24 April 2024

Press release – special topic occupational safety

Safe handling of dust – information on offer at Stone+tec

Preventing the dangers of dust is an important task for companies of all sizes. Any dust can lead to respiratory diseases in the event of high levels of exposure. In addition to suitable organisational and personal protective measures, tools with integrated extraction systems as well as stationary and mobile dust extraction systems contribute to employee safety.

Nuremberg – Dust of differing particle sizes and compositions is released during many work steps in the processing of natural stone and industrially produced building materials such as ceramics and quartz composite material, as well as in cement or concrete processing. Depending on the material, experience has shown that this mineral mixed dust contains fine quartz dust as well. Pneumoconiosis is caused by the inhalation of inorganic dust. Quartz dust can also lead to silicosis and cause lung cancer. The importance of protection against dust in the workshop and on the construction site is demonstrated by statistical data: in 2022, the number of BG BAU (Employer's Liability Insurance Association for the Construction Industry) insured persons with a suspected occupational disease due to inorganic dusts was 3,525.

The effect of dust depends on the type of dust, the duration and level of dust exposure, the location of deposition in the respiratory tract and the particle size. Different limit values apply to the various types of dust in the air at workplaces. According to the Technical Rules for Hazardous Substances (TRGS), the occupational exposure limit value for inhalable dust of the so-called E-dust fraction is 10 mg/m³ of air. For respirable A-dust, the finest part of the inhalable dust that can penetrate into the alveoli, the limit value

is 1.25 mg/m³. The assessment standard for quartz dust is 0.05 mg/m³, measured in the respirable A-dust fraction.

Reducing and preventing dust

The measures available to employers and employees to minimise and prevent the health risks posed by dust are as varied as the sources of dust hazards. BG Bau promotes the (S)-T-O-P principle. The order in which the measures are to be taken is binding.

Substitution, i.e. the replacement of dust-intensive products with low-dust products such as low-dust tile adhesives, is followed by technical (T) and organisational measures (O). Only when all these measures have been exhausted may personal protective equipment (P), such as respiratory protection, be used.

Technical measures play a particularly important role in the day-to-day work of stonemasons, for example low-dust working methods and machinery in which the dust is extracted directly at the point of origin, as is the case when blasting lettering directly at the blasting head. The BG BAU advises using extracted machinery and equipment for cut-off grinders and sanders. Dust extractors of at least class M should be used to collect dust from machinery. In addition, work areas should be cleaned regularly using dust extractors – dry sweeping or blowing should be avoided at all costs. In practice, the combination of an extracted manual machine and an air cleaner can achieve sufficient dust reduction. It is also particularly important that all employees are conscientiously informed about using technical measures effectively and the necessary protective measures.

An important source of information on the topic of dust is BG BAU's fair presence at Stone+tec 2024 in Hall 11, Stand H04. Traditionally, the topic of dust prevention takes up a lot of space with the presentation of specific low-emission processes and machinery for various activities. The BG BAU stand will also address the topic of ergonomics in stonemasonry and the BG BAU's service modules on musculoskeletal disorders. Information on noise protection and risk assessment in general will round off the fair programme. Exhibits complete the information on offer: Planned are a demonstration of kneeling seating devices for working close to the ground, the presentation of an electric stair climber for transporting heavy and bulky loads up all types of stairs, low-dust manual machines for edge processing, dust extractors for extracting dust from machines and for cleaning work, air purifiers for use on

construction sites and much more. Optimisation options for dust extraction at the workplace will be demonstrated using a dust cabin.

Safe handling of dust is also a high priority in the product range of tool and equipment suppliers such as J. König GmbH, particularly in connection with the processing of ceramic materials: “Due to the high proportion of fine dust generated when processing ceramic materials, dry extraction is ideally suited,” explains Managing Director Franziska Petri. According to her, wet filter systems have less and less market share, as some fine dust components do not bind with water. For stonemasons, a dust extraction system isn’t a productive system, but it creates a more attractive and cleaner workplace and a pleasant working environment that ensures higher productivity, explains the Managing Director.

At Stone+tec 2024, the Karlsruhe-based company will be exhibiting a latest-generation dry extraction wall with automatic cleaning and an Italmecc dry extraction table in Hall 12, Stand A-B21. This will be used live in the test area. The two mobile extraction units Mini Turbo and Maxi Turbo for workshops and construction sites will also be presented live in action.

Stone+tec Nürnberg in combination with Tile+tec will take place on 19 and 22 June 2024 at the Messe Nürnberg.

www.stone-tec.com

Copy and research: Richard Watzke

Press contact and accreditations
AFAG Messen und Ausstellungen GmbH
Corporate Communications
Messezentrum 1, 90471 Nuremberg
Phone +49 (0)911 98833-585
presse@stone-tec.com