

GOOD PRACTICES FOR ISOSTATIC PRESSING (DRY) IN CERAMICS

This activity relates to the isostatic pressing of ceramic products containing crystalline silica. Dust is possible while filling the moulds and when removing them.

ACCESS

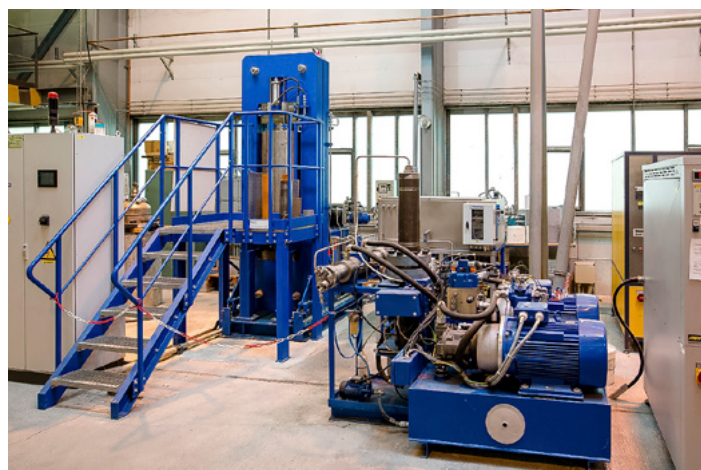
Restrict access to the work area to authorised personnel only.

DESIGN AND EQUIPMENT

- Control raw material spillage. Make sure the right amount of raw material is used for the mould e.g. by providing a gauge.
- Enclose the filling/unforming station as much as possible.
- Make the enclosure deep enough to contain equipment and materials.
- Keep the open area as small as possible – while allowing enough room for safe working. Use see-through panels and plastic strips to reduce the open area.
- The general airflow into the enclosure should typically be at least 0.5 m/s. The airflow towards the hood slots should typically be at least 1 m/s. Refer to task guidance sheet **2.1.13**.
- **DO NOT store items inside the ventilated area; they will obstruct the airflow. Ensure large items do not obstruct the work opening.**
- Where possible, locate the work area away from doors, windows and walkways to stop draughts interfering with the ventilation and spreading dust.
- Provide an air supply to the workroom to replace extracted air.
- Provide an easy way of checking the control is working, e.g. a manometer, pressure gauge or tell-tale (a small flag).
- Discharge extracted air to a safe place away from doors, windows and air inlets.
- You can recirculate cleaned and filtered air into the workroom, in quantities recommended by existing standards.

MAINTENANCE

- Ensure equipment used in the task is maintained as advised by the supplier/installer in efficient working order and in good repair.
- Replace consumables (filters etc.) in accordance with the manufacturer's recommendations.



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EXAMINATION AND TESTING

- Obtain information on the design performance of the ventilation equipment from the supplier. Keep this information to compare with future test results.
- Visually check all equipment at least once per week for signs of damage or, if it is in constant use, check it more frequently. If used infrequently, then check it before each use.
- Have the ventilation equipment examined and tested against its performance standard, at least once each year.
- Keep records of inspections for a suitable period of time which complies with national laws (minimum five years).
- Put in place measures to control the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated.

CLEANING AND HOUSEKEEPING

- Clean your workplace and equipment on a regular basis.
- Deal with spills immediately.
- Use vacuum or wet cleaning methods.
- **DO NOT clean up with a dry brush or using compressed air.**

TRAINING

- Give your employees information on the health effects associated with respirable crystalline silica dust.
- Provide employees with training on: dust exposure prevention; checking controls are working and using them; when and how to use any respiratory protective equipment provided and what to do if something goes wrong. Refer to task guidance sheet **2.3.4** and part 1 of the Good Practice Guide.

SUPERVISION

- Have a system to check that control measures are in place and that they are being followed. Refer to task guidance sheet **2.3.3**.
- Employers should make sure that employees have all the means to perform the checklist given below.

PERSONAL PROTECTIVE EQUIPMENT

- Refer to task guidance sheet **2.1.15** dedicated to Personal Protective Equipment.
- Risk assessment must be carried out to determine whether existing controls are adequate. If necessary, respiratory protective equipment (with the appropriate protection factor) should be provided and worn.
- Provide storage facilities to keep personal protective equipment clean when not in use.
- Replace personal protective equipment at intervals recommended by the manufacturer/supplier.

EMPLOYEE CHECKLIST

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| <input type="checkbox"/> Make sure the ventilation system is switched on and is working. | <input type="checkbox"/> If you think there is a problem with your dust control equipment, ensure additional control measures are taken to reduce exposure to respirable crystalline silica dust while the problem persists. | <input type="checkbox"/> Remove broken products immediately from the work area. | <input type="checkbox"/> Do not clean up with a dry brush or using compressed air. |
| <input type="checkbox"/> Make sure it is running properly; check the manometer, pressure gauge or tell-tale. | <input type="checkbox"/> Make sure that paper bags and other waste material aren't drawn into the ventilation duct. | <input type="checkbox"/> Put lids on containers immediately after use. | <input type="checkbox"/> Use, maintain and store any respiratory protective equipment provided in accordance with instructions. |
| <input type="checkbox"/> Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor. | <input type="checkbox"/> Make sure that large items do not obstruct the working opening. | <input type="checkbox"/> Clear up spills immediately. Use vacuum cleaning or wet cleaning methods for solids. For liquids contain or absorb with granules or mats or wash away with a lot of water. Dispose of spills safely. | <input type="checkbox"/> Check and implement the measures of controlling the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated. |

This guidance sheet is aimed at employers to help them comply with the requirements of workplace health and safety legislation, by controlling exposure to respirable crystalline silica. Specifically, this sheet provides good practice advice on dust control during isostatic pressing of ceramic products containing crystalline silica.

Following the key points of this task guidance sheet will help reduce exposure.

Depending on the specific circumstances of each case, it may not be necessary to apply all of the control measures identified in this sheet in order to minimise exposure

to respirable crystalline silica. i.e. to apply appropriate protection and prevention measures. This document should also be made available to persons who may be exposed to respirable crystalline silica in the workplace, in order that they may make the best use of the control measures which are implemented.

This sheet forms part of the Good Practices Document on silica dust prevention, which is aimed specifically at the control of personal exposure to respirable crystalline silica dust in the workplace.