

Ultra Sonic Cleaning Services

Fact Sheet

Clean Harbors is the exclusive worldwide provider of the Ultra Sonic cleaning technology for the oil, gas, and petrochemical industries. Clean Harbors ultrasonic cleaning removes heavy and light bitumen, tar, asphaltines, polymers, grease and other petroleum products from any metal item through immersion in an ultrasonic tank.

What is Ultra Sonics?

Ultra Sonics works on principles similar to sound wave activity. Electrical energy is converted to mechanical energy through piezoelectric effect created by transducers generating cavitation bubbles throughout a liquid medium (containing a combination of specialized chemicals). It generates pressures up to the equivalent of 10,000 psi, temperatures up to the equivalent of 10,000 degrees Fahrenheit, and ultrasonic streaming of 400 km/hr. This effectively separates the contaminant from the surface without damaging a component.

Cavitation bubbles are not limited to the exterior of the object being cleaned. They will form and function inside components with hollow interiors up to 2 feet in thickness. This ability results in reduced downtime as disassembly and reassembly of components are not always required. This is particularly valuable in closed loop systems where components are not able to be shipped off site for maintenance unless they are contaminant free.

How Our Service Program Works

Clean Harbors offers mobile tanks for turnarounds, long term lease tanks on customer sites and tanks operated at a Clean Harbors facility.

The tank is filled with a proprietary chemical degreaser (MSDS is available upon request). The transducers are powered up and the temperature is generated through the naturally occurring reaction in the tank. The process equipment is fully submerged into the tank and depending on the deposit, it will remain for one to four hours. The ultrasonic effect cleans the shell and tubes in the exchanger or process equipment, and the contaminants are contained in the tank. The equipment is removed from the bath and rinsed using a low pressure water hose to remove the residual chemistry.



FEATURES

Why use Clean Harbors Ultra Sonic cleaning services

- Removes all forms of hydrocarbon contamination and refinery-grade by-products from the surface of any material with an effect that is unmatched by any conventional cleaning methodology.
- Process-critical components and equipment once deemed not cleanable can now be cleaned and put back into production.
- Services can be performed in a fraction of the time required by conventional methods.
- Conventional high pressure cleaning can use in excess of 20,000 gallons of water per exchanger. This waste water requires treatment. The waste ultrasonics produces is contained in our tanks and depending on usage, is changed out quarterly. When using Ultra Sonic, the change out frequency is significantly reduced.
- No metal degradation occurs.
- Safety concerns inherent with high pressure cleaning methods are minimized.



Bundle cleaned by Ultra Sonic technology