

## UIT-1005 SYSTEM

### More Robust, More Portable Ultrasonic Technology

Progress Rail's UIT-1005 system delivers a portable, repeatable and proven ultrasonic peening and ultrasonic stress relief process. Operating at the industry's highest ultrasonic frequency, 27 kHz, our Ultrasonic Impact Technology (UIT) process has a proven return on investment (ROI) across a wide variety of industries, such as ship repair, infrastructure, oil and gas, aerospace and defense and mining equipment. Numerous publications and university laboratories around the world have proven UIT's effectiveness.

#### Features

- New robust hard case for enhanced portability and durability.
- New and improved electrical connections to reduce set-up time and increase reliability.
- Touch screen controller provides easy-to-use adjustments to variable settings.
- Capability to monitor, collect, store, and download operational parameters, while displaying graphically in real time on the HMI screen.



## ULTRASONIC PEENING



#### Benefits

- Significant fatigue strength/life improvement through the imparting of deep residual compressive stresses.
- Residual compressive stresses achieved to a controlled depth of 0.040-0.240" based on material type/thickness.
- Improved Weld Geometry- minimizes the notch effect at fillet weld toes.
- Grain structure modification- mitigates crack propagation.
- Localized distortion control/ dimensional stability of critical weldments and high tolerance machined parts.
- Mitigates Stress Corrosion Cracking (SCC).
- Highly portable, non-thermal stress relief equipment, easily mobilized to remote job sites.

Contact Progress Rail today to discuss how the UIT-1005 system can benefit you and your team.

## UIT-1005 SYSTEM

The UIT-1005 is a powerful peening system. Using magnetostrictive technology, the system can deliver strong ultrasonic energy to components and weldments, mitigating harmful tensile stresses while imparting beneficial residual compressive stresses, ultimately increasing the fatigue strength and life of assets. The portable hand tool can easily be positioned at the weld toe to eliminate harmful stress risers and on the weld face to relieve tensile stresses induced during weld solidification. The UIT-1005 can be used for non-thermal stress relief of weldments and distortion control as a result of welding. The UIT peening process can be applied as an in-process or post-process procedure.

Progress Rail's UIT peening process has been certified by numerous 3rd party organizations including the American Bureau of shipping, Det Norske Veritas, and Lloyd's of London. Many publications from acclaimed institutions and distinguished professionals from around the world have validated and endorsed the UIT peening process. But our real world success stories and the impact to the bottom line are the highpoints of the UIT technology. Industries served include Oil and Gas, Mining, Industrial, Aerospace, Rail, Defense, Infrastructure and many more.

### UIT-1005 SYSTEM SPECIFICATIONS

GENERATOR	<b>Nominal Frequency</b>	27 kilohertz
	<b>Rated Power Output</b>	800 Watts
	<b>Voltage Input</b>	110 Volts
	<b>Current Input</b>	15 Amps
	<b>Frequency Input</b>	60 hertz (50Hz available)
	<b>Amplitude</b>	Programmable 10-30 microns
	<b>Weight</b>	52 pounds
	<b>Dimensions</b>	12.5" x 10" x 22.5" (HxWxL)
HAND TOOL	<b>Nominal Frequency</b>	27 kilohertz
	<b>Weight</b>	6 pounds
	<b>Length</b>	21 inches
WATER COOLER	<b>Diameter</b>	3 inches
	<b>Weight (empty)</b>	33 pounds
	<b>Voltage Input</b>	110 Volts
	<b>Frequency Input</b>	60 hertz
	<b>Dimensions</b>	25 x 9.25 x 9.25" (L x W x H)



Structures



Steel Production



Shipbuilding



Aerospace



Semi-submersible



Mining



Petro Chemical



Pipe Lines

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