

Major UK manufacturer of aluminium wheels selects Russell Finex to improve the quality of its powder coating

A manufacturer of aluminium wheels based in England required a new sieve to screen lacquer coating powder. The company, which supplies wheels to both new car manufacturers and off-the-shelf suppliers of premium accessory wheels, was experiencing mesh blinding problems with its existing rotary sieve, which was obtained complete with its powder booth. Additionally, the company could not meet the high throughput rates it wanted to achieve. After numerous attempts to make the rotary sieve work, the company turned to Russell Finex, of Feltham, England, to solve its screening problems with a new 400mm vibratory sieve equipped with the Russell Finex Vibrasonic Deblinding System.

As a top producer of aluminium wheels in Europe, the company ensures its wheels are finished to the highest standard. A lacquer coating is thus applied to wheels before they are put in an oven to obtain a desired glossy finish. While some manufacturers use liquid coatings, this company decided powder coating would be a more environmentally friendly and economical alternative as it allows for fallen powder to be reclaimed and overcomes the problem of having to deal with solvents associated with liquid coatings. Their new sieve therefore needed to screen both new powder and reclaimed powder.



It was essential that all oversized particles and fibres were removed from the coating, as this would affect the quality of the wheels. As an industry-leader, the company could simply not afford for its product quality to be compromised in any way. The decision of which sieve to select was therefore critical in safeguarding its reputation. The company turned to Russell Finex, of Feltham, England, to conduct on-site trials to determine the optimum solution to fit its needs. With over 70 years of experience in screening and separation solutions, with a rich history serving the coatings industry,



The Russell Vibrasonic Deblinding System

Russell Finex was the ideal company to understand the specific requirements of the application.

A 400mm vibratory sieve was eventually selected to screen particles down to 75 micron, removing even the smallest contaminants. Furthermore, it was certified to operate in ATEX environments designated as Zones 0, 1, 2, 20, 21 and 22, ensuring the safety of operators. In order to eliminate mesh blinding problems the company was experiencing and which are notoriously common with powder coatings, the machine was equipped with the revolutionary Vibrasonic Deblinding System.

The Vibrasonic system combines conventional vibration with ultrasonics. An ultrasonic frequency is applied directly to the separator mesh, breaking down surface tension and effectively making the wires friction free. This eliminates mesh blinding and maintains product consistency without needing to continuously stop the machine to clean the mesh. This in turn led to increased productivity, and allowed the company to achieve the throughput rates it desired.

Russell Finex are recognised worldwide as being leaders and originators in fine mesh separation technology. With the 400mm vibratory sieve equipped with the Vibrasonic Deblinding System, they have effectively helped yet another company safeguard its product and its reputation.

For over 70 years, Russell Finex has manufactured and supplied screeners, filters, and separators to improve product quality, enhance productivity, safeguard worker health, and ensure powders and liquids are contamination-free. Throughout the world, Russell Finex serves a variety of industries with applications including pharmaceuticals, food, chemicals, adhesives, plastisols, paint, coatings, metal powders and ceramics.