

# A Unique Recipe: Wheelabrator's "A-Team" on Super High-Spec Peening

**WHEELABRATOR'S** global airblast team develops blast processes for some of the highest-spec peening applications out there—from mainstream automotive and medical to aerospace and motorsport. Based in France, Germany and the United Kingdom, but operating globally, the team supplies airblast equipment, parts and services, as well as offering advanced subcontract shot peening. Here, Yves Dufour, who heads up Wheelabrator's Global Air team as Senior Vice President, and Tony Grammauro, Vice President in charge of Wheelabrator Impact Finishers, discuss the evolving demands on airblast processes, global market trends and the benefits of a tight symbiosis of equipment and process.

## The Growing Demand for High-Spec Airblast Equipment and Services

**Tony:** Both on the equipment and the subcontracting side, zero-defect manufacturing and traceability are key themes that drive our business. Demand for high-spec peening is growing and we are able to deliver the process—be it as a service or baked into equipment—with the performance and reliability industries like aerospace and automotive need.

Where we previously mainly dealt with aircraft manufacturers and their suppliers, we're now also seeing huge growth in maintenance, repair and overhaul (MRO) on the operator side of the aviation industry. And we continue to work with most of the major automotive companies globally where the shot peening of critical parts has become a mainstream process.

## Wheelabrator's Customers

**Yves:** Customers come to us for our process know-how. I'm in the fortunate position that I have Tony and the Impact team, who will test things for us and provide feedback, and who get requests for the most advanced peening tasks from their customers. That's gold dust to us in terms of shaping our product offering. As we evolve our equipment, the Impact guys are our harshest critics, but they also have their fingers on the pulse of the industries we're serving.

**Tony:** That works both ways, of course. We're the only subcontract shot peening outfit that is also part of an equipment manufacturer. It means we can influence the machine development and feed back anything we don't like. So far, this has meant that we're very happy customers of Yves's



*Yves Dufour (left) and Tony Grammauro (right) discuss the latest market trends and developments in high-spec peening.*

team and wouldn't dream of buying our equipment from anybody else. Together, we can make it the best equipment there is.

## Wheelabrator's Response to Customer Challenges

**Yves:** On a practical level, a lot of the challenges we're helping our customers with are quite immediate: around productivity, energy use, reducing maintenance requirements, etc.

As more parts require higher-spec treatment at bigger volumes, customers need technical support to reliably control sophisticated peening processes.

Outsourcing the process to Tony's team is one potential answer, but for high volumes—in automotive for example—this is not realistic. So we're building a lot of the expertise and skill into the machines, using automation to ensure that crucial repeatability. We're expecting this challenge to extend into areas like MRO, as volumes increase along with a growing global aircraft fleet. Customers want a reliable process out of the box, which is about more than just delivering a machine.

**Tony:** When Yves says it's not realistic for global industries to give everything to me and my team as subcontracted peening work, he is of course right.

That said, with the predicted growth in commercial aviation alone (Airbus and Boeing have both released figures last year projecting a doubling of the global fleet by 2038), capacity is going to be a major issue. Who is going to peen all those parts to aerospace standard?

That's why we're already drastically increasing our capacity in the UK—to give the industry that extra capacity. We've just commissioned two new fully automated shot peening machines and will be adding a robot shot peening machine in the next twelve months. We're also primed to scale things up at our facility in France if needed. Beyond this ramping up in volume, we're working with Yves's team to evolve the equipment to anticipate future process needs.

**Yves:** Part of that work is looking at elements of the process and improve those or develop add-ons that tackle specific issues. For example, we're just working with a supplier on a new type of innovative media, and we've developed a new hose that delivers hugely improved uptime as well as reducing contamination of the abrasive. These products will be available in the coming months, as soon as they come out of testing and pilot projects.

Another add-on we've developed and that I'm particularly excited about is a high-speed camera that allows us to measure the speed and size of individual particles of abrasive. That way we can establish the energy we're applying to the part more accurately. It allows us to see phenomena we've not previously been able to see—turbulences in the airflow, etc.

Currently, the camera is designed to be used primarily for process calibration and validation. It's temporarily attached to a nozzle or placed in a cell with a robot arm, so the arm can hold the nozzle in front of the camera for checking.

Ultimately, we could see this develop into real-time monitoring. Through the digital products that are being developed in the group, we can very easily connect the camera output to a central system where we could use advanced image processing and AI to get an even tighter grip on the process. Suddenly the black box that used to be the shot peening process opens up and we can see what's happening inside. That would deliver so much more than an Almen strip ever could. This is how we'll get to genuine zero-defect manufacturing. ●

#### About Wheelabrator

Wheelabrator, part of Norican Group, is one of the world's leading providers of surface preparation technology, offering a complete range of airblast and wheel blast equipment, and shot peening solutions, as well as comprehensive global aftermarket support.

For over 100 years, leading companies in the foundry, automotive, aerospace, energy, medical, rail and construction industries have trusted Wheelabrator's products and services to improve productivity and profitability. From cast iron pans to aircraft wings, there's hardly a surface we haven't improved.

Operating from strategically located service centers on four continents, Wheelabrator provides 15,000 active customers in over 100 countries with state-of-the-art parts preparation technology and services.



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Shot Peening Equipment**

**Portable/Mobile  
Systems**

**Complete Turn Key  
Process including  
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Design, and  
Documentation**

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