

TWO MONTHS IN CHINA TURN INTO TWO YEARS

HEINER WILLIM STARTS UP SEVERAL ABP PLANTS
DURING THE CORONAVIRUS PANDEMIC

NEW SITE IN THE USA

WHAT CUSTOMERS CAN EXPECT FROM THE NEW ABP SITE

RETROFIT IN SOUTH AMERICA

THE SAINT GOBAIN SUCCESS STORY





Introduction

As the world is facing profound upheavals, new challenges are emerging in many areas of the economy and society. We at ABP are confident that we have good answers to these challenges.

Proof of this is, for example, the response at the major trade fairs in recent weeks and months, where our expertise in induction furnace technology and digitalization, for example, was in extremely high demand.

But this is also demonstrated by current retrofit projects, where sometimes decades-old furnaces are being given a new lease of life so that they can once again achieve an extremely high level of performance after modernization.

All of this only works when you have strong teams – which is what we have worldwide at ABP. Employees are the basis for developing progress and innovations, and they put ABP technology into practice, as the examples in this issue show.

*With best regards
and Glück auf!
Till Schreiter, CEO*

45-year-old furnaces are transformed into racing machines

Effective modernization at Saint Gobain Brazil

Saint Gobain in Brazil is now able to operate with much greater flexibility and effectiveness. Three existing IT9 mains frequency furnaces were converted to medium frequency and extensively modernized so that the now 45-year-old furnaces are once again at the cutting edge and can achieve top performance. In the final stage to date, an IGBT converter and new plate packs have been delivered.

The modernization was carried out in several stages. After converting the furnaces to medium frequency in stages in 2014 and 2018 with a 10 MW TWIN-POWER® converter, Saint Gobain can now operate the three furnaces in parallel with all the benefits of a medium-frequency plant.

The newly supplied IGBT converter has made working with the plant even more flexible and effective: Since one furnace is always in standby mode as necessitated by the process, it is now possible to

sinter this furnace with the new IGBT converter while the other two furnaces are in melting mode in parallel. Employees therefore no longer lose time, and flexibility and reliability both increase.

Thanks to the design of the new sintering converter, it is also possible to keep the molten mass warm until the next processing stage or to melt cold material slowly, should production demand it.

Saint Gobain Brazil had also changed the refractory material on the melting furnaces over the years, increasing its thickness. Extensive investigations have shown that this caused the plate packs to overheat, so in a further modernization stage, three sets of adapted plate packs will be supplied. This enables the customer to operate its melting furnaces at nominal capacity again after the changes it implemented itself to the lining – here, too, the productivity of the overall plant is increased thanks to the retrofit measure.



Employees of Saint Gobain Brazil were recently guests at ABP's Dortmund headquarters for a planning visit.

FENAF: Great contacts in São Paulo

ABP attended South America's premier industry trade show – presentation at CONAF

The ABP team had some great conversations at FENAF 2022: At the Pro Magno Eventos complex in São Paulo, ABP Induction attended South America's premier industry trade show and was able to connect with both partners and customers alike. A total of nearly 80 exhibitors were represented at FENAF, and almost 5000 visitors came to the fair during the four days of the event.

The focus at ABP's booth was on ABP's digitization solutions. The CONAF conference took place parallel to the trade fair. Here Guilherme Viana spoke on behalf of ABP about ABP's digitization strategy for foundries.

In general, the atmosphere at the show, which took place in June 2022, was positive: the need to invest and improve productivity to become more competitive and optimize costs was the principal reason for many visitors to come to FENAF. Visitors were looking for better service options, energy efficiency solutions, replacement of melting concepts and other ways to optimize. Here, ABP's experts presented valuable suggestions



and options, for example with the digitization products, but also with the comprehensive C3 service package and the options for replacing cupolas with induction furnaces.

The next FENAF will take place in 2024.



Massillon: Expansion at the site in the USA

Partnership with neighboring Walsh University to nurture new talents

The American colleagues at ABP have now found a new home : The new office in Massillon is attached to the previous production site and offers not only more space but also potential for collaborations with companies and research institutions.

The ABP Induction team moved to the new office in March 2022. Today, a total of 17 employees work there, which is a significant expansion in comparison to 2018, when the team at the site consisted of ten employees. The new office space is approximately 500 square meters, and the workshop is just over 2,500 square meters. This has made Massillon the central site for ABP in the United States.

Massillon is located in the state of



Ohio, about 80 kilometers south of Cleveland. In 2018, the city of around 32,000 inhabitants was purely a production site. With the move and expansion, project management, human resources and accounting are now also based at the site. A controls engineer has also joined, along with experts in aftermarket business and a senior controller.

The new location is in the industrial area of Massillon, near the Tuscarawas River. The new premises feature new LED lighting in the workshop and warehouse, and a new IT system has also been established along with a dedicated demonstration room for products from ABP Induction's digitalization division.

The special appeal of the new

location is that cooperation and partnerships with other companies and institutions are increasingly possible. For example, Walsh University is setting up an analysis laboratory in the neighboring office, with which ABP Induction will work together to develop and promote new talent.



Safe operation in any foundry

ABP Basic & Advanced Safety packages engineered for safety, convenience and reporting



Safety plays a major role in the world of automation. That goes for the protection of the employees at the machines as well as for the safe operation of the plants. As the complexity of machines and plants continues to increase, so too do the requirements for functional safety. The safety standard for the operation of machines and plants is defined by the newly designed „ABP Basic Safety Package“.

It provides high levels of safety and protection. It is already part of the basic configuration of every new ABP plant. Older plants can benefit from the „ABP Basic Safety Package“, which brings the plant back to the state of the art so that it can be operated safely and effectively. The ABP Basic Package is designed so that it is also suitable for retrofitting in existing plants – for a reduction in downtimes, a long machine service life and greater safety for the employees. The „ABP Basic Safety Package“

is a vital form of basic protection for existing plants. The package consists of the GD 05 ground fault monitor, the diagnostic function for GD 05, an extended GD 05 ground fault monitor for TWIN-POWER® systems, the LCM leakage current measurement, the hedgehog coil and the test bath earth.

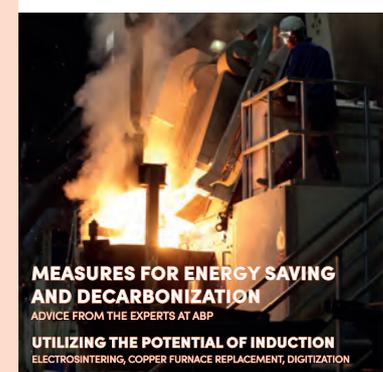
To ensure that foundry operators are prepared for all eventualities, ABP has developed the „ABP Advanced Safety Package“. This is an upgrade of the basic package and includes important safety features for almost complete protection. This features an automated system to verify bath grounding, locate yoke insulation defects in the mechanical area, and detect potential metal penetration.

All information on the two packages can be found on the [ABP blog \(click here\)](#) and on the [abpinduction.com](#) website: In the download section there you can find all flyers for the individual solutions.

Special issue on energy and CO2 reduction

ABP has published a special edition of its ABP News on the latest turbulent topics of energy market development and decarbonization. Rising energy costs, uncertainty about gas supplies, and the pressure to save as much CO2 as possible – these are all aspects that are currently on the agenda of every foundry.

In ABP News 13 you will find relevant answers to these issues. As a leading supplier of induction furnace technology, ABP Induction can provide quick assistance. For instance, strategically in terms of planning when it comes to replacing cupolas with induction furnaces, with short-term measures when crucible induction furnaces are converted to electrosintering, and more long-term when it comes to the complete digitalization of melting operations. All important background information, tips and contact details are compiled in ABP News 13 (click on the cover to download).



MEASURES FOR ENERGY SAVING AND DECARBONIZATION

ADVICE FROM THE EXPERTS AT ABP

UTILIZING THE POTENTIAL OF INDUCTION

ELECTROSINTERING, COPPER FURNACE REPLACEMENT, DIGITIZATION

Two months in China turn into two years

Heiner Willim becomes stranded in Asia during the coronavirus pandemic – and sets up several ABP plants while he’s there.

It is not unusual for ABP engineers and technicians to travel the world to build, commission and maintain ABP plants. However, the fact that one assignment turns into almost two years away from home is remarkable in every respect. This is the story of Heiner Willim, who set off for China in December 2019 to prepare the assembly of an ABP plant there.

„We started working on January 7, 2020, and on January 24, 2020, the first coronavirus restrictions were imposed – our work was therefore directly shut down again,“ Heiner Willim recounts. Originally, a TSH 10 induction heater with a capacity of 36 megawatts was to be commissioned for a customer in the Chinese city of Fuding in Fujian Province. But by March 10, the borders in Fujian province were closed, people were no longer allowed on the street, everything stopped. „Chaos broke out on site, the construction site stood idle, the specialists we required were not on site, so we were not able to carry out the assembly and commissioning for the time being,“

the seasoned technician recounts.

It wasn’t until March 15 that the site reopened, under very strict Covid-19 restrictions. Assembly work was able to resume with a small assembly crew. At the time, travel was strictly prohibited throughout the country and only allowed with special permission, and in some provinces it was still banned altogether. The borders to foreign countries were closed from March 28.

Then Heiner Willim himself fell ill. „I had an elevated temperature and severe pain; however, it was not coronavirus infection, but pleurisy.“ Yet, getting help organized, under the conditions with all the turmoil about the coronavirus, was not so easy. The customer arranged an interpreter for Heiner Willim, who was able to help with the admission to the hospital. The ABP technician also needed a certificate that he was virus-free. „In China, you see, everything is done via WeChat – at the time, they even recorded the status of which area of a city you were allowed into.“

Heiner Willim was first placed in a five-bed room, then in a three-bed room. „Chinese hospitals



Heiner Willim thanked the hospital staff after his treatment.

are organized differently than in Germany. There, for example, you have to buy your medication in advance before it is administered. There’s also an information board where you can always see which staff members are on duty at any given time and are available for patients. I also had to take care of my laundry and buy daily meals, since I was on my own for the time being. But – the team at the hospital was really nice and was always there to help.“ The nurse, the doctors – they were all responsive at all times. He was already feeling noticeably better after three days, and after eleven days everything was fine again, so that he was able to leave the hospital. Heiner Willim thanked the medical team afterwards with a bouquet of flowers and a video message.

In June, everyone was able to return to the site to commence with the next phase of work. However, further experts from abroad could not be involved – there was still no possibility of getting them into the country. The work itself progressed

Successful teamwork and commissioning at Fujian Steel in April 2020.



sluggishly because relevant parts for the plant were missing. They were supposed to come from Wuhan, of all places, the presumed place of origin of the coronavirus. The city was still under full lockdown.

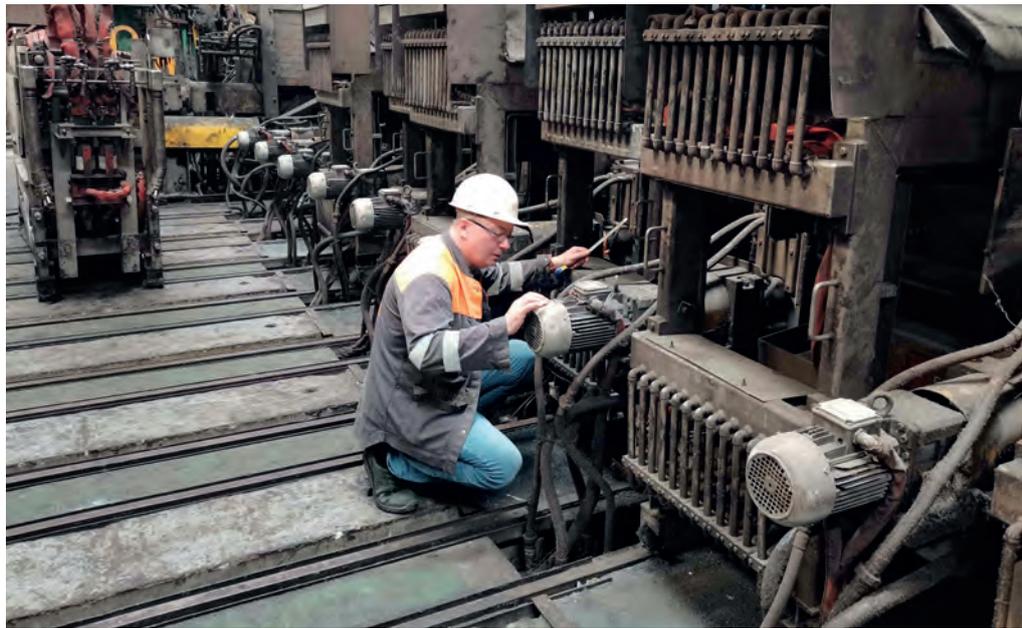
At the end of July 2020, the next installation of an ABP induction heater type TSH 12 with 36 MW began at Rizhao Steel in Shandong Province. In this case, the urgent priority was set to build and commission this ESP line as soon as possible. Initially, owing to the shutdown of international borders, only specialists from Primetals Shanghai and ABP Shanghai were able to support the project. It was not until the end of September 2020 that the first foreign experts were then allowed back in, subject to quarantine.

„Then, our plant actually went into operation on November 21, 2020, and the first coil was produced,“ recalls the ABP expert. The exhausting, hard work with successful production was a tremendous success not only for ABP, but also for all the teams that were involved.

Early December 2020, after nearly a year in China, was then basically a good time to fly back to my family, he says. „After all, I had only seen everyone by video for a year, had become a grandfather in the meantime, and wanted nothing more than to see my grandchild. But things turned out differently,“ he says. That’s because another customer plant was about to be installed and commissioned in China. „Plus there was another lockdown, experts from abroad couldn’t enter the country at all, or only under difficult conditions. And I was still in the country. So I took over the next plant.“

Starting in February 2021, he moved on to a construction site in Wu’an, Hubei Province for the next TSH10 36MW plant. „We worked day and night to be able to meet the agreed deadline. The ‚first coil‘ was to be

Heiner Willim checks the first measured values of the plant at Taihang Steel in October 2021.



Fine-tuning for line 5 at Rizhao Steel in June 2021.

produced here on April 6, 2021. „We had a meeting with the customer every day, where we looked at the figures for the plant,“ he explains. A utilization rate of over 95 percent had been promised, and with adjustments to the plant, they finally reached 95.7 percent. „The new line succeeded in showing what it could do. The project was a success, the customer was satisfied, and I stayed until the final acceptance of the complete line.“ In the meantime, on August 16, 2021, ABP’s TSH10 induction system for the ESP line in Fujian was also successfully commissioned with

the first coil.

Then on December 15, 2021, he was back on the plane to Germany, and after nearly two years, he was finally able to embrace his family again and actually see his grandchild for the first time. „Those were certainly big sacrifices I made, but my job is my passion. As a company, you have to be able to rely on your local employees 100 percent, especially in our job. And that’s just as important to me, which is why the decision to stay in China for two years was still the right one, even looking back today.“



ABP EcoLine as an entry-level solution

ABP has presented a new solution for entry into the furnace world: ABP EcoLine is the perfect solution for entry into the foundry market for small companies, research institutes or even engineering companies that want to set up their own production. With this move, ABP is targeting customers in countries characterized by the fact that companies operating in those markets primarily look for an economical solution that strikes a balance between a reasonable investment, high reliability and appropriate production capacities.

More information is available on the Internet at ecoline.abpinduction.com. All variants are available with their respective options in the web configurator, to be found at ecoline.abpinduction.com.



Imprint

ABP editorial staff:

Markus Fournell, Ulrike Szymura, Dr. Marco Rische (responsible)

Realisation:

Michael Braun (Medienhaus Waltrop)

Suggestions, contributions and questions ulrike.szymura@abpinduction.com

szymura@abpinduction.com

ecoMetals Day presents prospects for steel

Highlight presentation by ABP CEO Till Schreiter

The steel industry is currently experiencing a number of far-reaching challenges. The energy crisis, decarbonization and demographic change all call for solutions. The industry met at the ecoMetals Day in Düsseldorf to discuss possible approaches. With the building blocks of induction technology and digitalization, ABP provided two pragmatic approaches.

ABP CEO Till Schreiter spoke about ABP's ideas in front of the podium packed with numerous experts and users. He sees energy management, capturing and making available expert knowledge, as well as agile partnerships as being the first steps in meeting the challenges. He also believes that induction technology and digitalization are forming a strong alliance in this context. Till Schreiter presented the 5-pillar model of digitalization at ABP.



Markus Fournell and Till Schreiter at the ABP booth.

He recommended developing a digital strategy that enables the implementation of a sustainability strategy. Companies would have to strive for a consistent analysis and CO2 reduction according to scope 1 and 2. An important contribution to decarbonization, including in the steel environment, is made by inductive melting and heating in metallurgical process routes, he said.



Till Schreiter outlined solution strategies for the steel industry in his keynote speech at ecoMetals Day.