

Dear Reader,

Welcome to our Easy Guide Blast. In a few words we would like to introduce the content of our Beryllium-containing materials guide on **FOUNDRY MELTING & CASTING EXPOSURE CONTROL GUIDE**. This is the 5th of 9 guides on specific processes provided by the Be Responsible Programme.

CONTEXT OF THE BE RESPONSIBLE PROGRAMME



The **Be Responsible Programme**, launched by the Beryllium Industry, aims to advance the science of beryllium health and safety as well as protect beryllium workers and their close entourage.

The Beryllium Science and Technology Association (BeST), representative association of the beryllium industry, and its members stress that substantial uncontrolled workplace exposure to beryllium airborne particles can present a potential health and safety risk to employees.

What to achieve

The inhalation of beryllium-containing dust, mist or fume can cause a serious lung condition in some individuals. The use of engineering and work practice controls are the preferred methods of controlling exposure to beryllium-containing particulate reliably below the national occupational exposure limit (OEL) applicable in your country for airborne beryllium.

Exposure during foundry melting and casting

All visible releases of melting and casting fumes must be controlled to prevent release into the work environment. In these cases, process ventilation is **necessary**. Foundry melting and casting operations are considered as likely inhalation hazard operations. Consequently, effective controls must be implemented.

Critical ventilation parameters

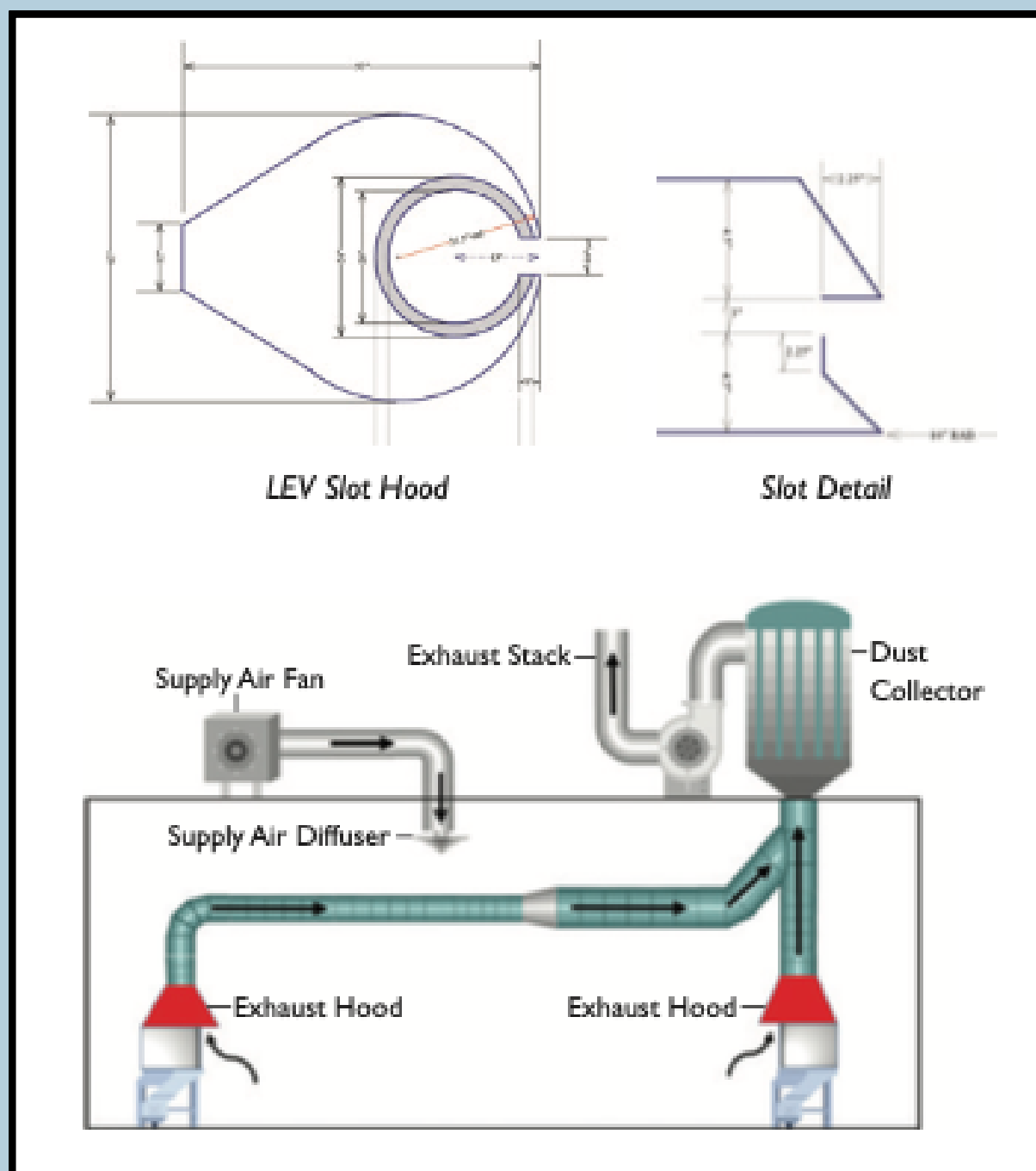
Understanding the critical ventilation parameters, i.e. velocity, particle capture area, distance from source and air flow rate, is needed to determine the most effective process ventilation.

1st action: Read the product Specific Safety Data Sheet (SDS).

2nd action: Use local exhaust ventilation (LEV). Exhaust inlets/hoods to be positioned as close as possible to the source.

3rd action: Conduct operations in a ventilated enclosure.

Good to know: As part of the ventilation equipment, process exhaust air should be directed through a High Efficiency Particulate Air (HEPA).



What else to consider

Engineering & work practice controls to be implemented to **cross handling operations**.

When removed from molten metal, **furnace tools** such as rub bars, skim bars, and thermocouple tips will release fume. These tools should be placed in a LEV hood after each use.

More information

The American Conference of Governmental Industrial Hygienists (ACGIH) publishes a guide to effective ventilation system design entitled, "Industrial Ventilation: A Manual of Recommended Practice". The ACGIH publication describes ventilation systems for a wide range of operations.

Golden rule 1

As always, personal protective equipment, maintenance, housekeeping and workplace exposure characterisation must be implemented.

Golden rule 2

BeST recommends that quantitative and qualitative exposure assessments be conducted by a qualified industrial hygienist or occupational health professional.

Golden rule 3

In case of doubt, always reach out to your supplier for additional guidance.

Check out the full foundry melting and casting exposure control guide [here](#).

WANT TO KNOW MORE?

Check out our dedicated website www.berylliumsafty.eu in all European languages or get in contact with us at info@beryllium.eu

WHAT ABOUT THE OTHER GUIDES?

We will continue to provide similar Easy Guide Blasts for all our Be Responsible Guides in the coming months on a regular basis so keep an eye out for our emails! Previous Easy Guide Blasts are available [here](#).