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## **Spirax Sarco steam injector brings quiet efficiency for mushroom producer**

Spirax Sarco has solved a severe noise problem and overcome shortages of sterilisation steam by installing a steam injector in the boiler feedtank at Heveco Mushrooms in West Sussex. The injector is also cutting the consumption of water treatment chemicals by an estimated 75%

Heveco is a major supplier of mushrooms to the UK retail market. A crucial part of the farm's intensive operation is sterilisation using steam at 5.5 bar g. "We need continuity of production and efficient sterilisation is key to maintaining optimal performance," says Heveco's plant engineer Mr Steve Mustchin.

The new steam injector replaces a sparge pipe (a tube drilled with holes) to mix steam with the water in the boiler feedtank. The sparge pipe was inefficient, resulting in an inconsistent boiler feedwater temperature. When the feedwater temperature was low, the boiler used excessive energy and took longer to generate steam, which led to steam supply problems. Inconsistent feedwater temperature also meant that extra treatment chemicals were needed to protect the boiler, because cooler water holds more of the dissolved oxygen that causes corrosion.

“It’ll take a while to confirm the cost savings,” says Mr Mustchin, “but we’re definitely using fewer chemicals and it’s more efficient to heat the water in the tank rather than the boiler. We’re really pleased – I just wish we’d made the change earlier.”

The sparge pipe was also noisy and caused vibration, which was a big concern. “Anyone working in the boilerhouse had to wear ear protectors,” says Mr Mustchin. As well as being a nuisance for personnel, vibration can cause extra wear and tear on the steam system. “Since we fitted the Spirax Sarco injector we haven’t had a single problem,” explains Mr Mustchin.

The steam injector draws water from the surrounding tank into a nozzle, where it mixes with the steam before being discharged. As well as being quiet, the injector increases circulation so that the water temperature is consistent throughout the feedtank. This enables Heveco to top up the boiler at a steady 87°C.

