Are You Thermal Spraying Within The Law?

Thermal spraying processes can give rise to a number of potential hazards to the operator of the equipment, unless correctly addressed. It is now mandatory within the law to undertake a proper risk assessment when considering new plant to ensure that these risks are minimised.

Issues to be considered include:

- **Assesment of explosion risk (ATEX)**
- **Control of hazardous dusts**
- **Noise control**
- **Conservation of heat energy**
- **Control of hazardous & enclosed spaces**

Assessment of Explosion Risk

For many years the use and handling of flammable gases in industry has been tightly controlled by rules that dictate what is acceptable practice in 'zoned areas'.

There are also many dust types which are potentially explosive when suspended in air, but it was only recently that the regulations contained in the ATEX directive came into force to lay down acceptable safe practice for dust handling.

The new regulations clearly state that operators of equipment that generate and capture dust, must be able to prove that through the design and deployment of the equipment, the explosion risks have been assessed, quantified and minimised.

Minimisation of the explosion risks means that where a risk has been identified, acceptable measures have been taken to avoid ignition and to have a safe pressure venting system in place, should an explosion occur.

Control of Hazardous Dusts

Many of the airborne dusts created by thermal spraying processes can be very hazardous to health if inhaled. It is therefore extremely important when installing thermal spraying systems that adequate dust control measures are incorporated.

Ideally the process should be carried out in an enclosure to prevent escape of the dust and noise into the work area. A dust extraction and filtration system should be provided to allow the harmful dust to be captured safely.

Health & Safety Engineering offer high efficiency dust collectors that have low running costs and reliable operation.

Noise Control

The other function of the thermal spraying enclosure is to reduce the noise to acceptable levels. Typically, noise levels between 120 and 130 dBA can be generated whilst spraying, and in order to comply with COSHH regulations, this needs to be reduced below 80 dBA at 1 metre.

Health & Safety Engineering can supply acoustic enclosures which meet these regulations giving full protection to the workforce.

Control of Hazardous and Enclosed Spaces

The greatest hazard to personnel is the thermal spraying process itself. Severe burns or blindness can result if operators are not suitably protected, and in addition, crushing injuries could occur if robots are not made safe, and even asphyxiation could result from a build-up of the process gasses if inadequately vented.

Health and Safety Engineering offer acoustic enclosures with sophisticated interlocks to prevent operators gaining access to the booths unless it is safe to do so.

Safety devices include gas detection, oxygen depletion monitors, booth purging cycles, robot interlocks, door locks and time delays.

HSE **Health and Safety Engineering**

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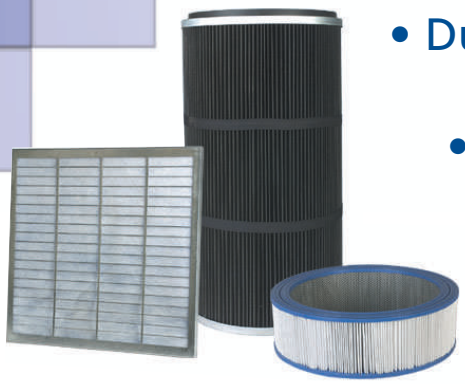
Health and Safety Engineering

Experts in Dust Extraction and Acoustic Enclosures for The Thermal Spraying Industry

Health and Safety Engineering have been supplying acoustic enclosures and dust extraction systems for thermal spraying applications for more than 20 years, and also offer a Total Filter Management programme to operators which includes maintenance , spares and LEV emission testing.



• Dust Extraction Filter Units •

• LEV and COSHH Tests •

• Filter Unit Servicing •

• Acoustic Enclosures •

Replacement Filters

Dust Extraction Filter Units

• Thermal Spray Equipment •

• Spares •

• Smoke Clearance Tests •

• Shot Blasting Booths •

• Central Vacuum Systems •

Filter Unit Servicing

• Turnkey Projects •

Thermal Spray Equipment and Spares

Turnkey Projects

Health and Safety Engineering specialise is complete turnkey projects including design, installation, commissioning and servicing of a complete termal spray package.

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