. When it comes to production planning, we are very close to our customers' production processes. The expansion of application- and process-optimizing services is therefore only logical and consistent. But of course we are in no way competing with the resources of Haitian International. On the contrary, this results in highly synergetic effects and high-quality teamwork.

What is the approach?

First, we define the production target of the site together with the customer. Key figures such as desired output, resource availability, etc. The process variables of the machines, the tool data and the properties of the raw material used create the framework for process optimization. For example, the optimization of the flow behavior and thus the ultimate part quality. With the help of super-cloud simulation - a breakthrough in CAE simulation – we can precisely analyze the material flow and target



100%

Norms and parameters

Process optimization, improving part quality

optimizations. Once the process has been optimized, we work on improving efficiency, i.e. saving energy and resources. By networking the entire production either with Go Factory or our MES system High-Net – depending on the needs and the size of the company. We're talking about plant monitoring, scheduling and task management, quality control, process cloud storage, plant and tool maintenance, data reporting and other functions.

So Smart Solutions is becoming the smart coach for plastics processing companies in all industries?

We see ourselves as a holistic supporter, with a high level of expertise in the individual disciplines and a view of our customers' respective industry requirements. When we do management optimization, the systemic tools are the lesser part of the job. I claim that 70% of a process is the management support itself, the establishment of new systems and their maintenance and last but not least the implementation of supervisions into an efficient and intelligent production. These are all long-term and continuously managed processes for which we are 100% ready.





Improvement in efficiency, energy and ressources

"The electric Zeres fits very well with our philosophy: technology to the point for production to the point. The price-performance ratio is also unbeatable in our eyes. Our first 90-tonne Zeres has already gone through more than 6 million cycles with-out a significant malfunction." Maarten Keijzer



Maximum efficiency: the Zeres family in the production hall.

Production to the Point

A customer visit to Emperor Mouldings B.V. in Alphen aan den Rijn, the Netherlands.



Brothers Maarten and Peter Keijzer, heads of Emperor Mouldings B.V., embody a new generation of injection molders: focused, efficient and relaxed – with a new understanding of work-life balance. In the Zhafir Zeres Series, they see the best prerequisites for making injection molding processes as efficient as possible and driving production automation forward.

Growing up in his parents' injection molding business, Maarten Keijzer knew very early on that he wanted to run an injection molding company. The fact that his father then sold the business turned out to be a good decision in retrospect, as Maarten quite inevitably had to found and build up his own company. He took this step in 2019, initially alone, but since 2022 his brother Peter has been completely on board.

Both had precise ideas from the start: "No employees for as long as possible, but to bring production to the maximum, so far that we can still manage everything with just the two of us." The main products are of agricultural use; the end customers are greenhouse operators. In addition to the agricultural industry, they still supply the commodity sector and technical parts. The bottom line is that they focus exclusively on small shot weights in high volumes.

This is because highly efficient processes, "production-friendly" products and automation in places where it is worthwhile and serves the work-life balance are important to them.

About meaningful growth and scalability

Since its founding in 2019, Emperor Mouldings B.V. has grown steadily, in output, turnover, set-up. "If the demand is there, it would make no sense not to grow," the Keijzers agree. "But always with moderation and purpose." Nevertheless, growth is not generally the big goal, they say; rather, they are concerned with the "sporting challenge" of spraying the maximum number of products with the existing machines and their 2-man power. Accordingly, they have aligned their machinery and supplemented it with pinpoint accuracy. The heart of production is currently formed by five electric Zeres machines with four times 900 and once 1,200 kN clamping force (another is on order). All run with integrated controls (Success Series 7 and 11) from Sepro Robotics. The molds are equipped with external hotrunner systems from PSG, and a specially programmed error-stop function intervenes if the temperature in the metering unit is too high. This also guarantees them near-zero error production at Emperor Mouldings. Original quote Maarten Keijzer: "We've had just 1 carton of rejects so far in 2022."

Performance against rising energy costs

First certified industrial

compostable clipring

made of PLA

While the young company has come through the pandemic relatively well and relaxed, the energy crisis is having an even more serious impact on its core market, the Dutch agricultural industry. Rising energy prices are likely to bring many greenhouse owners to their knees, by next winter at the latest. "Our warehouse is full and the market is saturated for now. That means that of our machines, only two out of five are currently running. The reason for this is that the agricultural industry is suffering extremely from rising energy prices and many end customers have already announced that they are closing their greenhouses for the winter." Of course, rising energy costs are also making themselves felt in their own injection molding operations, but their stringent decision to use electric machines and the low shot weight of the small parts keep their energy consumption within limits. In any case, they optimize their injection molding processes for maximum energy savings to keep their carbon footprint as small as possible. Apart from that, they keep on working on continuous automation of production, keyword: increasing efficiency. "The electric machines are a tremendous help for us to produce in this high efficiency. Our father had hydraulic machines, he still had to ramp them up with some lead time and wait until the oil temperature was right, sort out some

When asked about concrete visions or dreams for the near future, the answer is rather down-to-earth: "Two days away from the company, but everything continues to run" - that's a good vision. But of course they are well aware of the challenges ahead and want to face them. And who knows, "maybe we'll become the smallest smart factory in Europe."



Passion for technology: Maarten and Peter rave about the Zhafir machine model made of bricks. They added robotics and peripherals to the kit.

Constantly improving processes Mark Waterreus (left, Owner of Robotech, HTIG distributor in NL) talking to Maarten (mid) and Peter Keiizei

cycles of scrap and so on. We turn our Zeres family on Monday morning and don't turn them off until Saturday night. Machines and the Success line from Sepro are an ideal match. From the first shot, production is error-free," explains Maarten Keijzer.

In his opinion, another important building block for higher efficiency is material-optimized processes, in which he gained valuable experience in his previous job at a material supplier. "Our injection units are all equipped with a shut-off nozzle, so we can maximize parallel functions during energy-intensive plasticizing. Every second saved has an immediate impact on energy costs."





ADVANTAGE A Magazine of Haitian International



Rising to the challenge

Hardcoat Technologies applies "Technology to the Point" for challenging automotive lamps molding projects with success.

> Founded in 2014 by CEO and President Nick Steffens, Hardcoat Technologies is a Tier-2-supplier of automotive lighting components located in Knoxville, Tennessee, USA. The company specializes in the challenging process of injection molding polycarbonate lenses for head lamps, driving lamps and fog lamps, which are thermal hard coated for weatherability and scratch resistance. Hardcoat Tech's products also include Light Pipes



and Carriers for the Automotive Industry. Customers in the automotive, ATV and industrial markets include SL Tennessee, Truck-Lite, Rebo Lighting and Electronics, and Hicks Plastics/Myotech.

The company's products end up in vehicles such as the GMC Sierra truck, Ram truck, Buick Enclave SUV, Chevrolet Malibu sedan and the Ford F-150 truck. In its start-up phase, the company grew 300 percent from 2017 to 2019 and from 2019 to 2022, it grew another 200 percent. The company's growth drove a 23,500-square-foot (2,183 square meter) addition which opened in 2022, next to their original facility. By 2022, Hardcoat Technologies has purchased 10 molding machines from Absolute Haitian, the exclusive distributor of Haitian and Zhafir molding machines in the U.S. and Canada. Their inventory includes seven MA II and MA III servo-hydraulic machines – the workhorse for the company – along with two ZE electric machines and one JU III twoplaten machine. "We specify smaller injection drives on larger machines to accommodate the unique features of our molds and shorten the residence time of material in the barrel," noted Steffens.

"Automotive head lamps must deliver high-impact resistance, weatherability and scratch resistance. Many said we could not produce highly cosmetic polycarbonate lenses in standard Haitian machines with general purposes screws. We have been working with polycarbonate material for 25 years," said Steffens. "With robust processes, reliable molding machines and a consistent maintenance program, we do it, achieving less than 2% scrap rates." (The company also runs acrylic and PC material using a ZE 4500 with a hardened screw to manufacture light pipes for LED lighting in high-end vehicles.)

"The price point of the Haitian machines makes them very attractive," said Steffens. "We are able to offer our customers the latest in thermal cure silicone Hardcoat technology but keep our pricing to them competitive."

"We manufacture all our own Hardcoating application equipment and tooling in-house. We purchased a 1500 Laser for fabrication and 3D printers for prototyping. Instead of 2 to 6 weeks, we can have prototyping completed in hours," Steffens noted.

The company's Knoxville location positions Hardcoat Technologies to collaborate with automotive suppliers in the southern U.S. "With Tier 1 suppliers to GM and Nissan in Tennessee, BMW in South Carolina, Mercedes and KIA/Hyundai throughout Georgia and Alabama, we are well-situated to continue our growth," said Steffens. Automotive is a hard market to break into but Steffens had relationships built

produce highly cosmetic polycarbonate lenses on standard machines with general purposes screws. But we did."

Nick Steffens, CEO and President of Hardcoat Technologies

from 17-plus years of commercial development responsibility before he started Hardcoat Technologies. "We are driven by making parts quickly and providing value to our customers. We bring experience and technical know-how. Haitian brings molding machine expertise and Absolute Haitian delivers the sales, service and parts support we demand. This has been the path to making our business a success," Steffens concluded.



Facts & Figures:

Founded: 2014

ISO 9001 Certified

Cleanroom coating environment for in-house developed hard-coating process

10+2 injection molding machines:

ZE 3600/1400, ZE 4500/1400, JU III 4500/1730, MA II 3200/1700, MA II 5300/4500, MA II 6000/4500, MA III 3800/1700, MA III 3800/1700, MA III 6000/2250, MA III 6000/2250



"The product quality is close to 100%, which is a leap in quaility!"

Zhang Yulin, General Manager of Litong

With Zhafir power: **Electric drive brings double benefit**

Visit at Litong Tools Co. Ltd.

Litong Tools Co. Ltd. specializes in the development, design, production and sales of plastic tool boxes and other storage boxes. With products exported to more than 100 countries and regions in the world, Litong occupies a leading position in the industry with excellent quality and service.

After effectively combating the epidemic at the domestic level, enterprises quickly returned to work and production, and orders lead to explosive growth. However, rising raw material prices have put a lot of cost pressure on domestic enterprises. In this case, how to reduce costs and increase efficiency has become a key issue for enterprises to achieve breakthrough

In this regard, Litong has its own unique understanding, which is particularly evident in Litong's choice of machinery. At present, Litong operates 109 Haitian injection molding machines, of which 101 are Zhafir electric injection molding machines.

Far-reaching advantages of the electric Zhafir machines

The Litong injection molding factory is a hive of activity: Hundreds of injection molding machines are closely lined up to make the best use of the production area. Demand for boxes, especially from the domestic market, is high. Zhafir machines, in particular, can be seen everywhere in Litong. Under normal circumstances, manufacturers generally believe that electric injection molding machines are more expensive than hydraulic machines and therefore not needed for such standard applications.

Litong also had such bias against electric machines initially. With the intention of testing it, Litong bought four Zhafir machines in 2014. After one year of operation, the performance of the machines has far exceeded Litong's expectations.

Zhang Yulin, General Manager of Litong, says: "We tested different parameters of the machine several times over a longer period. Finally, it was concluded that the electric motor consumes 50% less power than an ordinary hydraulic injection molding machine. In addition, the injection is much more precise, and the product quality is close to 100%, which is a leap in quality!"

According to internal calculation, Litong furthermore believes that the higher initial cost of the electric machine will pay for itself within 3 to 5 years after startup. Therefore, electric machines are undoubtedly the better choice in terms of long-term use. For this reason, starting from 2016, all of Litong's new machines have been Zhafir machines. Hydraulic machines have been gradually eliminated. With the increased use of electric machines, Litong has achieved significant improvements in product quality, production efficiency and energy consumption costs.

With increasing experience and usage, Litong has discovered other advantages of Zhafir machines: "In the past, the products we developed were often oversized. Because of the electric machines, precision is high, injection is fast, product overweight is avoided, raw materials are saved by 8%, and the average molding cycle is 5% shorter than with the hydraulic press."

In addition, the shop floor staff has been reduced by 50% and labor costs have been significantly reduced, which is an important reason why Litong is purchasing the Zhafir injection molding machine in high volume.

In addition to complete electrification, large-tonnage machines have also become a future development trend of Litong. In recent years, with the increasing application of multi-cavity and deep-cavity molds, the size of the mold box produced by Litong is getting larger and larger. Zhafir's electric injection molding technology has achieved full coverage of 400-33,000 kN, which undoubtedly provides Litong with more opportunities. The two Zeres Series 13,800 kN and 10,800 kN machines purchased by



Litong have shown impeccable performance since they were put into operation.

Focus on sustainable development

The economic market will remain difficult to predict even after the epidemic. In addition, the continuous rise in prices for goods and raw materials affects all companies in the industrial chain to varying degrees. At Litong, the consensus is that the company can only mitigate the risk of rising costs on the supply side by increasing production efficiency, further improving automation, and improving the company's fine control.

After years of practice and research, Litong has introduced a large number of Zhafir electric injection molding machines. Mr. Zhang emphasized, "Zhafir's machines are an important support for Litong's cost control and sustainable development. In the future, Litong will further expand its cooperation with Zhafir and introduce more advanced and larger production equipment."





Service to the Point

Optimal processes through competent service & support.

AVID International Molding Solutions was founded in 1986 and has grown from the original two-man operation to a full-service injection molding company with more than 200 employees. The company manufactures plastic parts for various markets, such as filtration and automotive. Haitian Mexico's support has been instrumental in moving them forward.

AVID International Molding Solutions is headquartered in Elk River, Minnesota, USA. The plant has 33 machines with clamping forces ranging from 38 to 500 tons. A second plant is located in Monterrey, Nuevo León/Mexico, with 17 machines and capacities from 90 to 600 tons. In contract manufacturing, AVID combines in-house mold making with high injection molding capacities and assembly processes to provide its customers with customized turnkey solutions. We spoke with mechanical engineer Servando Reyes, operations manager at AVID in Mexico.

Senor Reyes, what is the reputation of the AVID brand in the market?

AVID is more than just a name in injection molding, we are a reliable full-service plastic injection molder. Whether it's ABS, nylon, acetal or bioplastics, fast cycles or multi-component, engineering, mold development or value-added. Our custom injection molding is passion based on more than 35 years of manufacturing excellence that has brought many ideas to life.

How did you get to know Haitian Mexico?

We have known Haitian for years. The first contact was through Summit Plastic, and since then we have maintained an excellent business relationship with each other.

How long have you been working together?

In 2012, we bought our first machine from Haitian. In the meantime, we have several Mars and Jupiter machines, including four from the electric Zeres.

How do you rate the performance of our machines?

Highly recommended, especially if you are looking for quality and service and warranty.

What has changed as a result of your collaboration with Haitian?

The know-how and better processes. Over the

years, we have developed processes that help our customers successfully integrate even thick-walled components. Whether it's industrial applications or pressure vessels. We are able to develop processes that maximize the performance of thick-walled components.

Is there one Haitian service that you particularly value?

The on-site technical support. In addition to performance and availability, professional service is critical. We have used the technical support to optimize our applications, which has led to a very good result.

What is AVID's mission, how do you look forward to the future?

Our customers, who are in the consumer goods market, are under constant pressure to improve their products. We are committed to helping them bring their products to market better, stronger and faster. We will do everything we can to support their success.

Would you say your company has gained competitive advantages by operating with Haitian machines?

Yes, tremendously. Since Haitian has been part of the business case for our operations, our capacity and capabilities have grown exponentially.

Jalisco plant, Mexico

Power for Central and North and South America

Mexico is the second largest plastics processing market in Latin America, with dynamic development. In 1999, Haitian International exported the first injection molding machine to Mexico. Today, Haitian Mexico is one of the most renowned manufacturers in the region, known for high performance and quality.

In order to further penetrate especially the U.S. market, we built and commissioned a new plant in Jalisco, Mexico in 2021. As the first comprehensive manufacturing center with independent capacity through local production and assembly, this plant underscores our presence in the Mexican market and offers our customers unparalleled delivery capabilities. Also in terms of speed of delivery: the plant is located in the CLJ Industrial Park (Jalisco Logistics Center), the largest local logistics center.

The Mexico plant covers 91,691 square meters, equipped with large metalworking shops, a paint line, warehouses and a workshop for assembling the injection molding machine. All stages of the production line systematically interlock. The high level of automation ensures high product accuracy and at the same time ensures a high capacity of plant production: around 1,500 injection molding machines per year.

In addition, comprehensive services such as information consulting, tours and mold tests are offered.







Cooperation to the Point

Solution for Technology and Performance Enhancement: About the Successful Cooperation between Haitian and Dongfeng Nissan.

Dongfeng Nissan is a joint venture between Jap-

anese automaker Nissan and China's Dongfeng

Motor Corporation, a leading group in the construction of trucks, buses and passenger cars, as well as in the manufacture of engines and automotive components. With annual sales figures of more than 1 million vehicles, Dongfeng Nissan is a major player in the automotive industry in the People's Republic of China.

Since Haitian began intensive cooperation with this manufacturer in 2009, ten automatic production cells with injection molding machines of 33,000 kN clamping force each have already been installed at the Guangzhou, Xiangyang, Zhenzhou and Wuhan plants. The latest plant in Wuhan-Yunfeng plays a prominent role and poses great challenges to its





business partners due to the highest standards and strictest specifications at Dongfeng Nissan.

Turnkey solution for the highest demands

To ensure smooth operations from the very beginning, Haitian established a special team specifically for the Yunfeng project, consisting of senior executives from the application, engineering, manufacturing, customer service, marketing and other departments. In joint efforts, they overcame all challenges and accomplished their task even in the most severe pandemic phase. Despite many difficulties, the project goal was achieved on time.

This unwavering commitment with the goal of successful delivery was highly recognized by Dongfeng Nissan. During the final summary and appreciation conference of the Wuhan-Yunfeng project in August 2022, Haitian was awarded the "Excellent Project Manager" and "Excellent Supplier" awards.

Haitian will continue to cooperate and develop with Dongfeng Nissan in a targeted manner in the future. Last but not least, to seize the strategic opportunity to accompany and promote the development of the domestic automotive industry through high-quality solutions with more precise machines, faster cycles and higher energy efficiency.

-to-t...-dongfeng-nissar



We Care

The green guiding principle at Haitian.

Haitian International's ESG Report 2021 had already announced it, and now implementation is in operation: one of the largest production facilities, the 160,000 sqm Tongtu Road plant on China's east coast, is becoming a Green Energy Lighthouse Project being equipped with of condensate to be reused every year. modern photovoltaics.

The aim is once again to optimize energy management within the company. The installation of the first internal PV system to conserve resources is just one On the one hand, Haitian is thus supporting the of many environmental protection measures that fit together like puzzle pieces to turn it into a compre- use of green technologies. At the same time, the enhensive sustainable concept. For example, the switch tire Haitian Group is pursuing the goal of reducing to LED lighting in the plants has so far resulted in its own production costs through drastic savings in

energy savings of 60%, and the decentralized purchasing of materials (shorter transport routes, lower CO₂ emissions) is just as important as measures to reduce waste or the construction of in-house water treatment plants, which enable around 12,800 tons

Combining environmental protection and cost reduction

global drive for greater sustainability through the

bestseller (Haitian Mars Series, 2006) or through the early development of future-oriented, fully electric machine solutions (Zhafir Venus Series, 2007).

"We care" – the green guiding principle of the Haitian Group is formulated quite modestly, but the potential for successively optimizing energy and resource savings is enormous, simply though the installation of more PV systems. The TongTu Lu II PV System covering a total roof area about 140,600 sqm, will generate 25 million kWh of electricity, resulting in a CO₂ reduction of around 24,500 tons, making it the largest project in Ningbo to date. The project was completed within 3 months. And TongTu Road Plant is ultimately only one of four large plants in Ningbo. As planned, Haitian will start the similar BIPV project at Zhafir Ningbo from October 2022 and later at other 3 plants. The total investment would be around RMB 100 Mio, which will generate another 33 million kWh clean energy power for the entire company per year.

ESG REPORT

36 MWp total installed capacity

24.57 million kWh power generation per annum

24,500 tons CO₂ emission reduction per year



in Ningbo is the first factory with solar