

NICO NANOBUBBLE GENERATOR FOR OIL AND GAS

The Oil & Gas industry is constantly seeking innovative solutions to improve efficiency and maximize recoverable resources. Enter NICO Nanobubbles, a revolutionary approach that harnesses the power of nanoscopic gas bubbles to unlock trapped oil reserves, while minimizing environmental impact.

These NICO Nanobubbles possess unique properties that hold immense potential for enhanced oil recovery (EOR). Unlike traditional methods that rely on harsh chemicals, NICO Nanobubbles offer a cleaner and more efficient approach.



KEY APPLICATIONS IN OIL & GAS:

1. ENHANCED OIL RECOVERY (EOR): NICO Nanobubbles can be used in water flooding and gas injection methods to increase oil extraction efficiency. Their small size allows them to penetrate deeper into reservoirs, reducing surface tension and improving the displacement of trapped oil.

2. WASTEWATER TREATMENT: In the oil and gas industry, wastewater often contains hydrocarbons and other pollutants. NICO Nanobubbles improve the efficiency of wastewater treatment by enhancing the breakdown of contaminants, Reducing chemical usage, and increasing the dissolved oxygen levels to support biodegradation.

3. PIPELINE CLEANING: NICO Nanobubbles can be employed to clean and maintain pipelines, removing scale, biofilm, and other deposits. Their ability to deliver active agents efficiently ensures thorough cleaning without the need for harsh chemicals or mechanical methods.

4. CORROSION CONTROL: By improving the distribution of corrosion inhibitors through the water phase, NICO Nanobubbles help in better protecting equipment and pipelines from corrosion, thus extending their operational life and reducing maintenance costs.

5. GAS SEPARATION AND RECOVERY: NICO Nanobubbles can enhance the efficiency of gas separation processes, such as hydrogen sulphide removal or carbon dioxide capture, which are crucial in refining and processing operations.





BENEFITS OF NICO NANOBUBBLE IN OIL AND GAS

- **INCREASED OPERATIONAL EFFICIENCY:** By improving oil recovery rates and reducing downtime for maintenance, NICO Nanobubble technology can significantly boost overall productivity.
- **COST REDUCTION:** The enhanced performance of NICO Nanobubbles leads to lower chemical usage, reduced energy consumption, and less wear and tear on equipment, ultimately reducing operational costs.
- **ENVIRONMENTAL SUSTAINABILITY:** NICO Nanobubbles contribute to more effective wastewater treatment and reduced chemical usage, aligning with the industry's goals for environmental stewardship.

PIPE CLEANING WITH NANOBUBBLES

NICO Nanobubbles deliver a powerful, chemical-free cleaning action inside pipelines—breaking down biofilm, loosening scale, and removing stubborn deposits at the microscopic level. With continuous self-cleaning and enhanced flow efficiency, your systems stay healthier, cleaner, and more reliable than ever.

1. **POWERFUL BIOFILM REMOVAL:** Nanobubbles penetrate deep into pipeline surfaces, breaking apart sticky biofilms that block flow and harbour bacteria. Their high internal energy helps detach and lift biofilm layers without harsh chemicals.
2. **SCALE & DEPOSIT REDUCTION:** Mineral scale, sludge, and organic deposits are loosened and disintegrated as nanobubbles collapse and release energy. This helps restore pipe diameter and reduces blockages.
3. **CONTINUOUS SELF-CLEANING:** Nanobubbles stay stable in water for long periods, continuously scrubbing internal surfaces. This creates an ongoing cleaning cycle that prevents new buildup.
4. **ECO-FRIENDLY SOLUTION:** No acids, no chlorine shocks. Nanobubble cleaning uses only air or oxygen, making it safe for equipment, operators, and the environment.
5. **IMPROVED FLOW & EFFICIENCY:** Cleaner pipes mean smoother water movement, lower pumping pressure, and reduced energy consumption, resulting in more efficient system performance.

The application of NICO Nanobubbles in the Oil and Gas sector represents a breakthrough in enhancing efficiency, reducing environmental impact, and driving down costs.