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Machinery & Equipment MRO

New technologies aid cleaning

Cleaning machinery and equipment reduces the cost and consequences of a breakdown or failure in production that results from dirty equipment.

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Since the creation of humanity, cleaning is a common and integral task in our lives. We clean ourselves, we clean the dishes, we clean our houses and our cars, and we even rid our pets of dirt. Cleaning is done to maintain our goods as long as

possible, and to ensure their reliability.

On a secondary note, we also clean our goods for them to shine, and as an element of distinction. Being clean is to be proud, and being proud is to look good. The fundamentals of cleaning also apply to industrial machinery and equipment.



Top: Workers wear protective gear while cleaning equipment. Middle: Blasting guns can be used in exposed or enclosed areas. Bottom: Different blasting media are used to clean various surfaces.

As is often the case, if you think the cost for cleaning is a waste of money, you might discover the opposite at your own expense. Whatever calculation you use, sooner or later, the cost and consequences of a breakdown or failure in production resulting from dirty equipment can quickly exceed 1,000% of cleaning costs.

What are the benefits of cleaning equipment and machinery?

- Decrease the risk of failure in production
- Extend the life of equipment
- Improve equipment reliability
- Minimize the risk of fire
- Maintain insurance standards (your insurance company might ask you to clean your equipment before you even make that decision yourself).

Cleaning of machinery and equipment means more than giving it a shot from an air gun. In fact, when you send your maintenance crew to shoot air into your motor control centres or motor drives, you are actually shifting your contamination. In reality, shooting air on dust or dirt will cause the contamination to stack in corners or compress in hard-to-reach spots. For items such as heat sinks or radiators, the accumulation of contaminants will eventually cause overheating. This definitely is not a good cleaning solution.

Don't you want to avoid the consequences of a breakdown in production? Of course you do! Your machinery and equipment are exposed to a harsh environment or they may be contaminated with production residuals. That's why it's important to have them cleaned.

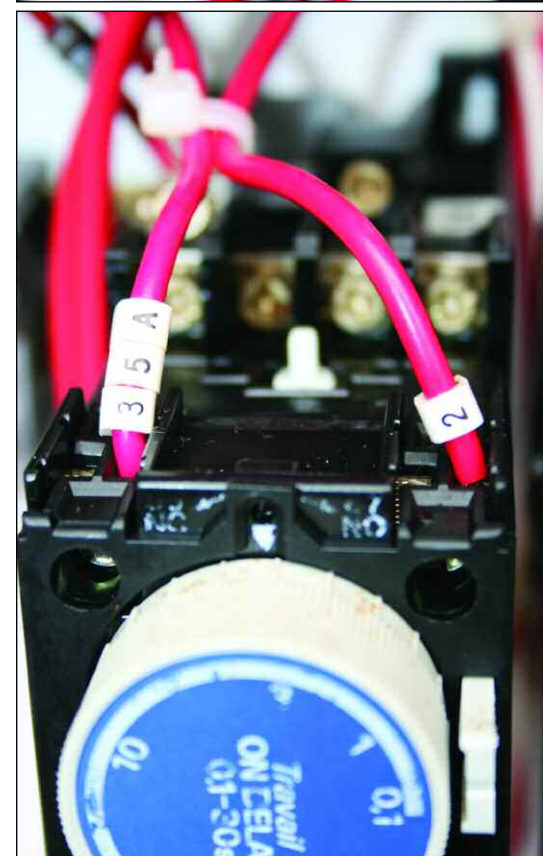
What's covered under the topic of machinery and equipment? The list includes motor control centres, electrical rooms, motor drives, motors, PLCs or any kind of electrical and electronics control, air compressors, presses, ceilings, walls, conduits, tanks, pipes and any other kind of surface exposed to dirt.

Although ultrasonic bath and high-mid pressure washing are useful for cleaning, other techniques are also available. Just like anything else, cleaning processes have been improved and developed to match industry's typical problems. The latest and most innovative process for cleaning is dry ice blasting.

Different from typical water-based cleaning methods, dry ice blasting is free of chemicals, with no wasted water and no messy residuals. It's a revolution in the cleaning process. In addition, along with all related safety measures, dry ice blasting can take place while the equipment is operating online. The process allows for online cleaning of motors, housings, machinery and much more equipment.

On the other hand, blasting media have also improved in the past decade. The sand we used to blast 20 years ago is now replaced with glass beads, ceramic beads, aluminum oxide, walnut shells, corn cob, crushed glass, plastic pellets, rice, wheat and a large number of recycled materials. All these media can be used under closed circuit inside a blasting media chamber, or in a larger room, and then sent to a dust collector for reprocessing.

The appropriate media and pressure for accurate cleaning are both selected according to the surface to be treated and its degree of contamination. Every media has a particular advantage. For example, soda blasting is a very efficient way to clean hard surface conta-



Crud and corrosion are removed from this timer and its wiring (before, top, and after, bottom).

minants as it is water soluble and environmentally friendly.

All these media can be used onsite. Using a system such as the Blast'N Vacuum, the media can be recaptured, allowing the blast cleaning to take place in a dust-free environment, preventing any escape of dust or residue to the surroundings.

In addition to all these processes, some companies offer innovative laser ablation technology for industrial surface treatment, cleaning and paint removal applications. This laser technology removes contaminants, production residue and coatings without any damage to the substrate. Typical industrial applications for laser cleaning include automotive, moulding, baking and historic restorations such as sandstone facades.

Keeping your equipment clean is a pragmatic and certain way to ensure reliability in production. The latest cleaning processes are available to you now, so you have no more excuses to delay. **MRO**

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