



Best Practice

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Introduction

This document is a guideline that is intentionally structured as an overview to cover topics that may or may not be incorporated into a detailed plan for a grinding and polishing contractor to be more environmentally friendly. This plan will be dependent on the specifics of each grinding and/or polishing jobsite, coupled with the considerations of the work environment, the quality of work, the financial impact and safety aspects of that particular jobsite.

Most of the resources available on the subject of “green” construction practices focus primarily on the design and engineering plans of buildings. Limited resources are available on the renovation and demolition practices carried out on the actual jobsite, including grinding and polishing concrete floors for remodeling projects. This document is specific to the grinding and polishing industry, and provides insight and guidance in the creation of a site-specific plan for environmentally friendly working practices to be performed by operators in this industry. The adaptive re-use of a concrete floor where grinding and polishing is required to accomplish the new configuration is the ultimate in sustainable development.

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1. Holistic Approach

It can be beneficial to the contractor to look at the complete jobsite from management to the final cleanup and waste disposal. Some of the following recommendations can be implemented beyond a single jobsite to involve company policies for day to day operational procedures spanning all of the contractor’s jobs. “Green” jobsites are typically noted in the bid documents. Note any additional documentation and procedural requirements which would impact a bid.

2. Grinding and Polishing Operations

Concrete grinding and polishing operations performed by contractors generate concrete waste (mostly finely ground concrete) and exhaust which must meet applicable air quality standards.

The following section highlights just some of the areas where grinding and polishing companies can become greener.

2.1. Concrete Recycling

Concrete waste from grinding and polishing operations largely consists of concrete dust or slurry and/or substances such as adhesives, mastics and levelers. Concrete dust is recyclable as filler/base for concrete slabs and also can be used as a soil conditioner on clay-based soils.

Grinding debris from floors with known hazardous substances such as asbestos engrained in the concrete, or floors that have been exposed to hazardous liquids that penetrate the concrete, should not be used for recycling. This debris should be properly disposed of according to the substance involved.

2.2. Recycle Worn Out Metal Tooling

Recycling Metal from worn out tooling helps to create a greener jobsite.

2.3. Properly Size Equipment for the Job

- Use appropriate sized grinders and generators for the needs of the work being performed.
- Use biofuel generators.

2.4. Perform Regular Maintenance

- Properly maintain all equipment to maximize fuel efficiency.
- Have a proactive preventive maintenance program in place.

2.5. Indoor Air Quality

Regular maintenance of vacuums and filters will keep air filtration systems running at optimum performance and provide the greenest work environment.

Engine Exhaust must meet applicable standards.

Use of liquid silicate densifiers and guard/sealer products associated with densification of ground and polished floors should contain low amounts of volatile organic compounds (VOC) for a healthier working environment.

3. Office-based Operations

Efforts to recycle waste material and promote a green working environment need not be limited to the jobsite. The office also provides scope for businesses to successfully run a green company, as many items of office equipment and stationary are recyclable and use of paper can be minimized by using electronic data.

The production of industrialized paper and plastic creates a negative impact on the environment, consuming energy, adding to landfill waste and pollution. Grinding and polishing contractors have the opportunity to recycle all paper and plastics consumed or used at their office locations by separating recyclables from non recyclables and loading them into special containers for recycling. Here are some examples of how cutting contractors can make their office-based operations greener.

3.1 Recycle Paper

- Have a special trash can for the recycling of waste paper, including letters, notes or large construction drawings.
- Reuse unwanted printouts, where applicable, by printing on the reverse.
- Order recycled printer paper from stationary suppliers.

3.2 Minimize Paper Use

- Cut down on unnecessary printouts where electronic files will suffice.
- Include notes or signatures on emails like, "be kind to the environment, think before printing this email" to encourage others.
- Use projectors and computer data sharing for paperless meetings.

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3.3 Recycle Printers and Cartridges

- When equipment is replaced or upgraded, recycle old items such as monitors, keyboards and printers.
- Use the free return packaging supplied with printer cartridges to recycle them.
- Have ink cartridges refilled when empty or buy refilled cartridges from suppliers.
- Use printer cartridges that contain soy-based ink.

3.4 Recycle Packing and Shipping Materials

- Send pallets for recycling or make use of the wood.
- Reuse cardboard boxes or break down to recycle.
- Reuse or recycle other packing materials made of paper, card, plastics or metals like aluminum or tin.

In general, green strategies make good economic sense for companies. Replacing incandescent bulbs with compact fluorescent lights when they require replacement can save businesses money through the conservation of energy and the lowering of electricity bills..

By following just some of the points raised in this document, grinding and polishing contractors can become greener both on the jobsite and at the shop. Not only this, but employing some of these processes can save the company money too. It is important to observe as many green practices as possible during grinding and polishing operations to protect the environment and, in some cases, abide by state and Federal laws.

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