

CASE STUDY

\
MORE THAN 20%
PRODUCTIVITY
INCREASE FOR
BRAZILIAN LOGISTICS
COMPANY WITH
THE NEMAX GRAB





\ ABOUT VLI PECEM

VLI is one of Brazil's largest logistics companies. VLI's interconnecting railways, terminals and ports provide the best conditions to efficiently serve Brazil's main regions that produce steel, agricultural and mineral products. Through innovation, VLI always seeks to serve its customers best.

The customised logistics solution at the VLI Portos PECEM site connects the primary steel-producing states - from the harbour to the factory. Paulo Sérgio Ribeiro Conceição has been working for VLI for 20 years and currently holds the position of Specialized Port Operations Technician at the Pecem site. He specialises in bulk material handling. He is responsible for team training, maintenance and operations.



PAULO RIBEIRO

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SPECIALIZED PORT
OPERATIONS
TECHNICIAN

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"We changed the whole concept
of the harbour..."

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the crane's potential is lost."



INTRODUCTION

Years ago, the Pecem harbour operated two continuous ship unloaders - one for each pier. When VLI took over the logistics from the steel mill nearby, they realised they would not be able to meet the productivity needed to serve the customer best. Therefore they decided to work with mobile harbour cranes and grabs in combination with hoppers.

Paulo Ribeiro, Spec. Port. Operations Technician says: “We changed the whole concept of the harbour. And because we weren’t just looking for a product but a complete solution, we did a lot of market research. We understood that to achieve the highest productivity, we needed to look for a high-quality grab solution that enabled us to use the cranes at their full capacity. With a poorly performing grab, the crane’s potential is lost”.

In VLI’s research for the best references in the local and European markets, Nemag was one of the suppliers that came out well.

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THE CHALLENGE

LOOKING FOR THAT PERFECT
COMBINATION:
OPTIMAL PRODUCTIVITY,
REDUCED COSTS & SAFETY

The first purchase was not a Nemag grab but a grab made by a competitor. After realising that this grab did not meet VLI’s requirements, they purchased the Nemag Clamshell. The Clamshell exceeded the other grab’s productivity by 15%.

Nonetheless, the cranes still did not reach their full unloading potential. In addition, maintenance costs were high, and changeover times were long. Changing from ore to coal could take up to 2 hours. Not to mention the additional workforce and lifting platforms needed to

adhere to safety regulations.

After two years, VLI decided to optimise their unloading process further and look for a different grab solution.

Ribeiro: “Because we had already seen a massive increase in productivity with the Nemag Clamshell and experienced Nemag’s expert support first-hand, we were confident they would be able to help us further along.”



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THE SOLUTION

THE NEMAX GRAB

VLI had three main requirements for the new grab:

1. **PRODUCTIVITY SHOULD INCREASE MORE THAN 15% COMPARED TO THE COMPETITOR'S GRAB**
2. **CHANGING THE GRAB SHOULD BE FASTER & EASIER**
3. **THE GRAB SHOULD PROVIDE SAFER WORKING CONDITIONS**

VLI decided on the highly innovative NemaX grab based on these three conditions.

Ribeiro: "Choosing the NemaX was a no-brainer. References from contacts in the European and Asian markets showed that the NemaX's productivity is higher than any conventional grab.

Secondly, changing the NemaX grab is made 100% easier and faster as the grab opens up completely and lays flat on the ground. Consequently, changing and maintaining the grab is low-risk as there is no need for workers to be working up high on lifting platforms. So at first glance, the NemaX checked all our boxes."

THE SOLUTION

NemaX grab



'Choosing the NemaX was a no-brainer..'



THE RESULTS

OVER 20% PRODUCTIVITY INCREASE, MASSIVE COST SAVINGS AND SAFER WORKING CONDITIONS

Productivity & cost savings

Compared to the first grab, the NemaX delivers a 20% increase in productivity. When handling iron pellets, the NemaX exceeds the 20% productivity increase. Without the NemaX, VLI could move 800 tonnes per hour on average. With the NemaX, they can move a 1000 tonnes per hour on average.

Ribeiro: "We are already pleased with these results. The thing is, though, we are still in a learning cycle. For example, we still sometimes need to adjust the configuration of the ropes. And the operators need some more time to get used to the grab. I strongly believe we can reach an even better performance after unloading our 20th ship with the NemaX! I'm looking towards an average of 1100 tonnes per hour".

The NemaX can reach a staggering 1400 tonnes per hour during free digging. This is 300 tonnes p/h more compared to the competitor's grab and 200 tonnes p/h more than the Nema clamshell grab during the free digging stage.

Ribeiro: "In addition, it used to take up to 5 days to unload a ship. With the NemaX side by side, we manage to unload the ships within four days! The savings in demurrage costs are considerable, to say the least".



Saving time cleaning the hatch

Because the NemaX has a far greater reach than conventional grabs, cleaning out the ship's hatch becomes less hassle. Ribeiro: "Regarding cleaning out the hatch, the operators will tell me that when the situation is the worst, that's when the NemaX works the best!"

Saving maintenance costs

The NemaX ensures 'clean' work: the grab closes entirely and only starts opening - with zero rocking - when perfectly above the hopper. The relubrication time is reduced by 50%. And any consumable costs such as steel cables have been reduced by 30%.

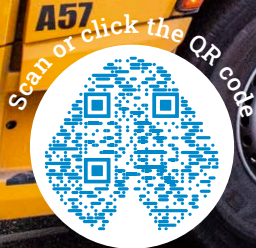
Safety

Ribeiro: "Especially in Brazil, safety regulations are stringent, and with reason of course. No doubt, the NemaX also brings a massive safety advantage. Because the grab can be placed open and flat on the ground, maintenance can easily be done at ground level. Because maintenance of the NemaX is very low-risk, we no longer have to deploy extra resources (staffing, lifting platform etc.), which is a (cost)advantage in itself!".

The NemaX also clearly affects Ribeiro's team. Ribeiro: "I think it's important to mention that working with the NemaX has brought the team a lot of joy. They're happy that they can work under safe conditions, their job is made easier, and of course, the massive increase in productivity positively impacts us all!".



Watch the nemaX in action



"... the operators will tell me that when the situation is the worst, that's when the NemaX works the best!"

PAULO RIBEIRO

FUTURE PLANS

(NE)MAXING IT UP TO BETTER SERVE CUSTOMERS

The first grab purchased by VLI at the Pecem site is expected to last another two years. By then, this grab will be replaced by a new NemaX grab.

Ribeiro: "Given the outstanding results, it's the most logical step. With both cranes operating a NemaX grab, we expect to fully clear a ship in as little as 3,5 days. This will reduce costs immensely. Furthermore, we will be able to service our customers even better. At the moment, we can unload 50 ships per year on average. With both cranes operating with a NemaX grab, we can significantly increase the number of ships."

COLLABORATION

FIRST-CLASS EQUIPMENT & RELIABLE SUPPORT

VLI Pecem is looking forward to prolonging their partnership with NemaX.



"NemaX provides first-class equipment with little wear and tear, even in extreme conditions. But perhaps more importantly, NemaX always offers reliable support."

The openness to discuss technical improvements showcases their commitment to being a trusted supplier, putting their customers' needs first.

I can't help but say that I am very satisfied."



[Learn more](#)

ARE YOU READY TO BOOST
YOUR UNLOADING PRODUCTIVITY,
CREATE A SAFER WORK ENVIRONMENT,
AND REDUCE OPERATING COSTS?

Nemag is here to help.
Our specialists are happy to advise you on the best grab solutions
for your situation. Free of charge & without obligation.



\ **NEMAX GRAB**

\ **BOOK A MEETING**

Feel free to book a meeting at a time that's convenient
for you via nemag.com/meeting or the button below:



\ **REQUEST A QUOTE - FREE OF CHARGE!**

Interested in detailed pricing information on our dry bulk grabs?
Request a quote - free of charge via nemag.com/quote or the button below:

Or send an email with your questions to sales@nemag.com.



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