

Case study



Böhler Steel USA

To reinforce their dedication to health and safety and with a desire to decrease process time for maximize efficiency, Böhler have looked to Vapormatt to help improve productivity.

As one of the world's leading providers of tool steels, high-speed steels and speciality materials, Böhler Steel, based in Boston, USA is in the midst of an overhaul of its production operations.

Prior to transitioning to wet blasting, they were using pickling/chemical cleaning when manufacturing their precision steel wire. The main disadvantages of this process include a significant loss of material and the production of sludge. Which, according to the Environmental Protection Agency (EPA) is classified as hazardous waste. This makes it incredibly important and costly for metalworking companies to take extra care when handling and disposing of pickling sludge.

As you can imagine, dealing with sludge can not only be detrimental to the environment and the health and safety of operators but, requires a large investment to build and maintain appropriate recycling and processing equipment. On top of all of that, this process was carried out as an independent cleaning step which prolonged the overall processing time.

Vapormatt has been able to offer a solution for Böhler to overcome these challenges in the form of two wet blasting machines



They have commissioned two production lines that each feature one of our highly efficient Profelis wet blasting machines, both are specifically configured to process in-line steel wire to suit their operational needs.

These systems will rinse and dry the wire after blasting and will leave it with a clean reactive surface – ideal for forming, machining and heat treatment. This allows for streamlined cleaning of the steel wire at the desired output rate (especially with the incorporation of the stop/start drawing function for non-continuous running) and eliminate the necessity for the independent pickling step. The improvement in their production line will significantly decrease the overall processing time and loss of material as wet blasting does not degrade the surface.

One of the other advantages of wet blasting is the closed loop system, which recycles the abrasive and water, that decreases operating costs whilst eliminating the need to use harsh chemicals and the subsequent creation of sludge.

Additionally, within the wet slurry environment, the water eliminates potentially harmful dust particles – creating a much more health and safety-friendly process for operators.

As a means to replace their previous process with a more health and safety conscious and environmentally friendly method of cleaning, Böhler's Profelis systems will help them reach their sustainability objectives whilst finishing their steel wire to a degree that will reinforce the strength of the material giving it the ideal surface finish for forming, machining, heat treatment and other applications.



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