



**BLIZZARD
BLASTING**
SOLUTIONS

For the coolest, quickest clean



Oil and Gas industry



Oil & Gas Industry

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Dry Ice Blasting in the Oil & Gas Industry:

Welcome to BBS Information pack explaining our innovative cleaning solutions for the oil and gas industry. With years of experience and a team of highly skilled professionals, we are dedicated to delivering exceptional dry ice blasting services tailored to meet the unique needs of the oil and gas sector. Our comprehensive range of services is designed to ensure optimal cleanliness, efficiency, and safety in your operations.



What is it?

Dry ice blasting, also known as dry ice cleaning or CO₂ blasting, is a non-abrasive and environmentally friendly cleaning process that uses high-velocity streams of dry ice pellets accelerated by compressed air to remove contaminants from surfaces. The process combines thermal shock, kinetic energy, and gas expansion to effectively remove dirt, grime, grease, paint, adhesives, and other substances without leaving residues or damaging the surface. The benefits of dry ice blasting include its non-toxic and non-abrasive nature, reduced cleaning time and equipment disassembly, improved worker safety, minimal environmental impact, and versatility across various industries and applications.

Kinetic Effect: When dry ice pellets strike the surface, they transfer kinetic energy, causing the contaminants to crack and loosen.

Thermal Effect: The extremely cold temperature of dry ice (-78.5°C or -109.3°F) causes the contaminants to contract and become brittle, making them easier to remove.

Sublimation Effect: Dry ice pellets convert into CO₂ gas upon impact, rapidly expanding and creating tiny explosions, lifting the contaminants away from the surface.

Benefits of Dry Ice Blasting in the Oil and gas

Effective Contaminant Removal: Dry ice blasting effectively removes various contaminants, including oil, grease, dirt, and scale, from equipment, pipelines, and surfaces. The high-velocity impact of dry ice pellets breaks the bond between the contaminants and the surface, allowing for easy removal without causing damage or leaving residue behind.

Non-Destructive Cleaning: Dry ice cleaning is a non-destructive method that preserves the integrity of equipment and infrastructure. It does not erode or wear down the surfaces being cleaned, minimising the risk of damage or the need for costly repairs or replacements.

Chemical-Free and Environmentally Friendly: Dry ice blasting is a chemical-free cleaning process that utilizes solid CO₂ pellets. It eliminates the need for harsh chemicals or solvents, reducing the environmental impact of cleaning operations. The dry ice pellets sublime upon impact, converting from solid to gas, and leaving no secondary waste behind.

Non-Conductive and Non-Sparking: Dry ice cleaning is a non-conductive and non-sparking process, making it safe for use in oil and gas industry environments where flammable materials or electrical conductivity is a concern. It allows for cleaning tasks to be performed without the risk of electrical hazards or igniting fires or explosions.

Reduced Downtime: Dry ice cleaning is a fast and efficient cleaning method that helps reduce downtime in the oil and gas industry. It eliminates the need for disassembly of equipment, as cleaning can be performed in place, saving valuable time and minimising production disruptions.

Versatile Application: Dry ice cleaning is versatile and can be used on a wide range of surfaces, including metal, concrete, rubber, and plastics. It can be applied to equipment, pipelines, tanks, heat exchangers, valves, and other components, making it suitable for various cleaning and maintenance applications in the oil and gas industry.

Improved Safety and Compliance: Dry ice cleaning promotes a safer work environment by reducing the exposure of workers to hazardous chemicals, minimizing the risk of accidents, and ensuring compliance with safety regulations. It provides a thorough and effective cleaning solution while prioritising the personnel safety

What can we do for you?

Equipment Cleaning: Dry ice cleaning effectively removes oil, grease, carbon deposits, and other contaminants from various equipment used in the oil and gas industry. Pumps, compressors, turbines, heat exchangers, valves, and other devices can benefit from it. By removing build-up and restoring efficiency, the method maintains optimal equipment functioning.

Pipeline Cleaning: Dry ice cleaning is highly effective for pipeline maintenance. It cleans the inner walls of pipelines of scale, rust, wax, and other deposits, assuring smooth flow, lowering the danger of blockages, and enhancing overall pipeline integrity.

Tank Cleaning: In the oil and gas business, dry ice cleaning efficiently cleans storage tanks, process tanks and fuel tanks. It cleans tank walls and surfaces of sludge, residues, and pollutants, ensuring cleanliness, reducing corrosion, and maintaining product quality.

Corrosion and Coating Removal: Dry ice blasting is a powerful method for removing corrosion, rust, and old coatings from metal surfaces. It removes the need for manual scraping or abrasive procedures, resulting in a clean surface that is ready for inspection, maintenance, or re-coating.

Heat Exchanger Cleaning: Dry ice cleaning effectively cleans oil and gas sector heat exchangers. It cleans heat exchanger tubes of fouling, scale, and deposits, improving heat transfer efficiency, lowering energy consumption, and lowering the risk of equipment failure.

Emergency Spill Response: Dry ice cleaning is an effective emergency spill response solution. It can be used to clean up spilled oil, chemicals, and pollutants from surfaces, thereby reducing environmental impact and restoring safety.

Surface Preparation: Dry ice cleaning is used to prepare surfaces for inspection, maintenance, or re-coating. It removes old coatings, paints, and pollutants effectively, leaving a clean and contoured surface ready for the next phase in the maintenance or refurbishment process.

Our process

Assessment and Consultation: The company starts by figuring out what the client needs in terms of cleaning. Once we gain a thorough understanding of your specific requirements. We then proceed to identify the surfaces and equipment that need attention. Additionally, we conduct a meticulous assessment of any safety or environmental factors that may impact the project. We discuss thoroughly with you the customer to find out what you want done specifically, find out what surfaces or tools they want to clean, and consider any safety or environmental issues.

Planning and Preparation: BBS makes a thorough plan for the cleaning process based on the assessment. This includes choosing the right dry ice blasting equipment, choosing the right type and size of dry ice pellets, and thinking about any extra safety measures or equipment that might be needed for the job.

Surface Preparation: Before using dry ice to clean, we make sure that the surfaces or equipment that needs to be cleaned are prepped and precautions have been taken to insure everyone's safety. This could mean cleaning up any loose trash, covering up sensitive areas, and taking any other steps needed to protect nearby parts or buildings.

Dry Ice Blasting: Setting up the dry ice blasting tools is the first step in the dry ice cleaning process. The equipment is usually run by trained employees of the company. It consists of a blasting gun linked to a high-pressure air supply and a dry ice pellet feeder. The technicians aim the stream of compressed air and dry ice pellets at the surfaces they want to clean. The mix of kinetic energy and thermal shock effectively removes contaminants.

Quality Control and Inspection: A priority of BBS is quality control all the way through the dry ice cleaning process. We check the cleaned surfaces to make sure that all the dirt has been removed and that the level of cleanliness that was wanted has been reached. Any touch-ups or extra cleaning steps that are needed are done as required.

Waste Management: The waste from the dry ice cleaning process is taken care of by us by following the right waste management steps. When dry ice pellets hit something, they turn into carbon dioxide gas and the waste they remove is left behind. The company makes sure that this trash is collected, stored, and thrown away in a safe way that follows environmental laws and rules.

Project Completion and Documentation: Once the dry ice cleaning process is done, we provide a summary of the work done, which will include pictures and videos of the before and after. We also suggest ways to keep up with maintenance clean in the future.

By following these operational processes, We can make sure that cleaning in many different industries is fast, effective, and safe. Throughout the whole process, we customer happiness first, keep quality standards high, and follow all environmental and safety rules.

Summary

Dry ice cleaning is transforming the oil and gas sector by providing effective and ecologically responsible cleaning, maintenance, and surface preparation solutions. In summary, the following are the benefits of dry ice cleaning on the oil and gas industry:

Dry ice cleaning, for starters, increases equipment performance and longevity by properly removing oil, grease, scale, and other impurities. It improves equipment efficiency, decreases downtime, and boosts productivity, resulting in higher operational output. Because dry ice cleaning is non-abrasive, it retains the integrity of important equipment components, preventing damage and reducing the need for costly repairs or replacements.

Second, dry ice cleaning maintains pipeline and tank integrity by eliminating deposits, scale, rust, and other buildup. It increases flow efficiency, reduces the likelihood of blockages, and extends the service life of these critical assets. In addition, dry ice cleaning aids in environmental compliance by eliminating the use of harsh chemicals and reducing waste formation. It provides a safer cleaning solution for employees while lowering the environmental impact of cleaning operations.

Overall, dry ice cleaning benefits the oil and gas industry by improving equipment performance, asset integrity, regulatory compliance, and cost savings. Companies may achieve cleaner and more effective operations by utilising the power of dry ice blasting, assuring the longevity and sustainability of their assets.

Request a Quote today

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