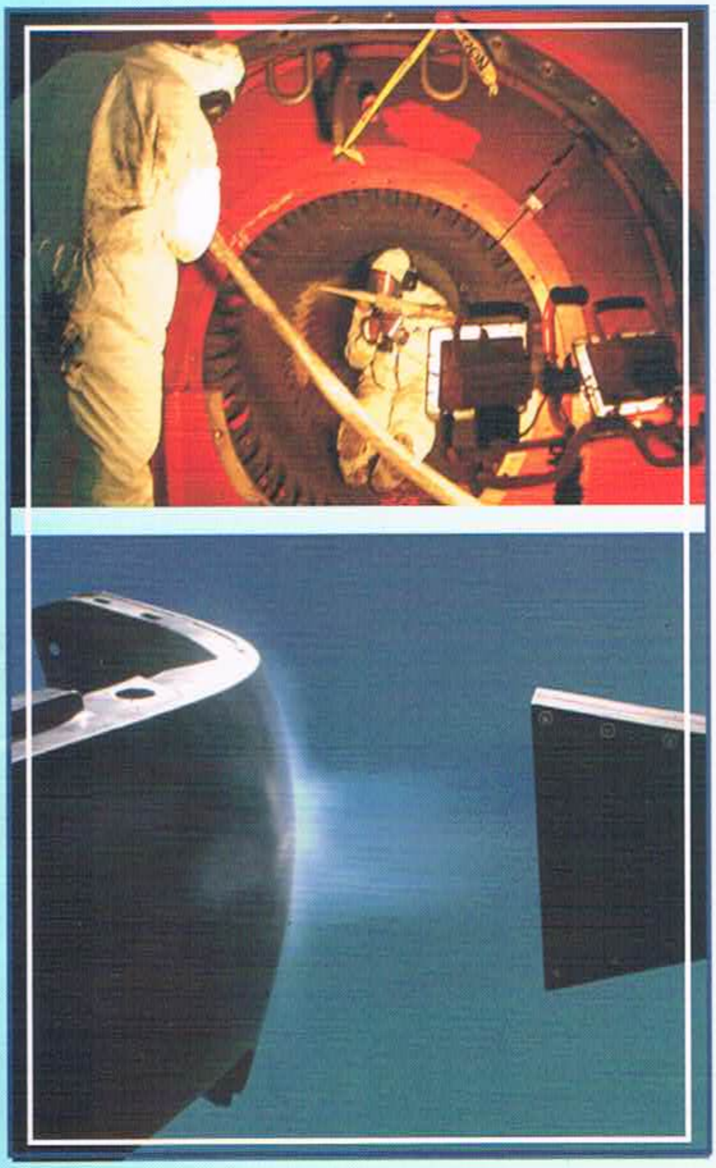
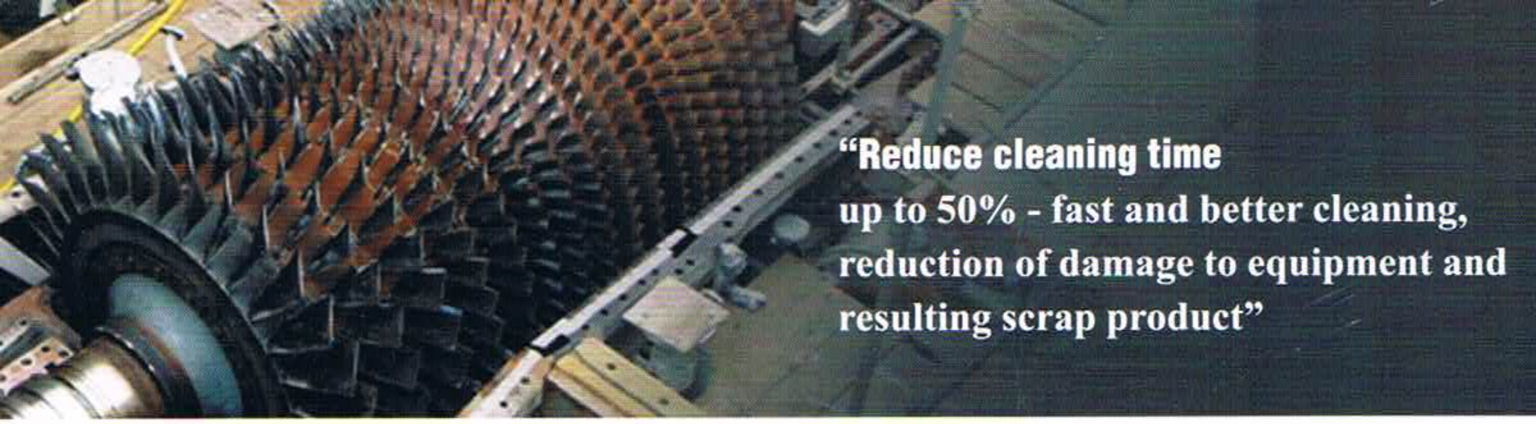
Dry Ice Blasting - Cleaning
A REVOLUTION
in Industrial Cleaning and Restoration



SVCGPL

Sri Venkateswara Carbonic Gases Pvt Ltd

NO SANDBLASTING, NO MESS
The quicker, cleaner way
to heavy duty cleaning



“Reduce cleaning time up to 50% - fast and better cleaning, reduction of damage to equipment and resulting scrap product”

◆ DRY ICE BLASTING

Dry Ice Blasting, is a process in which dry ice particles are propelled at high velocities to impact and clean a surface. The equipment we use accelerates the particles using compressed air. This process is similar to sand blasting without the costly and messy clean up.

Dry Ice Blasting (or CO2 blasting) is a fast, easy and cost-effective cleaning method that uses high-velocity dry ice (or solid CO2) pellets to clean surfaces without damaging equipment or creating new waste streams.

Because of the temperature difference between the dry ice particles (-109°Fahrenheit / -78.3°Centigrade) and the surface being treated, thermal shock occurs during the dry ice blasting process. This breaks down the bond between the substrate and the contaminant to be removed from it. The dry ice vaporizes on impact, so no secondary waste stream is created.

A number of industries worldwide have discovered the advantages of this precision cleaning process. Applications range from heavy slag removal to delicate semiconductor and circuit board cleaning. Dry Ice Blasting is a dry, non abrasive, non-conductive process that leaves no residual media to clean up. It's the pure and powerful solution for your cleaning and maintenance needs.

On impact the pellets sublimate without generating any was
Co2 won't become water!

The only thing remaining is the removed dirt – this way waste
reduced considerably and time saved.

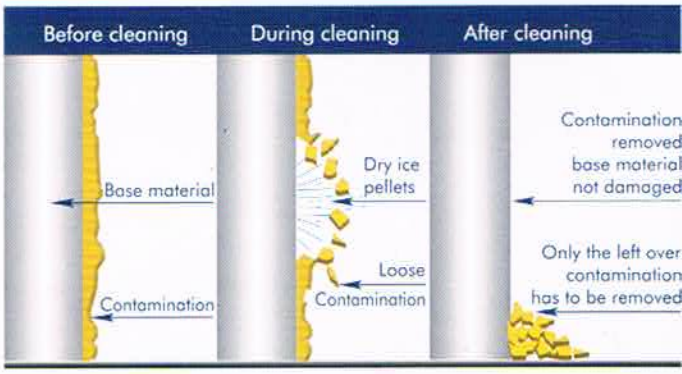
Conventional cleaning methods have serious disadvantages, for example:

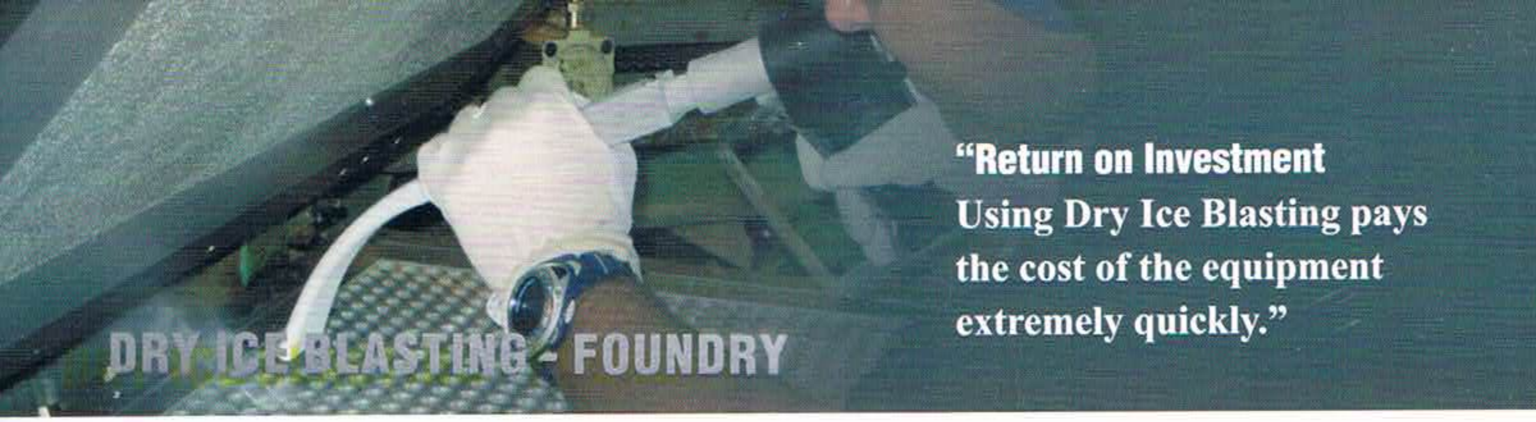
- Water treatment
- Complicated waste disposal
- Time consuming demounting of delicate parts
- Damage of parts to be cleaned

The Dry Ice cleaning process is especially appropriate to clean
fragile parts since the dry ice is non conductive and non corros
The parts to clean do not have to be dismounted nor to be mas

With the Dry Ice blasting machines you can clean parts without damaging the surface, for example:

Glue, oils, grease, bituminous, terials, adhesives, layers
corrosion, wax, printer ink, silicones, PU foam, weld cinc
food residue, encrustation, smoke damage, graffiti, etc.





DRY ICE BLASTING - FOUNDRY

"Return on Investment
Using Dry Ice Blasting pays the cost of the equipment extremely quickly."

Typical manual cleaning methods require cool down, disassembly, unproductive hours of messy hand cleaning or bead blast cleaning, and then reassembly. In addition, most traditional cleaning methods are not fully effective and often result in damage to the part or equipment.

The major issue for the foundry and forging industries is the downtime caused when cleaning permanent aluminum moulds, core box vents, semi-solid castings and die casting machines.

Dry Ice Blasting offers significant improvement in cleaning times (up to 50%) as well as reduction of damage to equipment and resulting scrap product. As Dry Ice Blasting allows a non-conductive, in-place method to clean parts, even touch-up cleaning are safe and easy.

◆ Applications

- Permanent aluminum moulds.
- Refractory coatings.
- Core boxes and vents.
- Die cast tooling.
- Shell core moulds.
- Semi-solid castings / forging.
- Remove resins & release agents.
- General equipment & facility.
- Conveyors.
- General part cleaning.

◆ Pay Back on

- Reduce production downtime.
- Eliminate disassembly of moulds.
- Clean better, hot and in-place.
- Eliminate waste disposal costs.
- Increase production time.
- Non-abrasive, no damage to tooling.
- Environmentally responsible.
- Delivers superior as-cast fnish.

Before Dry Ice Blasting

After Dry Ice Blasting

Before Dry Ice Blasting

After Dry Ice Blasting

Online Cleaning reduce production downtime

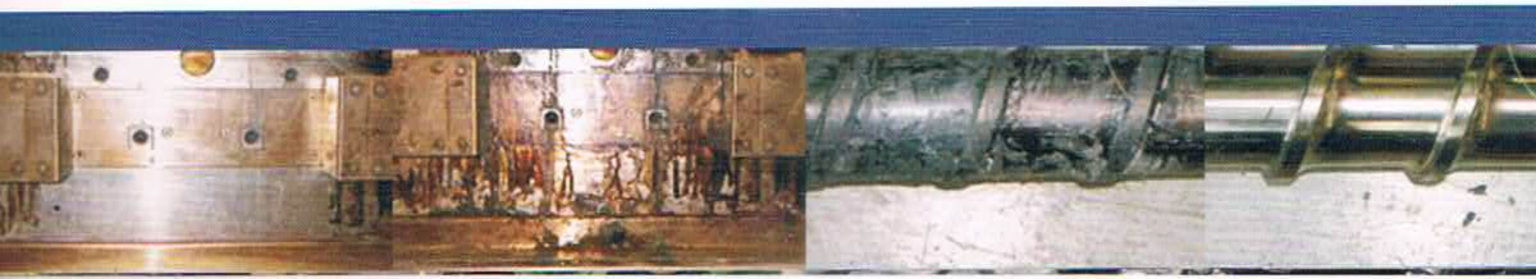
Dry Ice Blasting often allows the company's production equipment to be cleaned while in operation without the need for dismantling and costly downtime a significant economic benefit.

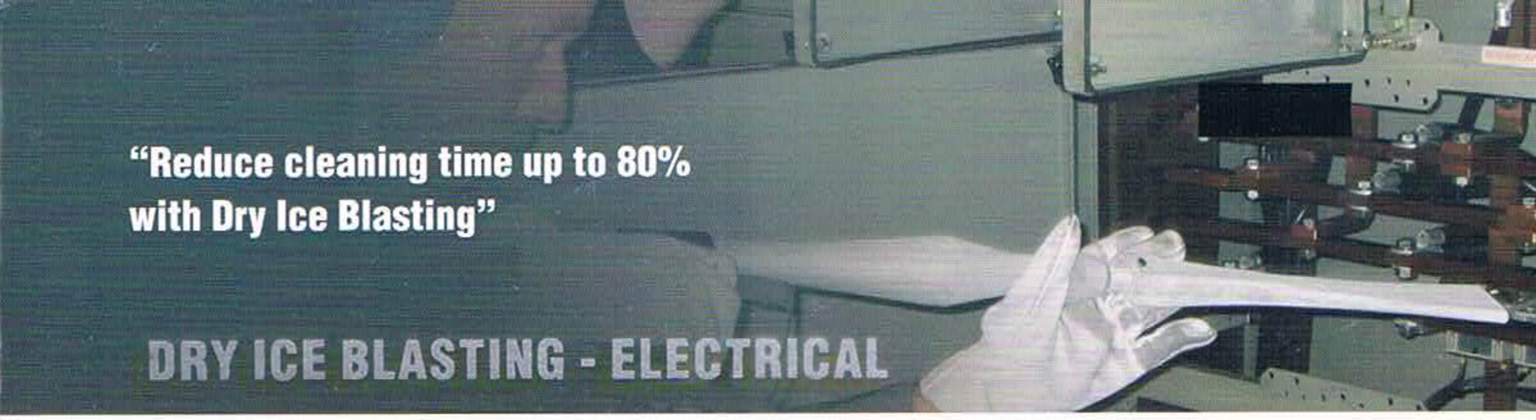
No Waste Disposal

Costs connected with the disposal of hazardous chemicals or solvents are saved because dry ice vaporises on contact with the surface being treated. Only the dislodged coating material must be removed from beneath the treated object.

Return on Investment

Dry Ice Blasting is extremely efficient, less time-consuming and very gentle to equipment to be cleaned, and therefore, the investment is paid back within short time of use.

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“Reduce cleaning time up to 80% with Dry Ice Blasting”

DRY ICE BLASTING - ELECTRICAL

Dry Ice Blasting has met the Electrical Industry's challenge of operating efficiency and uptime. Dry Ice Blasting, a non-conductive process, can restore both rotating and stationary electrical equipment to peak performance with dramatically shorter outages. Due to growing demand for electricity, some equipment such as pad mounted switch gears and substations go without maintenance. This results in less efficient operation and unplanned outages caused by flashover.

Dry Ice Blasting cleans electrical generating equipment to maintain reliable operation. Dirty electrical apparatus will overheat and be prone to arc-overs. Downtime for cleaning means lower plant productivity. Dry Ice Blasting also allows the units to be cleaned in place without damage to cables and insulation, and no explosive solvents.

Dry Ice Blasting of small electronic components is simple, safe and fast. Dry ice cleaning does not require solvents to remove and surface residue material from the components as they move along the assemble line. There is no damage to their plated surfaces. Dry Ice Blasting will also remove masking wax used in specialized plating processes.

Dry Ice Blasting of motors lets the equipment stay in place. With Dry Ice Blasting, you eliminate the dirt while eliminating the vats of solvent, labour consuming disassembly, moving heavy apparatus to the cleaning area, laborious cleaning with the possibility of insulation damage by hand tools during cleaning, drying time from organic solvents or water from a pressure washer or steam jet, and cleanup of the dirty solvent or water. Dry Ice Blasting does not damage insulation on the windings, while removing dirt, oil and carbon residue that may cause arcing or heat buildup.

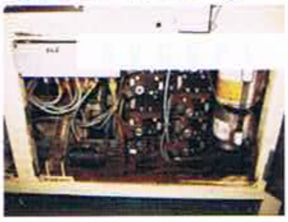
◆ Applications

- Electric motors
- Fire and smoke damage
- Generators
- Turbines
- Insulators and switches
- Cable ways & trays
- Small electric components
- Electric switch boards

◆ Pay Back on

- Better cleaning
- No chemicals
- No water
- No blasting media
- No waste disposal
- Reduced cleaning time an associated labour costs
- Clean your equipment on
- Non-abrasive, gentle to th surface to be cleaned

Before Dry Ice Blasting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After Dry Ice Blasting


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Online Cleaning reduce production downtime

Dry ice blasting often allows the company's production equipment to be cleaned while in operation without the need for dismantling and costly downtime - a significant economic benefit.

No Waste Disposal

Costs connected with the disposal of hazardous chemicals or solvents are saved because dry ice vaporizers on contact with the surface being treated. Only the dislodged coating material must be removed from beneath the treated object.

Before Dry Ice Blasting


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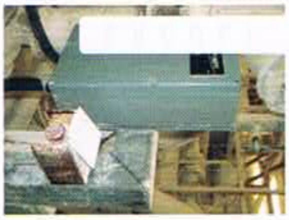
After Dry Ice Blasting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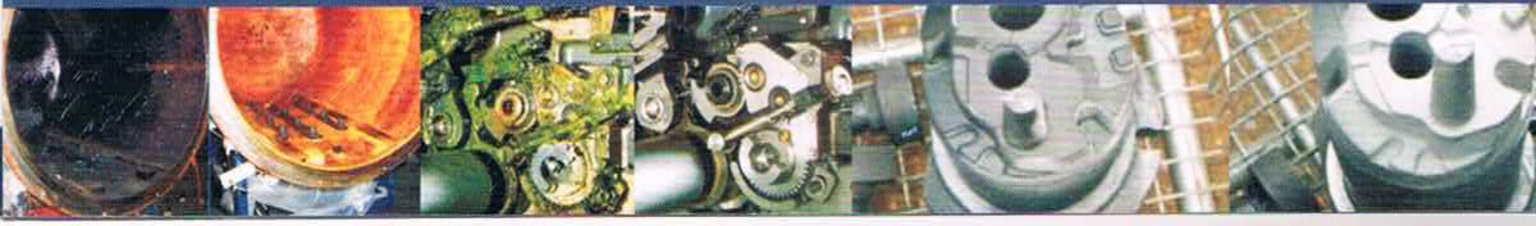

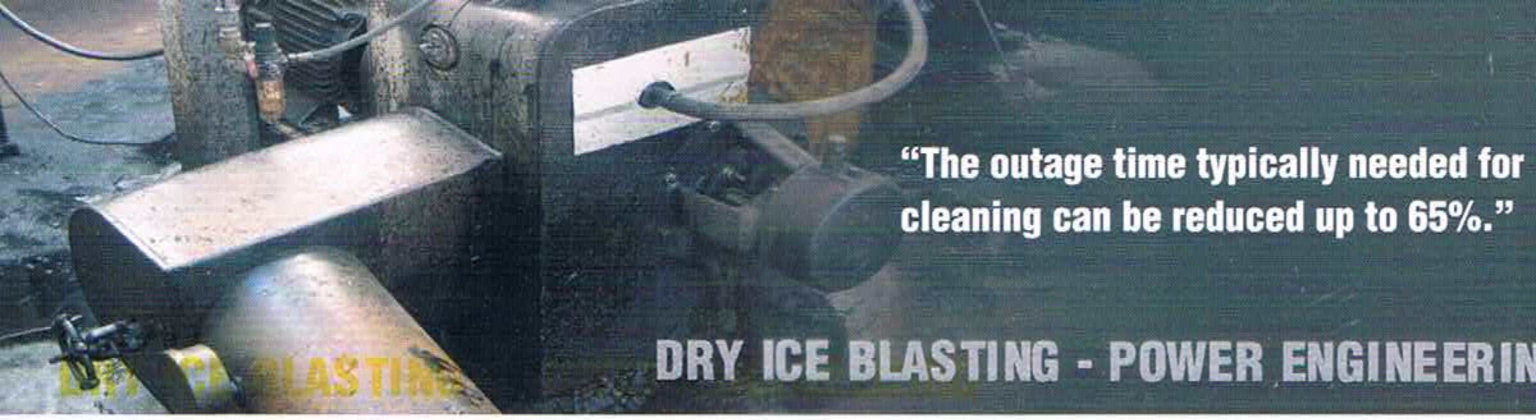

> **"The outage time typically needed for cleaning can be reduced up to 65%."**

DRY ICE BLASTING - POWER ENGINEERIN

Power Generation professionals know that one key to peak performance is clean electrical equipment. However, the demand to keep the equipment running often leads to deferred cleaning and maintenance, reduced efficiency, and in some cases, outages caused by flashover.

Dry Ice Blasting is the most effective, safest and cleanest way of cleaning power generation equipment. From small electric motors too power stations, all can be cleaned with out the use of chemicals. Dry Ice Blasting provides a non-conductive, environmentally responsible cleaning process that allows equipment to be cleaned in-place, without cool down or disassembly. In addition, the outage time typically needed for cleaning can be reduced up to 65%.

Carbon, grease and dirt contribute to low meg readings as well as catastrophic equipment failure. Dry ice cleaning removes these contaminants improving readings and restores machine efficiency.

◆ Applications

- Turbines.
- Compressors & generators.
- AC/DC motors.
- Circuit breakers.
- Switch gears.
- Transformers.
- Rotors.
- Stators.
- Insulators.
- Field frames.
- Substation isolators and bushings.

◆ Pay Back on

- Reduce catastrophic failure.
- Improve megohm readings.
- Increase polarization indices.
- Improve thermal dissipation.
- Reduce outage time for cleaning by 65%.
- Eliminate secondary waste.
- Non-conductive.
- Non-abrasive.
- Environmentally responsible.

Before Dry Ice Blasting

After Dry Ice Blasting

A Faster, More Productive Cleaning Method

Contract cleaners have grown their businesses with dry ice blasting by decreasing project costs and increasing effciency. You can buy, lease or rent Dry Ice Blasting equipment.

No Waste Disposal

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Before Dry Ice Blasting

After Dry Ice Blasting

Return on Investment

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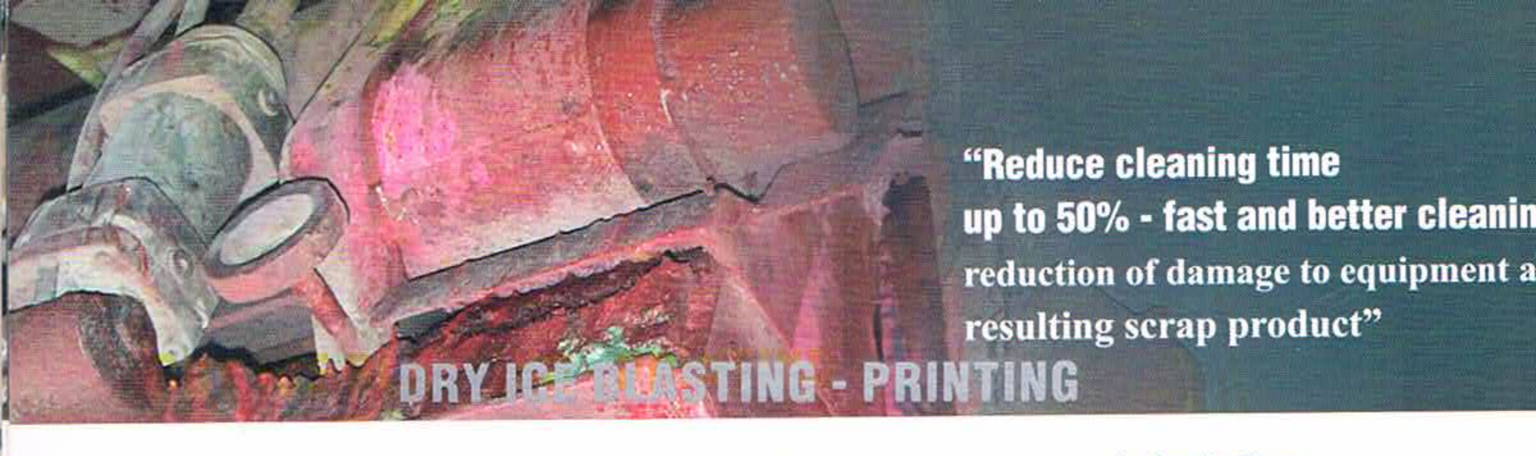


DRY ICE BLASTING - PRINTING

> **"Reduce cleaning time**
> **up to 50% - fast and better cleani**
> **reduction of damage to equipment a**
> **resulting scrap product"**

Dry Ice Blasting works for all presses: Flexography, gravure, offset and web-fed. Even the finest of plates in the gravure process may be cleaned by using dry ice cleaning.

Residue ink, grease, lint from paper, and other built-up coatings can affect registration of the printed material. These can be easily removed with dry ice blast cleaning.

The dry ice cleaning may be accomplished in place, minimal changes to the equipment are needed.

No additional chemical or secondary waste is produced using dry ice cleaning. Dry Ice cleaning makes the toughest locations cleanable. Dry Ice Blasting saves time and money, from days to hours per press.

After a dry ice blast cleaning, a simple wipe down of non-painted parts, and the presses are ready to earn more profit.

◆ Applications

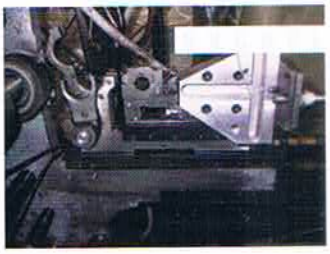
- Dried ink.
- Coatings.
- Paper dust.
- Spray powders.
- Grease.
- Oil.

◆ Pay Back on

- Reduce production downtime.
- Clean better.
- Eliminate waste disposal cost.
- Increase production time.
- Non-abrasive, no damage to tooli
- Environmentally responsible.
- Dry cleaning process.

Before Dry Ice Blasting

After Dry Ice Blasting



Online Cleaning reduce production downtime

Dry Ice Blasting often allows the company's production equipment to be cleaned while in operation without the need for dismantling and costly downtime a significant economic benefit.

No Waste Disposal

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Before Dry Ice Blasting

After Dry Ice Blasting

Return on Investment

Dry Ice Blasting is extremely efficient, less time-consuming and very gentle to equipment to be cleaned, and therefore, the investment is paid back within short time of use.

Cut daily mould cleaning time by about 80% simply by cleaning moulds hot and in place

DRY ICE BLASTING - PLASTICS INDUST

Clean mould cavities are a major concern for plastic part manufacturers in maintaining today's high quality standards. The build-up of unwanted surface residues from either the product mix itself, mould releases or the labeling process can create various problems, ranging from product release ("knock out") to inferior product quality and possible damage to tools.

Flash on the product also creates challenges for manufacturers. Mould halves leave a parting line in the final product, and that parting line, or flash, must be removed for product quality.Traditional cleaning and deflashing methods involve tedious and ineffective manual processes using chemicals and hand tools. The Dry Ice Blasting cleaning process provides a non-abrasive and environmentally responsible method that allows moulds and products to be cleaned in a fraction of the time, allowing increased cycles between preventive maintenance. In addition, moulds can be cleaned hot and in-place, with out water, chemicals or creation of secondary waste.

Today, even the back 1/3 of the blow-mold surface and the entire deep-cavity injection molds used to make test-tube shaped slugs are cleaned by dry ice blasting whereas it used to have to be cleaned by hand.

Dry Ice Blasting – Polyurethane Industry

Polyurethane, dirt, soot, grease, and oil build up in production facilities cause machinery to function improperly and can create an unsafe working environment.

Often, traditional cleaning methods to remove Polyurethane, such as scraping and wiping with chemical solvents, are delayed as long as possible to avoid lengthy production downtime.

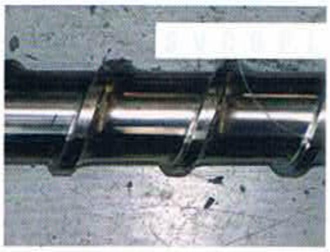
Dry Ice Blasting process allows safe and effective online cleaning in a fraction of the time of traditional methods.

Dry Ice Blasting allows installed equipment to be cleaned without the need to remove it from the production line. Polyurethane, grease, gluing and oil are all removed without contamination.

Dry Ice Blasting is electrically safe, it will not short-circuit motors or switches, and there are no flammable or explosive by products.

Before Dry Ice Blasting

After Dry Ice Blasting



◆ Applications

- Blow moulds.
- Compression moulds.
- Extrusion moulds.
- Injection moulds.
- Thermoform moulds.
- Plastic injection screw barrels.
- Urethane moulds and overspil
- Plate out.
- Off gassing.
- Defashing and (Finishing) surface /partingline vents.
- Gloss leveling (Finishing).

◆ Pay Back on

- Better cleaning.
- No chemicals.
- No water.
- No blasting media.
- No waste disposal.
- No or minimal down time.
- Clean your equipment on site.
- No abrasion.

◆ Applications

- Moulds in the automotive indu
- Polyurethane mixing equipme
- PU containers and tanks.
- PU foaming systems.

◆ Pay Back on

- Better cleaning.
- No chemicals.
- No water.
- No blasting media.
- No waste disposal.
- Reduced cleaning time and associated labour costs.
- Non-abrasive, gentle to the surface underneath.
- Reduced overall cleaning time

Some Applications in Before cleaning & after cleaning

other Industries & Applications

Aerospace | Automotive | Contract Cleaning | Fire Restoration
Food and Beverage | General Maintenance
Historical Restoration | Medical Devices | Mold Remediation | Packaging | Rubber

Our Group of Companies
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Shri Chiranjeevi Indgases Pvt. Ltd.
Sri Swarnalakshmi Enterprises
Swathi Air Products
Thirumala Carbonic Gases (India) Pvt Ltd.

SVCGPL

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