



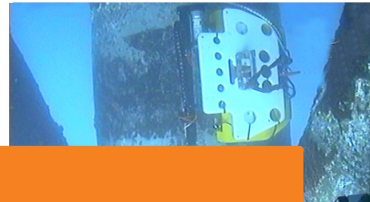
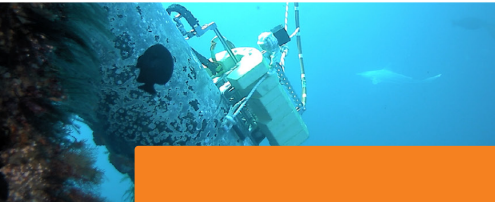
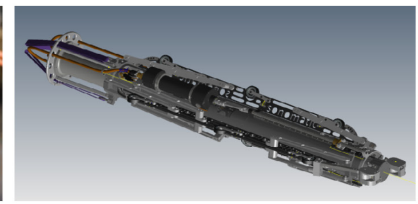
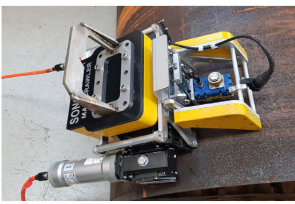
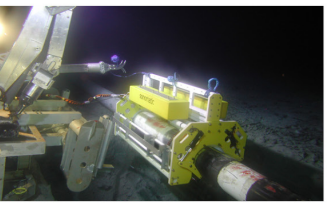
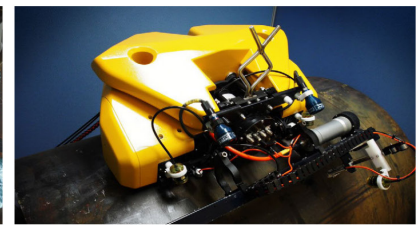
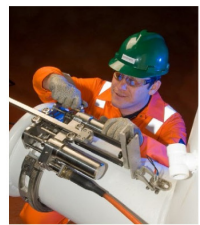
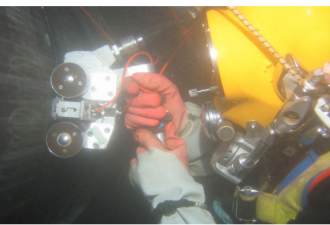
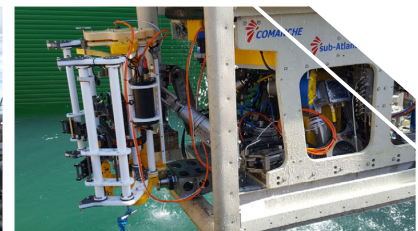
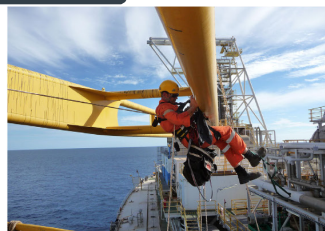
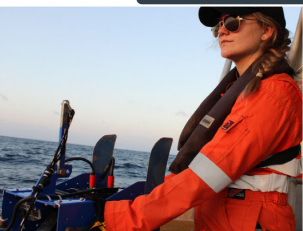
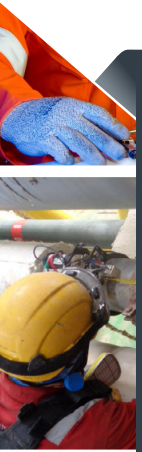
SONOMATIC

DATA SHEET

LASER CLEANING

THE PURPOSE

This document is composed to assist our clients and the supply chain with a high-level understanding of the benefits and services associated with our laser cleaning systems.

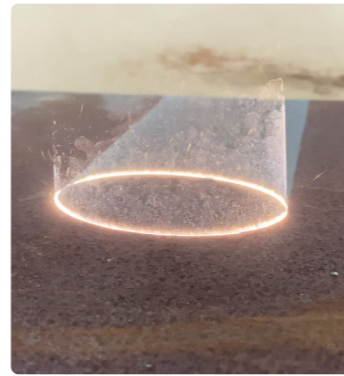


LASER CLEANING

As a company constantly striving for the newest technology to improve our industries, we have invested in a multitude of laser cleaning systems.

When submicron pollution particles adhere to a workpiece surface, they often stick very tightly, making it impossible to remove them with conventional cleaning methods. However, cleaning the workpiece surface with lasers is very effective.

Laser cleaning is a non-contact method of cleaning, making it very safe to clean precision workpieces or their fine parts and ensure their accuracy. Therefore, laser cleaning has unique advantages in the cleaning industry.



HOW IT WORKS

Laser cleaning is the removal of contaminants from a surface by vaporizing them into dust and fumes through laser ablation. The laser fires pulses at a surface utilising the fourth state of matter, plasma, which will remove contaminants from the surface resulting in a sanitised, clean surface. The contaminants then go into a fume extractor which allows for no clean up after completing a job. Whether it's for rust, paint, oxide, or coating removal, lasers can remove contaminants without damaging the substrate. As a non-contact process, laser cleaning is a low maintenance method that can save money over other methods over long periods of time.

The pulse itself, is hotter than the sun for a billionth of a second. Each pulse excites the molecules clinging on to the surface of the material to the point where they must split off the material. The reason that laser cleaning will not affect the surface is due to the flexibility in the control of the settings on the unit and the fact that corrosion/paint is not as strongly bonded as the metal or surface itself, means for a way to input the settings so that no wall loss occurs.

Due to the settings being so flexible, it is also possible to provide a laser etch on metal surfaces for preparation for paint.

BEFORE



DURING



AFTER



BENEFITS

- ✔ Energy savings (up to eight times lower than with conventional processes)
- ✔ No chemicals
- ✔ No abrasive components
- ✔ Clean disposal
- ✔ Safe
- ✔ Saving costs by not requiring a full ensemble of protective gear
- ✔ Reduces risk of base material damage
- ✔ Addresses Worldwide EPA and Chemical Containment Issues

LASER MACHINES

We currently have three units available for work, the 100Watt machine, the 300Watt machine and the 500Watt machine. These three units are all great for different uses. The 100Watt is best for light rusted surfaces, the 300Watt is a midground capable of removing heavy coatings and heavy corrosion but also lightly rusted surfaces, and the 500Watt is a heavy removal unit, this is to be used to remove heavy thick coatings, or very deep heavy corrosion. The trade off you give for the more power with the 500Watt is a less portable unit and heavier gun. The 100Watt and 300Watt are the same exact size and very similar in weight.

The 100Watt and 300Watt run off a standard 120V plug you would find in every building. Whereas the 500Watt runs off a 220V single phase 30A plug which are on most generators.



There is a multitude of laser lenses which changes how intense the beam is. The smaller the lens size, the smaller the surface area covered is but the more intense the laser is. The larger the lens size, the larger the surface area covered is, but the weaker the laser is.

KEY FEATURES

- ✔ Blue painter's tape can be used to cover up areas that aren't required to be cleaned
- ✔ Maintenance free
- ✔ Meets OSHA Compliance Regulations
- ✔ Versatile Uses
- ✔ High Power - Low Cost
- ✔ Eco Friendly Technology
- ✔ Multitude of Lenses which change how the laser performs.
- ✔ Incredibly safe if done by certified staff
- ✔ Consumable Free
- ✔ Non-contact process
- ✔ Circular pulse that means for no heat spots
- ✔ Laser Etching

QA AND HS&E

Sonomatic operate under an integrated QHSE management system and are committed to the highest quality and safety of service provision | ISO 9001: 2015: 00007140 | ISO 14001:2015:00037371 | ISO 45001:2018:00037372 | ISO 17020: 2012: 4276 | Achilles FPAL Verified: 076712 | SEQual 1988 | British Safety Council Member: S0388440 |



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