

22 July, 2004

Steel mill boosts productivity with accurate cooling controls

Three Spirax Sarco pneumatically-actuated control valves fitted with smart positioners are helping to boost productivity at a steel section mill near Cardiff. The valves provide precise control over the flow of water used to cool rolled steel sections. The rate of cooling, from 800°C to under 100°C over a 15 minute period, is critical to avoid warping after straightening of the mill's steel channel and angle stock.

Celsa Manufacturing relies on water cooling because of the restricted space on the cooling bed at its Tremorfa Works mill. "This is an unusual application because most mills use air cooling. We do not have the space for hundreds of cooling racks so we need to cool the bar more quickly and allow us to straighten on line," says Mr. P. Willis, Mechanical Engineer, Celsa Manufacturing UK.

Maintenance costs have also been reduced.

"The old valves and hollow cone nozzles we replaced, frequently became blocked by particles in the recycled cooling water, which the old filtration system failed to catch. We have had no blockages at all since the new valves and controls, plus a better filtration system, were installed. This has reduced our maintenance requirement and improved our production efficiency," explains Mr. Willis.