



P R E S S R E L E A S E

COMPACT, AQUEOUS CLEANING LINE SUITS ENERGY SYSTEM MANUFACTURER

Energy storage and clean fuel company, ITM Power, which manufactures hydrogen energy systems at its factory in Sheffield for decarbonising transport and the built environment, has chosen an aqueous, ultrasonic cleaning line from Turbex to wash and degrease many of the components and fittings involved in the production process.

Project and test manager at ITM Power, Alex Shields, said, "A high level of cleanliness of the constituent parts of a hydrogen generator is paramount.

"Oil or particulates on machined parts can cause valves and pumps to stick, while any grease on electrolyser components would pollute the catalyst and shorten its operational life."

During the research and development phase, the company cleaned components by hand using solvents, but for subsequent batch manufacturing, it wanted to avoid the hazards of a large, solvent-based system.

So an aqueous cleaning line, called Versa 120, was ordered from Turbex and installed in January 2011. One of its advantages is the small footprint,

which minimises the amount of factory space taken up. The line comprises three 120-litre tanks placed side by side, served by an overhead gantry that handles baskets of components weighing up to 35 kg automatically between each stage.

The first, ultrasonic tank contains heated tap water and soap, which is rinsed off by deionised water in the second, non-ultrasonic tank. The third operation is ultrasonic rinsing in a tank of heated, deionised water.

At all three stages, the basket of components is dunked several times into the tank and lifted out again before proceeding to the next stage, creating agitation to help removal of soils. Two baskets can be processed simultaneously in successive stages along the line.

Mr Shields continued, "The service and support provided by Turbex set it apart from other potential suppliers we initially considered.

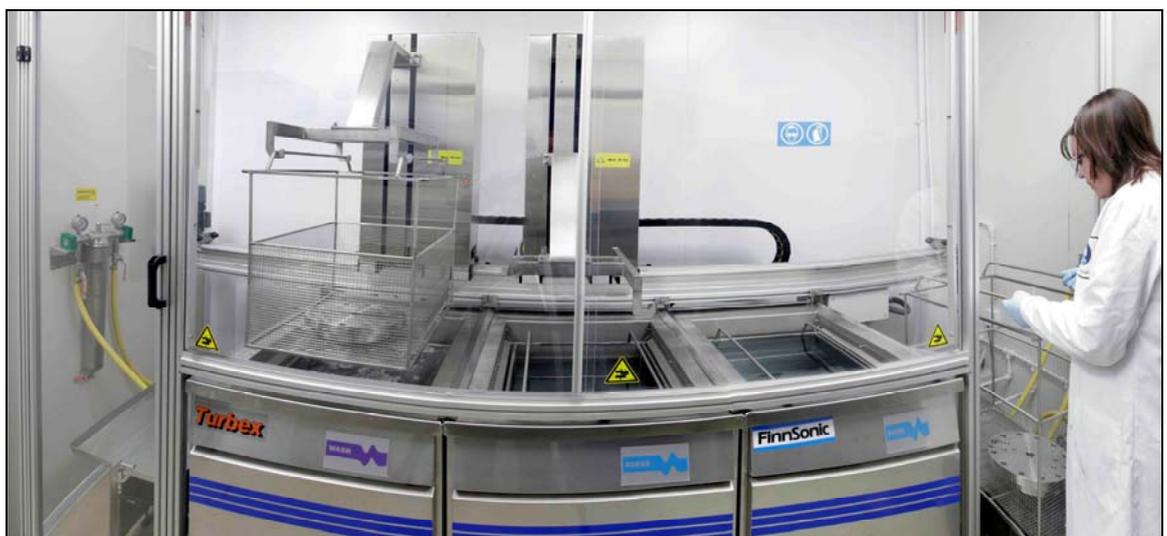
"Being new to industrial cleaning, we were heavily reliant on the supplier's clear explanation of the technology and early advice as to the line configuration that would best suit our needs.

"Turbex managed the project from start to finish, including modifying tank number 2 inexpensively to include a skimmer for removing any soap remaining on the surface of the water.

"The supplier also produced the washing programs, which included determining the duration for each cleaning stage and setting ultrasonic power in the first and third tanks for best results.

"Finally, the same engineer that was present at the factory acceptance came here to advise on the logistics of fitting each element of the machine through a door into the restricted area we had set aside for the cleaning system. He then commissioned the system and got it running smoothly for us."

After using the system for six months, Mr Shields said that, in his opinion, the aqueous line achieves equivalent levels of component cleanliness to a solvent system. It is therefore safely underpinning the stringent quality control criteria for hydrogen gas generator assembly.



The compactness of the Turbex Versa 120 at ITM Power is apparent from this panoramic view taken from just inside the door to the room. The line of tanks is in fact straight.



Dunking of a basket in the first, ultrasonic wash tank.



The basket entering the second tank for the first rinse.



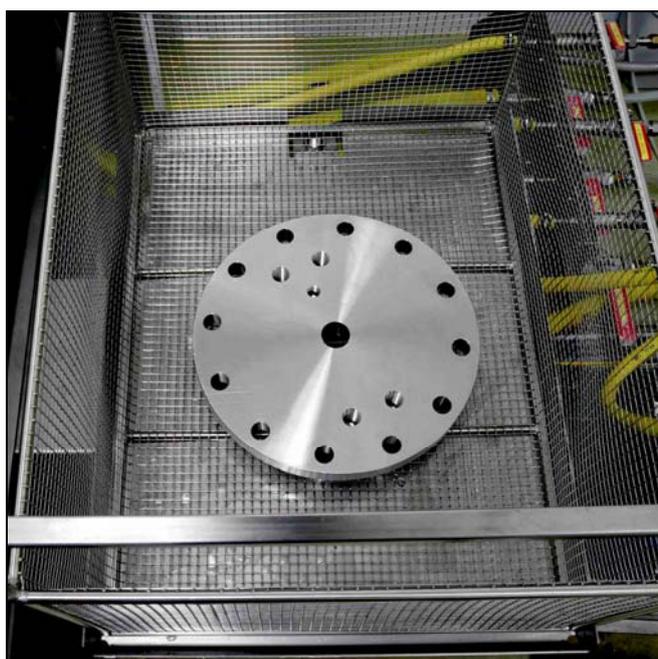
The basket about to be transferred to the third tank for final ultrasonic rinsing in deionised water.



The basket passing to the unload station.



Unloading in progress.



The cleaned component.

About ITM Power

ITM Power has developed a range of materials and technology to reduce the cost of hydrogen production. The company manufactures products to convert renewable energy to a clean fuel, storing the energy as green hydrogen for decarbonising transport, industrial and residential applications. www.itm-power.com

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