SUCCESS STORY 72
HOT FORMING AUTOMOTIVE PANELS

Q **How can the temperature uniformity of the panel be verified prior to pressing?**

A

Situation and background

Hot forming is being increasingly adopted in the forming of structural panels for use in the production of automobiles. The key benefit is that very rigid structures can be made accurately with high strength lightweight steels. This ensures the car is both lightweight and strong, both of which are improvements required by legislation in many regions of the world. The process consists of the rapid heating of flat panels to 950°C/1742°F prior to pressing them into complex shapes. The Datapaq® system is used to measure the temperature uniformity of the panel through the fast heating process. Hot forming is slower than the previously used process of cold forming. Consequently, any small increase in production throughput has significant financial benefit to the end user.

The winning solution

- The end-user can for the first time measure the performance of this key process.
- Datapaq has experience with fast high heat applications and was able to offer a solution from our standard portfolio of products.
- The time to set up the process at each new product introduction is reduced, thus maximizing production line utilization rates.

Savings made

In one situation in Europe, an experienced user of the hot forming process was able to shorten the heating time by 15%. This had immediate payback as the hot forming was a frequent production bottleneck, and increasing the throughput of the process improved productivity of the entire line.

KEY FACTS

Customer's End Product
Automotive specialist steel structural components

Max Temperature Reached
950°C/1742°F

Duration of Process
5 min.

PRODUCT AND BENEFITS

TB2005-S
DQ1860 datalogger
Furnace Insight™ software

- Product temperature uniformity can be measured easily and thus optimized.
- Production throughput can be maximized.
- Set-up time for new panel types and thicknesses is reduced.
- Routine process monitoring can be easily accomplished increasing production line availability.
- Trouble shooting the furnace profile is now quick, easy and safe.