

Schwank Case Study

Heating BMW Steel Stamping Plant: Substantial Energy Savings & Carbon Footprint Reduction



"The new heating system has done everything and more that Schwank promised"

B. Yazdi
Energy Manager, BMW UK



Equipment Used:

- supraSchwank
- ultraSchwank

Facility:

- Steel stamping operation

About The Facility

A steel stamping operation has been in operation on this site in Swindon, England since the early 1950's. In 2000 it became a wholly owned subsidiary of the BMW Group. With fully automated press lines, including coil blanking lines, and subassembly facilities covering more than 1 million ft², the plant produces high-quality steel stampings and complex sub-assemblies. Around 1,000 employees produce most of the body components for the MINI brand automobile, including all the skin panels and closure assemblies. The Swindon plant also manages the logistics of 'Direct Delivery' to the MINI plant at Oxford. Parts ship just-in-time to meet the customer's assembly needs. This lean manufacturing initiative has reduced stocks of components to a minimum.

The Issue

The BMW Group strives to increase production on a continuous basis while consuming ever fewer resources in the production process. Energy sustainability considers that the heating system is a substantial contributor to the overall efficiency and carbon footprint balance sheet. A few years ago BMW Group commenced a search for a highly efficient heating system to replace its outdated central boiler plant. While efficiencies and social responsibility were in the forefront of requirements, the controllability of the system within different buildings and employee comfort also became key criteria. With different working areas requiring different working temperatures, and operating times, flexibility was paramount.



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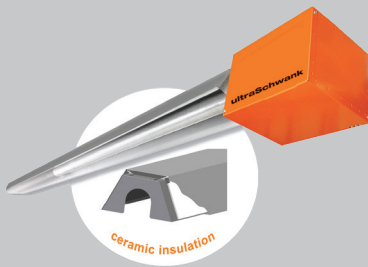
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Products used to heat BMW:



supraSchwank



ultraSchwank



Implementation

After an extensive search for a system that best suited BMW's needs, the decision was made to install a Schwank heating system comprising high efficiency gas-fired radiant heaters.

Schwank supplied over 400 individual radiant heaters that included ultraSchwank tube heaters, and supraSchwank luminous heaters. Heaters with the highest radiant factors were selected to maximize the energy savings and carbon reduction and increase comfort levels. The ability to match an individual building's physical and operating characteristics with the correct heater type was viewed as particularly important.

Results

The heating system is now completely flexible as it incorporates over 50 individual heating zones all controlled and monitored via the site's central Building Management System by Johnson Controls. The design of the system has enabled comfort levels within the site's many different buildings to be easily maintained. Energy savings amounted to 47%, meaning the ROI was reached earlier than forecast - between 2 and 3 years.

Philip Plowman, Energy & Contracts Manager, BMW UK, stated that a reduction of more than 5,500 tons of CO₂ was achieved in the first year. This equates to the volume of over 2,000 Olympic size swimming pools.

Schwank
INNOVATIVE HEATING SOLUTIONS



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