

#### POCLAIN MAG #22 November 2024

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## Editorial

**Jiantan ZHANG** China Manager

...a market marked by deep change and uncertainty, underscoring the need for vision and adaptability

As 2024 draws to an end, Poclain is set to showcase its offering at the BAUMA construction machinery exhibition, taking place from November 26<sup>th</sup> to 29<sup>th</sup> at the Shanghai New International Expo Center in Pudong. This event is the opportunity for Poclain and the construction equipment players to present their offering, new products and applications. Beyond serving as a platform for industry collaboration, it marks a strategic moment for us to give Poclain visibility and meet new and existing customers and vendors.

In Poclain's lexicon, innovation and quality are paramount. Continuous innovation enables us to remain at the forefront amid fierce market competition. Meanwhile, the gen-Z population is growing among the construction equipment users and they value user experience and individuality. For Bauma, we are designing our booth to showcase the most cuttingedge technologies and products to align with their expectations. You are welcome to visit our booth at N4.110.

This edition of Poclain Mag highlights the innovations featured at our booth, with a particular emphasis on our new full-electric system developed in collaboration with MOTEG and EmSiSo. This groundbreaking solution is designed to power the propulsion and tools of zeroemission off-highway vehicles. We also showcase several success stories from the Chinese market, partnering with OEMs such as SDLG, LiuGong, and Chuangyuan, along with our distributor HY.

Additionally, we provide insights into the advancements

at our Shanghai plant, aimed at enhancing operational flexibility and cost-efficiency. This issue also celebrates notable achievements in 2024, including the production of our 1 millionth motor at our Yorkville, USA facility, the 75th anniversary of our valve manufacturing site in Ziri, Slovenia, and our recent Ecovadis Silver sustainability rating.

Finally, we spotlight our customers and distributors who are demonstrating the value of Poclain's technology in the field, such as Hydac's success story on a mammoth stacker reclaimer with our new MI330 in India, Waratah OM's robust harvesting heads, and Talleres Lucas, our certified repair center in Chile.

In this 22<sup>nd</sup> issue of the Poclain magazine, we review past achievements and look ahead at future growth opportunities. We bring some of Poclain's narratives to life, showcasing how the company and its stakeholders can drive the industry toward resilience and sustainability. This vision is particularly relevant in a market marked by deep change and uncertainty, underscoring the need for vision and adaptability. Åsa ESTVALL CSR Program Director

## POCLAIN IS AWARDED THE ECOVADIS SILVER MEDAL

With more than 130,000 companies rated around the world, EcoVadis is the most trusted provider of sustainability ratings. Poclain joined industry giants like Johnson & Johnson, L'Oréal, Unilever, LVMH, Bridgestone, BASF, and JP Morgan in assessing their sustainability performance. Poclain's comprehensive actions, covering environmental impact, labor practices, ethics, and sustainable procurement, have earned them a silver medal, placing them among the top 15% of companies rated by EcoVadis.

## Poclain leads the way to sustainable growth

POCLAIR

With a long-standing commitment to sustainability, Poclain has stepped up its actions, rooting them in its daily operations. The group has appointed Asa Estvall as Group CSR (Corporate Social Responsibility) Program Director, along with CSR Executive Assistant Agnès Huet and a team of CSR Champions throughout the organization. One of their early tasks was to provide EcoVadis with a detailed account of Poclain's sustainability measures, which has shown significant advancements, placing Poclain ahead of many of its peers.

Zooming in on Poclain's largest production plant, located in Pondicherry, India, carbon emissions were slashed by 160% between 2020 and 2024. This was accomplished by installing over 500 solar panels on the plant's roof, introducing next-generation energy-saving machines on production lines, and implementing heat recovery systems to maximize energy reuse. Regarding our products, our remanufacturing program ReMan is operational and running with several key accounts. We are also integrating ecodesign methods and aiming to increase the share of recycled materials for our new products.

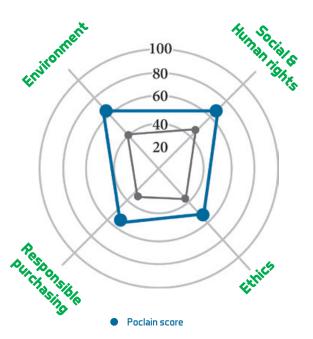
#### SILVER | Top 15%

## ecovadis

Sustainability Rating

#### APR 2024

#### ECOVADIS EVALUATION



• All companies in this sector of activity evaluated by EcoVadis

#### Poclain's commitment to the Paris Agreement

Beyond the EcoVadis initiative, Poclain has set ambitious 2030 goals aligned with the Paris Agreement:

- Reduce Poclain's absolute scope I and 2 emissions by at least 40% compared to 2022 levels. Scopes I and 2 encompass the emissions generated by the group, as well as those associated with the purchase of electricity, steam, heat, or cooling;
- Support customers in transitioning from diesel-powered to emission-free machinery using electro-hydraulic and electric transmissions;
- Reach 80% of low-carbon energy;
- Reach 99% of recyclable material for outgoing products and packaging;
- Obtain ISO 50001 energy management certification for all Poclain plants by 2026.

In conclusion, working with EcoVadis keeps Poclain on track to address both immediate environmental challenges and long-term goals. As Poclain continues to push the envelope on sustainability, it reaffirms its role as a responsible corporate citizen and a leader in the global movement towards environmental and social betterment.

## POCLAIN PUMPS PRIORITIZE CUSTOMER PROXIMITY



Vincenzo TOMEI Axial Industrial Development Manager A s new Poclain pump applications are won across the world, the group is consolidating its pump manufacturing capabilities, making them more readily available where they are needed. Since acquiring the Comer Industries Hydraulic division in 2009, Poclain has significantly improved pump design and added dedicated production lines to serve the local markets.

## A highly modular pump range

Poclain's closed-loop pump range includes five models: PMV0, PM10, PM20, PM30, and PM50 ranging from 7 ccs per rev. to 52 ccs per rev. (0.43 to 3.17 cu.in per rev.). Designed to work alongside Poclain's high torque motors, they are as modular, reliable and integrated, capable of interfacing with flanged flow dividers.

A notable feature of these pumps is their tandem mounting capability, which makes them particularly suitable for compact machines such as skid steers, compact loaders, and walk-behind tool carriers.



• USA (Yorkville) PM10

• Italy (Spilamberto) PMV0, PM10, PM20, PM30, PM50



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#### A close-to-customer pump offering

Poclain's strategy to build pumps closer to geographical markets began in 2015 with the establishment of a PMV0 assembly line at its Shanghai plant to serve the ASEAN market for walkbehind rollers.

In 2020 the Yorkville, Wisconsin plant started assembling PM10 tandem pumps for the compact mobile machinery market and saw a surge in demand due to its unique compact design and localized production.

To serve the Indian market, we are currently investing 1.3 million Mn euros to set up an assembly line in our Pondicherry, India Plant. The historical Comer pump plant in Gaggio, Italy, has been moved to a state-of-the-art facility in Spilamberto, where we have invested 9 million euro to optimize quality, productivity, and cleanliness, and bring together the operational and R&D teams.

Further investments are underway in Shanghai to extend the pump range to PMV0, 10 and 20 with a new assembly line.

Spilamberto (Italy), Yorkville (USA), Shanghai (China) and Pondicherry (India) - these four locations share the same processes and level of excellence for pump design and manufacturing. Today Poclain can address any medium duty pump need around the world in a short timeframe, and we expect to double our output by 2030, meeting the growing global demand for advanced pump solutions.

## **I MILLION MOTORS IN USA**

Since its establishment in 1978, Poclain Inc. has experienced steady growth. Our French brand has become a trusted name in key North American applications like skid steer loaders, directional drills, and combine harvesters. In recent years, we have invested \$25 million to expand capacity and upgrade our processes, leading to a 50% increase in output. We have reduced our lead times and achieved a significant milestone: the production of 1 million motors. Our dedicated team is at the core of our success, and we take pride in maintaining exceptionally low turnover. Here, some of our team members share their most memorable experiences at Poclain Inc.



#### Mark Debruine 34 years with Poclain Regional Sales Manager

Poclain's collaboration with Vermeer started in 1992. I was calling on them and it happened to be the first time Poclain provided a Poclain shirt to a salesperson. As I was walking through plant 6, I passed a cubical where two design engineers were sitting. They saw my shirt and said "Hey Poclain guy! We just got off the phone with RexRoth". I stopped and said hello. I asked them how we could help, and it turned out they were going to build a directional drill. They explained how the machine worked, and we began to discuss the drill rotate circuit of a machine I had not heard of before.

At the first meeting they defined the torque required. At the second meeting, we discussed the motor rpm needed, and it turned out they needed to hit both full torque and full rpm. It is what we call corner horsepower, and you cannot push one motor to do both.

They added that there was a pulling force that exceeded our bearing capacity. So I proposed that we use two motors to handle the horsepower for the drill rotate circuit and Vermeer build a gearbox that would interface with two motors and handle the axial load of the thrust / pull back circuit.

The Vermeer HDD gearbox was born. Over time Poclain got the motors on the thrust / pull back circuit as well. As Vermeer introduced new HDD models, I worked with them to apply the same concept with different size motors.

The shirt I had on in 1992 has spurred an amazing collaboration between Vermeer and Poclain. I wear a Poclain shirt every time I visit a customer because it's a great way to meet new people and be easily recognized.

#### **Earle Jacob** 20 years with Poclain Machining Supervisor

There was the 30-year anniversary of Poclain France in Verberie. I went there with four of my colleagues. It was awesome because there were colleagues from the Slovenia, China, India, Italy and Czech Republic plants. There were also members from the Bataille family, distributors from England and Germany, customers and vendors. It was very interesting to hear the customers ask specific questions and mingle with Poclain staff from every location and job function. I was especially impressed with the Verberie plant and surrounding facilities.





#### **Joe Iberl** 14 years with Poclain Applications Engineering Manager

In March 2012, I had the privilege to visit the French Alps very close to the Poclain piston plant to ski with a group of my colleagues from around the world, many of whom I still work closely with today. Without Poclain I would have never had this opportunity for such a unique and unforgettable teambuilding event, and I am thankful that I could be a part of this special occasion. Thank you, Poclain!

#### Ben Ocasio 19 years with Poclain Dojo Trainer

Throughout my 19 years of working at Poclain, I have had the privilege of working in various capacities, from an operator and service operator to a logistics agent. Each role has provided me with a unique perspective on the intricacies and dedication required to maintain our high standards of quality and innovation. I am excited to pass on the knowledge and skills I have acquired over nearly two decades to the next generation of Poclain employees. My goal is to instill the same level of dedication, attention to detail, and passion for quality that has been the cornerstone of our success.



#### **Phil Hempel** 18 years with Poclain Quality Manager

I started out on the assembly line, that's where the relationship with the team started. We have so many long-term employees who are now in key positions, that makes feel me very proud.

Teamwork. I cannot pinpoint only one event. We worked together and that's how we were able to get to the millionth motor. When you work with your colleagues more than you see your family, it becomes your second family.

#### Sean Langley 20 years with Poclain AMINC Supply Chain Supervisor, Lean Logistics

When we first launched the ML product line in 2003, we had a 100% recall with Caterpillar. During this time, to keep the Caterpillar production lines running, we worked 28 days straight. I was a material control supervisor, a new position for me at the time. We worked long hours, weekdays and weekends. We expedited shipments on the weekends and at night. It was very intense for a month. It was certainly challenging but for me these are motivating moments, when people come together.



#### Dave Fechner Assembly Supervisor

It is amazing to see the growth. At the beginning, we barely occupied half of the former building and there was only one assembly line. At the time we were producing 50 different motors. Now we produce 50 different motors on any given day.

#### George Knezic 17 years with Poclain, District Sales Manager

To me the amazing thing is the great knowledgeable people. I am advocate of sales growth and it's been good. We have challenges, we are not perfect, but we address them, and it's all about growing.







### POCLAIN VALVE SITE CELEBRATES 75<sup>TH</sup> ANNIVERSARY

**7**<sup>5</sup> years ago, in September 1949, the Kladivar service workshop was established in Ziri, Slovenia. It gradually developed into a hydraulic component and system provider for mobile and industrial markets. In 2007 it was acquired by Poclain and became the group's valve competence center. Today the team of 280 designs, sources, produces and markets valves for the most challenging heavy-duty applications on the market.

## Poclain's valve offering is divided into two main categories

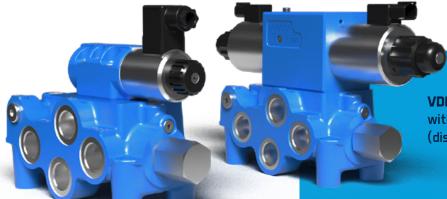
The first category is the motion control range. It targets wheel drive applications including traction control valves, freewheeling valves, directional control valves, exchange valves, and combo valves that can integrate several functions in one single housing. The motion control range also addresses tool applications, with swing drive valves, selector diverter valves, and multifunction valves.

Alongside the motion control range, we offer brake valves to control power brakes on off-road vehicles like tractors, motor graders and wheel loaders.



On the 20th of September 2024, the team united to celebrate the anniversary and was introduced to Petr Sobola, the new site manager. The teams also joined workshops to brainstorm on strategic topics that will drive the company's growth in the coming years: upcoming product developments, enhanced quality processes, voice of customer and health and safety measures. The celebrations closed with the inauguration of the new canteen, a token to the company's growth and the bright prospects that lie ahead.

## NEW AND IMPROVED POCLAIN FREEWHEELING VALVE



VDF-H15 with KV6 pilot valve (dis)engagement on static machine

Poclain's VDF H15 freewheeling valve has been a reliable solution for OEMs worldwide, in applications such as motor graders and combine harvesters. This valve enables rapid engagement and disengagement of Poclain's motors at the flip of a switch, allowing on-demand allwheel drive activation in challenging ground conditions. The introduction of a cast valve body, effective end of 2024, will enhance manufacturing efficiency and improve flow capacity.

#### Application

The VDF H15 valve, when paired with Poclain's MS wheel motors, forms part of the AddiDrive system. This solution provides a lightweight, no-drag alternative to traditional mechanical all-wheel drive systems. It is applicable in full hydraulic transmissions (e.g., sprayers, combine harvesters, grape harvesters) and mechanical transmissions that require additional traction on rough terrains, such as motor graders and trucks.

The new VDF H15 valve is designed to boost machine efficiency and driveability. Its adaptability and upgraded features make it an ideal choice for OEMs seeking to upgrade their current systems or integrate it into new machines.



#### ALEŠ NOVAK

Product Portfolio Manager at Poclain hydraulics VDF-H15 with KVIØ pilot valve (dis)engagement on-the-fly

## The VDF H15 freewheeling valve has enhanced features

· Up to 500 bar (7,200 PSI) pressure;

- Reduced pressure drop compared to the existing valve.
  Gain of 2 bar at 150 I/min (29 PSI at 40 GPM), resulting in improved system efficiency;
- Higher flow rate. The new valve supports up to 150 lpm (40 GPM) capacity;
- · Lighter construction;
- Two pilot valve sizes: Large pilot valve for machines that engage and disengage all-wheel drive on-the-fly;
- Small pilot valve for machines engaging and disengaging when the machine switches between modes while idle;
- Backwards compatible with the previous generation (same mounts and ports)

## LEADING LIUGONG GRADERS PERFORM WITH POCLAIN ASSIST DRIVE

Guangxi LiuGong Machinery Co., Ltd. is one of the top 500 manufacturers in China and is regarded as a leader in China's construction machinery industry. Since the launch of the first wheel loader in 1966, LiuGong has grown into a diversified construction OEM with an extensive product line including excavators, wheel loaders, motor graders, rollers, pavers and mining trucks. We talk to Li Jian, LiuGong loader International Business Director and General Manager of grader business, about the group's development and collaboration with Poclain.

#### LiuGong a prominent Chinese manufacturer of loaders and graders

With more than 30% of sales overseas, LiuGong loaders are number one in China. The factory was established in 1958, and the first Z435 wheel loader was manufactured in 1966, which paved the way for independent research and development and filled in the gap in China's loader market.

LiuGong's motor graders also hold a significant place in the Chinese market and are expanding internationally. The product line is diverse, catering to a variety of needs and providing advanced technology, efficient power, and hydraulic systems. These graders are designed for efficiency in complex conditions, featuring intelligent control systems for automated operation and remote monitoring. They are built to be durable, capable of working long hours in harsh environments, and with a focus on environmental protection and energy efficiency.

#### Poclain assist drive system improves LuiGong grader performance

LiuGong's graders integrate Poclain's front wheel assist, featuring control valves and wheel motors. The MS motor improves the gradeability and off-road performance of the motor grader, and the VDF freewheel valve enables to adaptively switch between the work and the freewheel travel mode, which is more efficient and environmentally friendly.

Talking about why he has chosen Poclain as his partner, Li Jian explains, "Poclain is the leader in low-speed hightorque motors, and they have helped LiuGong greatly improve their technology. Their wheel motor is compact and easier to integrate into the machine; it does not need to be paired with a gearbox, so there is less maintenance and low energy consumption. The freewheel valve provides instant engagement and disengagement to improve operational efficiency. It is durable and is a proven hydraulic solution that is well recognized in the market, which shortens our development time."

As the market becomes increasingly competitive, LiuGong hones in on high-quality and sustainable products. They are focusing their future development for loaders and graders on smart control systems, remote monitoring, and unmanned operation in high-risk areas.



## FENCING GOES PRO WITH POCLAIN-POWERED PROTECH



Nicolas JAMERON PROTECH Machinery Director

Driven by safety and productivity concerns, fencing is increasingly carried out using self-propelled machinery. Landowners with vast expanses of land are outsourcing the task, and contractors, who rely on high output for their revenue, increasingly favor the self-propelled models. PROTECH Machinery, based in Gloucester, U.K., is expanding its lineup of self-propelled tracked machines, and has selected Poclain for its hydraulic drive systems.

#### PROTECH launches fence post driving machinery

In regions like the U.S., New Zealand, and Europe, where forest and cattle owners need to fence vast areas of rugged terrain, traditional post driving required two people and was often slow, especially when the rocky ground required drilling. Sensing that there was no streamlined solution on the market, PROTECH's founders started producing fence post driving implements in 2003 and shifted to tracked machines a decade later. The tracked models gave PROTECH complete control over the supply chain and machine performance and enable faster fencing with just one operator.

Fence post driving machines are probably among the most niche on the off-road ag machinery market. Working closely with fencing contractors, PROTECH have designed a highly versatile machine integrating a slew of features: an auger for rock drilling, a fence decoiling system, a post loader, and extendable tracks. They fit into a compact envelope, with the smaller models weighing 2.5-tons to comply with European towing regulations.

#### Compact and reliable Poclain motors are the perfect fit

PROTECH 's range, from the 2.5-ton EVO COMPACT to the 6.5-ton EVO 3, features a Poclain transmission with a tandem PM pump and two MS motors. The auger implement is also powered by a Poclain motor. "We needed rugged motors to access remote areas across creeks, rocks and soft, muddy terrain. The Poclain motors are perfect for the job. Their high torque at low speed provides the consistency the operator needs to drive the posts safely and precisely. And as the MS motor is highly modular, we were able to configure it to perfectly match our machine requirements. We also appreciate the team's local support for prototyping and aftersales, and it's great to rely on their international network to service machines in our overseas markets." says Nic Jameron, PROTECH Machinery Director.

With a strong foundation in innovation and a commitment to performance, PROTECH Machinery, powered by Poclain's dependable hydraulic systems, is well-positioned to expand their business worldwide, setting new standards for efficiency and reliability in fence post driving.

## POWER YOUR OFF-HIGHWAY VEHICLE WITH POCLAIN'S FULL-ELECTRIC SOLUTIONS

100 %

**P**oclain continues its endeavour to drive offhighway machines using the most efficient technology, while addressing today's emissions requirements. Starting in 2022 with e+h electro-hydraulic transmissions, we are adding full-electric solutions to our offering.

Benjamin L'HÉNORET Electromobility Marketing Manager

#### Poclain pairs up with e-mobility experts

To support our customers in developing zero-emission transmissions with the performance they have come to expect from our hydraulics, we have paired up with two leading players in their respective specialty. In 2022 we acquired EMSISO, an inverter specialist, followed this year by a majority share in MOTEG, a German manufacturer renowned for its synchronous permanent magnet e-motors. EMSISO contributes its expertise in power electronics and control algorithms, while MOTEG's e-motors deliver high power density and optimal efficiency.

The EMDI

inverters

With its team of 100 experts, Poclain, EMSISO and MOTEG work in synergy to enable OEMs to migrate seamlessly to zero-emission vehicles. This collaboration offers custom-designed transmissions and auxiliary drives that blend decades of experience in off-highway applications, robust software development, and modular solutions to meet application requirement.

## Full-electric offering starting in 2025

Starting in 2025, Poclain plans to offer full-electric transmissions supplying a continuous power ranging from 5 to 40 kW for off-highway machines in low or high voltage (up to 850V DC). Future developments will extend the range to 100 kW. By partnering with Poclain, OEMs will be able to kick start their zero-emission offering and equip their vehicle with safe, compact and efficient electric solutions for their propel and auxiliaries. Our solutions are fit for all ground conditions and sized to meet their duty cycle requirements.

#### The MMA electric motor

MMA consists of water and aircooled permanent magnet synchronous motor (PMSM) and was developed especially for mobile applications in low and high voltage. In the development of this motor series, the emphasis was placed on determining the optimum between power density, efficiency, noise and cost.



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## OFFSHORE WIND FARM: DOUCE HYDRO CHOOSES POCLAIN

**P**oclain supports Douce Hydro, a recognized hydromechanical specialist in the offshore and renewable energy sectors to drive the winches for the installation of wind turbines.

An offshore wind farm is set for development in Normandy, France, by 2025. The farm will produce enough electricity to supply 630,000 residents. Douce Hydro, a French company, has provided two custom-made winches dedicated to the installation of 64 wind turbines. These winches, designed for retrieving an umbilical cable aboard a service vessel, are equipped with Poclain's MI330 hydraulic motors.

## Douce Hydro: A specialist in large-scale projects

As a manufacturer of custom solutions across various industries, Douce Hydro is no stranger to large-scale challenges. Douce Hydro is especially prominent in the offshore, marine, renewable energy, and civil engineering sectors.

The company has already been involved in many impressive projects, including the Singapore offshore wind farm, the Three Gorges dam in China, and the Pierre Mauroy stadium in Lille, which hosted basketball events for the 2024 Paris Olympics.

For this project, Douce Hydro teamed up with SA Joly, a specialist in the design and manufacturing of metal reels, as well as with Poclain for the drive. The expertise of each company allowed them to tackle technical challenges while meeting tight project deadlines. *"Poclain embarked on a race against time to deliver the four motors,"* says Pierrick, an Application Engineer at Poclain.

## Four 40,000cc MI330 Motors for the service vessel's winches

The 6-meter-wide winches are installed on each side of the vessel, enabling the winding and unwinding of a 60 cm diameter umbilical cable on a 6-meter diameter spool. The cable supplies oil, electricity, and control signals to a 2,000-ton windmill installation tower, which is supported by Douce Hydro cylinders.

Poclain's motors power the winches, which handle a total weight of 30 tons. The MI330, with its direct-drive displacement ranging from 26,690 to 40,000 cc and a maximum torque of 200,000 Nm, perfectly meets the needs of these large-scale winches.

*"This is the first time we've handled rotary motion and integrated motors of this size,"* says Christophe Burgun, Deputy General Manager of Douce Hydro.

In July 2023, Douce Hydro contacted Poclain, and the MI330 hydraulic motors were produced and delivered in record time.

#### Among the first four offshore wind farms in France

The service vessel, equipped in Rotterdam, is working on the Courseulles-sur-Mer wind farm in Normandy, one of the first four in France. This 64-turbine wind farm will generate 450 megawatts to power 630,000 homes. It is expected to be operational by 2025.

This project adds to Douce Hydro's proven history of large-scale ventures. The company is currently involved in hydroelectric dam projects in Canada and France.



## Douce Hydro: A global leader in hydraulic cylinders

**Christophe BURGUN** 

Deputy General Manager

Based in Albert, in Northern France, Douce Hydro has established itself as a global leader in the design and manufacturing of custom hydraulic cylinders. Douce Hydro tackles mega-projects with their unique manufacturing and repair capabilities, offering cylinder diameters up to 2.4 meters and handling capacities of up to 80 tons, across a 24,000 sqm highly integrated production area.

Douce Hydro is part of the FIDH group, with four production sites and two commercial subsidiaries, all dedicated to hydromechanical applications across various sectors. In 2024, the group is expected to generate a consolidated revenue of 30 million euros, three-quarters of which are from projects overseas.

The family-owned company, founded in 1950, will celebrate its 75th anniversary next year.

## AILI'S BREAKTHROUGH WITH POCLAIN BRAKING SYSTEMS ON ELECTRIC LOADERS

A ili Intelligent Control, founded in 1991, has established itself as a significant player in China's electro-hydraulic transmission market. Over the years, the company has expanded its operations nationwide, boasting 23 subsidiaries and a diverse portfolio of leading global hydraulic brands, including Poclain Hydraulics. Aili and Poclain's developments on the Chinese territory are tightly entwined, as one of Poclain Beijing's first engineers, Qian WANG, later joined Aili and championed the brand in his new organization.

#### Aili wins Outstanding Contribution Agent award

In 2022, Aili received the Outstanding Contribution Agent award from Poclain, recognizing their significant achievements in converting numerous applications to Poclain drives across various sectors such as road construction, railway building, mining, tunnel boring, agriculture and manufacturing. Aili's extensive contribution has been pivotal to Poclain's growth and recognition in China. The success of their collaboration is rooted in a shared culture of technical excellence through continuous learning, providing high value-added tailored system offerings, and maintaining close customer relationships. *"In the early stages of our partnership, both Aili and Poclain were aware of the opportunity lying in China's infrastructure investments, so we strived to deepen our cooperation"* says Mr Qian Wang [Aili group Chief Engineer].

The Chinese market, known for its colossal machines working long hours in harsh environments, has seen Aili excel with a team well-versed in both application specifics and Poclain technology.

## Aili introduces the Poclain brakes to the electric loader market

Aili's expertise is exemplified in the Shangdong province, an area dense with construction equipment OEMs. Here, Aili approached an innovative OEM developing premium electric wheel loaders. The manufacturer values reliability for its components, especially the braking system. Aili proposed Poclain's VB3 brake valve, which features a bilinear performance curve. It was customized to perfectly fit the need of the loader operator. The VB3's bilinear curve provides fine and accurate braking at low speed, and robust and responsive braking in case of an emergency. The two distinct braking behaviors are more economical and comfortable for the operator.

As the Chinese growth slows and new technologies such as electric vehicles and autonomous machines emerge, the close partnership between Aili and Poclain is key in providing unique value-add to OEMs, who can in turn promote the advanced performance of their machines.



**Qian WANG** Aili group Chief engineer

## POCLAIN AND HUNAN CHUANGYUAN DRIVE INNOVATION EXCELLENCE IN RAISE BORING MACHINES

unan Chuangyuan High-Tech Machinery Co., Ltd. was established in November 2012. It is a leading domestic provider of mining solutions integrating mining processes, intelligent equipment, and centralized control platforms for autonomous operation. After years of development, Hunan Chuangyuan has formed a comprehensive business structure covering raise boring machines, mining equipment, intelligent mining system solutions, and engineering consulting. We talk to Mr. Wang Yi, the founder and chairman of Hunan Chuangyuan about the company's growth and partnership with Poclain.

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## The initial motivation for entrepreneurship

Mr. Wang stated that freeing miners from harsh and dangerous environments was his initial motivation for starting the business. The company focuses on technological innovation as its core competitive advantage and is committed to making meaningful contributions to society. Since its establishment in 2012, the company has experienced many important milestones in its growth process. Mr. Wang believes that the key to a company's success lies in a long-term vision and a sense of mission.

#### Key factors in Chuangyuan's development

Mr. Wang emphasized two key factors in their development: Being unique and being the best. Do what no one else has done before. The national manufacturing industry's R&D spend is 2.34%, while Hunan Chuangyuan's annual R&D spend represents more than 8% of its revenue. The company focuses on solving practical issues related to mining safety, environment, efficiency, and cost through innovation, launching more than ten new products each year. Hunan Chuangyuan has for instance invested manpower and capital in artificial intelligence

and intelligent manufacturing for raise boring machines and unmanned driving technology.

#### Cooperation with Poclain

Since 2015, Hunan Chuangyuan has been cooperating with Poclain to develop raise boring machines, and the collaboration between the two parties has intensified over time. Currently, Poclain provides Chuangyuan with customized high-torque motors and freewheeling systems suitable for raise boring machines with drilling diameters ranging from one to seven meters.

## Why choose Poclain solutions?

Mr. Wang explained that intelligent raise boring machines require high torque, fast, and appropriately sized power drive units. The high-speed motor and gearbox combination cannot meet the requirements in terms of reliability and Wang YI Founder and Chairman

size, and the gearbox needs regular inspection and maintenance. Poclain's products are very reliable, with excellent performance and they are backed by a professional team. The customized products used by Hunan Chuangyuan have had almost no failures in ten years. High reliability and efficiency bring high satisfaction to end users.

## Future development of Chuangyuan

Hunan Chuangyuan's multiple projects have won the National Science and Technology Progress Award and received support from national key projects. The company plans to go public within the next two years and launch more key projects in the next three to five years, including intelligent mining projects, to continue maintaining its leading technological advantage. As Poclain China accelerates its localization production plan, Hunan Chuangyuan hopes to continue deepening the cooperation between the two parties.



### CUTTING EDGE WARATAH OM OPTIMIZES TREE HARVESTING WITH POCLAIN

Nestled in Joenssu, Finland, the forest capital of Europe, Outokummun Metalli released their first harvesting head in 1984. Twenty years later, they sign a joint-venture agreement with John Deere Forestry and establish the Waratah OM brand, a leading name in the forestry industry. Since 2001 Waratah OM has been using Poclain motors to power its harvesting heads. We talk to Joni Turunen, their Managing Director, about the collaboration and their latest developments.

#### Poclain: What is your main market and what do end users require today from their harvesting heads?

**Joni Turunen:** Our main market is Europe, and more specifically Finland and Sweden. Northern Europe's timber industry is mature. Its demands revolve around enhanced productivity, ease of use, durability, high uptime, and low CO2 emissions from harvesting equipment.

#### Poclain: How have you addressed these requirements?

J.T.: Pressure drop is critical on harvesting heads, as the harvesting head motors are installed 8 to 10 meters away from the pump. We worked with Poclain to mitigate the pressure drop by increasing the motor's volumetric efficiency, and they designed the High Flow and Optiflow distribution modules. We started integrating them on our medium and large harvesting heads in 2020.

We also offer increased circuit pressure as an option on the larger heads. These modifications have enabled us to increase efficiency and reduce emissions.

#### Poclain: Your harvesting head catalog features two and four-wheel drive models. How are they used?

J.T.: Our two-wheel drive H200 series is designed for handling crooked trees and hardwoods, offering compactness and agility. On the other hand, the firmer grip and faster operation of the four-wheel drive H400 series is preferred in Nordic countries, where straight spruce and birch trees prevail.

More sustainable and productive,



cut-to-length tree harvesting continues to gain market share globally. Waratah OM's collaboration with Poclain and their focus on innovation and sustainability demonstrate their commitment to meeting the evolving needs of the forestry industry. Sanjay MODI Head of Service at Hydac India

Stacker reclaimers are essential for handling coal and ore stockpiles in ports, power plants, stockyards and steel plants. The bucket wheel, located at the end of the boom, handles thousands of tons of raw material per hour, and requires behemoth torque - a niche traditionally dominated by Hagglunds motors. Hydac India and Poclain are challenging the solution in India with Poclain's new MI range. They are powering a stacker reclaimer in Orissa, Eastern India with an MI330.

#### Hydac India introduces high displacement Poclain motors to the Indian mining industry

Hydac India, headquartered in Navi-Mumbai, is a subsidiary of Hydac Group based in Germany. It has a comprehensive product portfolio including filters and accumulators, electronics and valves. They design hydraulic systems for industrial and mobile hydraulics, catering to various industries such as steelmaking, machine tools, off highway equipment, agricultural machinery and renewable energy. In 2017 the Hydac India team initiated and designed an application using Poclain motors. Their first joint application involved a power plant and mining railway dumper driven by MS35.

### POCLAIN AND HYDAC INDIA MAKE HEADWAY ON STACKER RECLAIMER APPLICATION



#### Hydac India wins Stacker Reclaimer Project

The Hydac India team learned that one of their customers had purchased a partially built stacker reclaimer that needed revamping. They helped them calculate its mechanical and torque requirements, which amounted to 200,000 Nm. Poclain convinced Hydac India to propose to drive the bucket wheel with a new MI330 in place of the traditional Hagglunds motor. Hydac India through its team's engineering and hydraulic expertise and benchmarking between the two solutions convinced the customer that Poclain's MI330 was more competitive and offered shorter lead times. The MI330 has been successfully installed and is now running on the machine.

Poclain's MI330 motor is poised to become a major player in the stacker reclaimer industry, offering a dependable alternative to established motors. The success in the project serves as a promising indicator of future market penetration and wider adoption of Poclain's MI range for similar applications.

## CHILEAN DISTRIBUTOR TALLERES LUCAS ADOPTS POCLAIN'S eSHOP



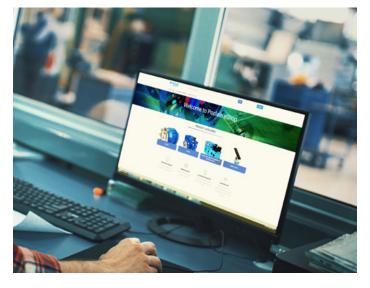
Ranked number one globally in lithium reserves, along with significant amounts of copper, iron and molybdenum, Chile also has over 2 million hectares of planted forest for timber. Mining and forestry combined represent hundreds of Poclain motors, working intensively in harsh conditions. Talleres Lucas is Poclain's distributor and certified repair center for Chile and Peru. Francisco Dittborn, the company's CEO, shares his experience in Poclain aftermarket and the company's transition to Poclain's eshop for parts and motors.

#### Talleres Lucas steps up its sales with first class hydraulic service

Founded over 60 years ago by Francisco's father, Talleres Lucas has significantly advanced its technical expertise under Francisco's leadership. The company has evolved from traditional parts retail to a proactive partner focused on minimizing machine downtime. Whether it is a harvesting head or a drill rig, the sales engineers know the brand and model number of the hydraulic component the operator has an issue with. They have an extensive inventory and a team of qualified mechanics to fix the issue rapidly.

#### Talleres Lucas enrolls in Poclain's eshop

Since the beginning of 2024 Talleres has enrolled in Poclain's eshop for online orders, accessing 30,000 part numbers and streamlining the ordering process. The innovation allows Talleres sales engineers to bypass traditional logistics channels, saving valuable time and ensuring efficient service across different time zones.



Francisco emphasizes the partnership with Poclain, noting their commitment to reducing lead times and enhancing service. With this collaborative approach, Talleres Lucas is poised for continued growth in Chile's competitive market.

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