

Preparing Tomorrow's Technologies!

Pioneer in innovative solutions to abrasive blasting, Winoa has always been committed to delivering superior value to its customers, providing them with high-quality products, skilled sales and technical teams.

Recently Winoa took a step further and brought a new dimension to surface preparation by combining abrasives with dedicated equipments and technologies.

MFN met Vincent Marrel, Head of Global Market Management to learn more about this new approach and the latest innovations at Winoa.

(?) MFN: Mr. Marrel thank you for taking the time for this interview. Would you introduce yourself to our readers?

(!) V. M.: As market manager with Winoa, one of my main responsibilities is to listen to customers, identify and anticipate how we can create value in their process using our current expertise of the blasting process. Winoa is well known for its position of world leader in the manufacture of steel abrasives, and customers are often surprised and impressed to discover the range of tools and services we can offer to improve their process. This is an exciting role as we discuss every day new opportunities to help companies with their blasting process across many different applications and all over the world. We are working hard to bring innovations for "Preparing Tomorrow's Surfaces".

(?) MFN: As the Head of Global Market Management can you tell us about innovative solutions that you are working on?

(!) V. M.: *WA Clean* - One of our most recent breakthrough in terms of innovative development is the WA CLEAN device: an electronic device which allows the user to check the cleanliness level of a blasted surface (SA level or other). Indeed, in surface preparation, the most common specification for cleanliness level is the ISO 8501, which requires to visually check the blasted surface (with naked eye) and compare this observation with reference pictures given in the specification's booklet. This method is not really suitable because it calls for personal interpretation (the operator or the quality controller has to decide by himself if what he sees is similar to

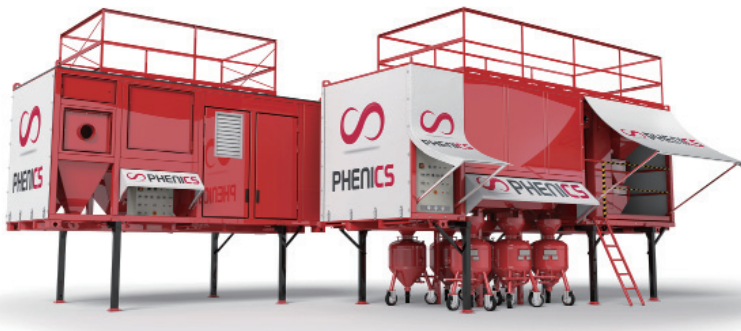


the Sa2.5 picture given in the booklet). In other words, this method is subjective, and depends on many external factors such as the surrounding light, the orientation of the blasted surface, the dust level... and many others. The WA CLEAN device is able to memorize the visual aspect of a reference blasted part and compare it with other ones. It tells to the user if the measured parts are showing the same cleanliness level than the reference one, without any doubts or risk of interpretation. With WA CLEAN, you can be confident about the reliability and the consistency of the quality controls! You can of course save the data and generate automatic reports, which can be precious to avoid endless discussions with quality inspectors. Moreover, it is the perfect tool to immediately identify blasting process deviations. WA CLEAN has been available for sale since 2016 and has helped customers accurately control cleanliness after blasting.

WA Dust - We are developing the counterpart of WA CLEAN for evaluation of the dust level of a blasted surface: WA DUST. To the regard of dust assessment, the most common specification is ISO 8502 (often called "dust-tape test"), which asks to visually evaluate (with x10 magnification) the size and the concentration of dust particles stuck on a tape strip. Once again, this specification asks for visual observation, which is subjective. WA DUST is able to "read" the tape strip obtained according to ISO 8502, and directly tell you the size class and the concentration level of the dust. In 2018, a dozen of WA DUST prototypes will be evaluated on the field by end-users. We look forward to keeping you informed about possible market availability of this exciting new technology.



Vincent Marrel, Head of Global Market Management of Winoa



Phenics XL 6 Unit

Last but not least Phenics, an innovative service dedicated to industrial painting contractors, bringing together a complete package to use recycled steel grit on jobs traditionally done with mineral abrasives.

(?) MFN: What does Phenics consist of?

(!) V. M.: Phenics offer is based on a combination of services and equipments, all in one place, available to industrial painting companies. It includes:

- *Vacuum & Recycling Equipments*

Phenics mobile systems come in different sizes and power. Units are available for rental and sales according to the needs of customers. It is also possible to custom design and manufacture systems for specific demanding applications: for instance this is how Phenics AIR was built to be able to be conveniently air lifted with regular helicopters.

- *Air blasting Accessories*

A wide range of air blasting equipments are also available for our customers. Blast pots, blasting lines and spare parts are offered with/without Phenics equipments according to the customer demand.

- *Premium Recyclable Steel Abrasive*

A new range of high performance steel grit, Profilium is designed for air blasting surface preparation, offering accelerated surface cleanliness, consistent profile, improved coating adhesion and optimum paint consumption through better surface profile quality.

- *Field Technical Support*

A team of experts, committed to ensuring the most efficient blasting and equipment usage for our customers, will provide regular technical support on the jobsite. The extensive expertise of the Winoa team allows a surface preparation company to interface with one specialist who can provide support with the full process chain to increase productivity and generate savings.

(?) MFN: What are the advantages of this service?

(!) V. M.: When replacing expendable abrasives with recyclable steel grit, our customers benefit of an increased on-site operation efficiency and better blasting yield. The abrasive volume and waste generation can decrease up to 90% ensuring significant cost savings especially in cases of lead or asbestos remediation projects where waste disposal costs are higher than the cost of abrasives.

With the savings achieved thanks to faster blasting and thanks to a reduction in waste disposal costs, Phenics becomes a very cost effective option that pays for itself very quickly. A breakdown of costs associated with blasting using typical expendable abrasives and the Phenics with recyclable grit is shown below, it is not unusual to observe savings in the range of 20 to 30%:

(?) MFN: In addition to generating better blasting yield, what is the impact of steel abrasive on the environment?

(!) V. M.: Today the most important environmental consideration for outdoor blasting must be choosing an abrasive that will not contaminate the environment and which is free from heavy metal contaminants.

Steel abrasive can be recycled up to one hundred times and their impact on the environment is minimized. The particles of blasted media remain in the contained area and then vacuumed, separated from contaminants and then reused.

Furthermore steel abrasive does not generate any dust in the working area. Working conditions of the operators are improved dramatically with higher visibility and absence of hazardous heavy metal contaminants.

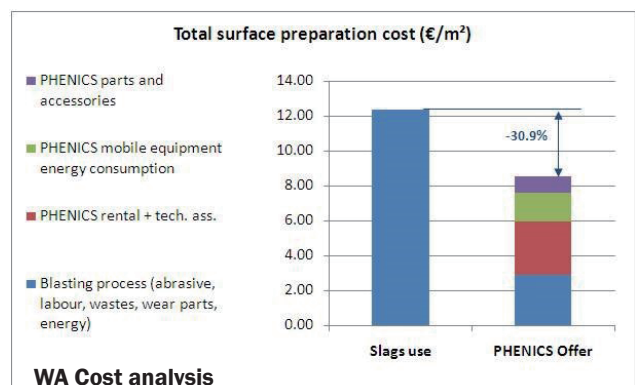
The weight of steel abrasive required to blast a given area is typically 5% of the weight of expendable grit such as coal or copper slags. This leads to significant reduction of abrasive volumes to be transported to the site and also decreases significantly waste to be discharged.

(?) MFN: What are the kind of worksites where customers use Phenics and are there any specific conditions to use Phenics and recycled steel grit?

(!) V. M.: Customers can use Phenics for all types of steel structures provided that it is a dry and contained or containable area. Some of the most frequent refurbishment jobs done with Phenics equipments are steel bridges, storage tanks, ballast tanks, dams and penstocks.

(?) MFN: What has been the customer response to this service?

(!) V. M.: At the beginning there was hesitation since industrial painting contractors have traditionally been using expendable grit. This is due to the fact that it is difficult to vacuum and reuse the abrasives in complex worksite conditions with significant distances.



« **At Winoa, our customers are our partners and our policy is to help them improve their operations, reduce their costs and achieve sustainable results.** »

Vincent Marrel, Head of Global Market Management of Winoa

In these circumstances, it has been sensible to use non-recyclable and the cheapest abrasive available, even though it may not be the most effective in terms of speed of blasting and quality of surface finish.

However with the new environmental regulations requiring the encapsulation of the worksite it has become possible to vacuum the abrasives in the blasting area. The only remaining issue for the contractors then was cleanliness of the recycled grit.

With Phenics system, the used abrasive is drawn into a 4 stage separation system incorporating a scalping drum to remove coarse contamination, two air separators to remove dust, thin particles and small sized abrasive grains and finally a magnetic separator to recover any non-magnetic particles which is indispensable for works containing lead and asbestos. Dust removal is 99.9% efficient with our equipments, thus ensuring thorough cleanliness of the recycled grit.

Once customers first tested Phenics equipments, they were quite satisfied with the results and they keep coming back for new projects. This is how we built our reputation, step by step after each customer realized the benefits were real and easy to achieve.

(?) MFN: Traditionally Winoa has not been active in the manufacture of equipments, is your company moving in that direction?

(!) V. M.: No, this is a niche application where Winoa has a proven technology to help contractors become more competitive. Winoa offers a service based on a range of solutions and equipments. A unique aspect of this business is also the fact that customers have the choice

to purchase or to rent their equipments. With Phenics, WA Clean or WA Dust Winoa's strategy is to offer solutions to help customers overcome existing blasting challenges.

(?) MFN: Any success story you can share with our readers?

(!) V. M.: It is hard to cite only one success story. Our equipments were used for example in the construction of Queen Elizabeth Aircraft Carrier in Rosyth consecutively for 3 years. We also worked with our Dutch customer MOPP for Heerema Balder project in Holland. Recently we have terminated a very impressive project in Germany with our customer Kocks working on a German Navy frigate. Phenics has accumulated a number of successes over in Europe, helping several shipyards with large ambitious projects.

(?) MFN: Where do you see Phenics services in a few years?

(!) V. M.: Phenics has been quite successful in France for the refurbishment of metallic structures such as bridges, dam gates and penstocks. In Germany and the UK, Phenics equipments have been used for ballast tank refurbishment in leading shipyards. We expect that Phenics equipments will continue to be adopted by more and more industrial painting contractors in different countries in Europe and that the numbers of machines in service will be doubled in a few years' time.

(?) MFN: You mentioned that Phenics equipments can be only used in dry and contained areas. What about ship hull refurbishment jobs? Is it not possible to use steel abrasives for these jobs?

(!) V. M.: Currently it is not possible to use recyclable steel abrasive in wet environments, namely in ship hull repairs due to rusting problems. However we are working on a special equipment which enables automated blasting and recycling of steel abrasives. It will open the option to many new shipyards forced to work with mineral abrasives because confinement is not possible to convert to the more efficient steel abrasives.

(?) MFN: Can you tell us more, when is this solution be available on the market?

(!) V. M.: Very soon. Market tests will start in 2018.

(?) MFN: You talked about various new technologies, what can customers expect from your technologies?

(!) V. M.: They can expect to get tangible, measurable results along with improved expertise on their operations, process controls and cost savings. What is more they can expect to work in ways they have considered impossible before.

(?) MFN: It can be counterintuitive, but can you explain us the motivation for Winoa to invest in technologies to help it customer reduce their consumption?

(!) V. M.: At Winoa, our customers are our partners and our policy is to help them improve their operations, reduce their costs and achieve sustainable results. We want to bring added-value to their blasting process and we will continue even in the case of reduced consumption. We believe that in today's increasingly competitive environment it is key to create value for our customers, listen to their objectives and use our expertise to help them achieve their goals.

MFN would like to thank Vincent Marrel for this interview!

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