

Case Study

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Keeping you up-to-date with the world of **noise measurement**

Cirrus' SoundSign™ – forging ahead in Sheffield

As the world's largest independently owned Forgemaster, Sheffield Forgemasters International (SFIL) is renowned globally for its steel production and engineering. A health & safety led philosophy is at the forefront of everything they do.



Sheffield Forgemasters Internationals' headquarters is one of the iconic landmarks in Sheffield and has a history spanning more than 200 years. The vast River Don site currently employs around 800 staff.

The company continues to supply an increasing global demand for high quality engineered products to key industries such as defence, nuclear, oil and gas exploration, power generation, marine and construction.

The Noise at Work need:

A health & safety led philosophy is at the forefront of everything that is achieved and produced at Sheffield Forgemasters International. As its Management states: "No major decision is taken at any level of the organisation, from Board level down, without due cognisance being taken of its impact on the safety of the company's employees. Over recent years the company has made great progress in not just maintaining, but improving, its health and safety management system and accident performance."





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The Product:

The SoundSign™ is a highly visible noise activated warning sign that has been designed for environments where there is a need to clearly warn when a preset noise level is reached.

Cirrus Research supplied Sheffield Forgemasters International initially with six of its SoundSigns™; this order was quickly doubled to 12 as the health & safety team realised the many benefits the SoundSign $^{\text{\tiny{M}}}$ technology brought to its metal forging production floor.

The Location:

The SoundSigns™ were installed in the Heavy Machine shop to monitor the noise levels of the machinery enabling SFIL to reduce the mandatory noise area.

As one of the world's leading forgemasters, the company operates equipment across its site where the scale is titanic. This includes: a 10.000 tonne forging press with a fully integrated 300 metre tonne manipulator and a 4,000 tonne press with an 80 tonne rail bound manipulator.

These impressive pieces of equipment all form part of the modern facilities where sophisticated forging techniques can create hollow, solid and irregular shaped forgings up to 250 tonnes in weight. Such large scale industrialised processes require high levels of health & safety monitoring, including excessive noise levels which can lead to permanent health and hearing impairment.

The Heavy Machine shop, where the SoundSigns™ were deployed, houses milling and boring machines of various size and capacity, some weighing several hundred tonnes.

To mitigate the risk and exposure to excessive noise levels, the SoundSigns™ were pre-set at levels 80-85dB - the action levels stipulated under Noise at Work legislation. These warn employees of any noise level breaches and instruct them to wear hearing protection as a result. Once the noise levels dissipate the signs automatically switch off.

The Benefits:

- The white LED technology allows for a high visual impact when noise levels are breached, as well as a long operating life.
- The signs are quick and simple to install with no training required.

- The Trigger levels from 40dB(A) to 114dB(A) can be used in any environment and were particularly suited to the heavy industrialised setting of SFIL.
- Both text and graphics are used to communicate specific noise level warnings.
- With 4 standard designs, it covers all indoor applications - from factories and manufacturing to helping monitor "quiet" zones in hospitals and libraries.

About Cirrus Research

Cirrus Products used in this case study

SoundSign™

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