

HIGH INTENSITY ULTRASOUND IN PETROCHEMICAL INDUSTRY

Beside oil wells ultrasonic stimulation (see here: www.ProgressUltrasonicsGroup.com), in addition there are several of interesting and proven/tested applications (of high intensity ultrasound) applicable in petrochemical domain such as:

1. Mixing/homogenization/blending of different liquids (for instance: for biodiesel, new fuels with certain content of water, dissolving paraffin/waxes/asphalts... in petrochemical liquids, gasifying or degassing of liquids, reducing viscosity, removing sulfur and odors, injecting ozone in liquids...).

See here (first download files): [high intensity ultrasonic liquid processing.zip](#)

(http://www.mastersonics.com/documents/mmm_applications/liquids_processing/)

2. Ultrasonic peening for stabilizing welded structures (post-welding treatment of welds in order to extend operating life for about 20 years... applicable for/in oil pumping platforms, big reservoirs, tankers, bridges, heavy vehicles...)

See here (first download files): [ultrasonic peening.zip](#)

(http://www.mastersonics.com/documents/mmm_applications/Stress-Relief/)

3. Optimizations regarding heat exchangers: ultrasonic excitation of heat exchangers in order to make internal cleaning and increase heat exchange in-line, without stopping the process...
4. Ultrasonically assisted filtering...
5. Very high intensity ultrasonic cleaning (different compared to what we know from ordinary ultrasonic cleaning sources).
6. Water softening to avoid creation of hard mineral layers (scaling) in boilers, pipelines etc...

See here (first download files):

http://www.mastersonics.com/documents/mmm_applications/liquids_processing/tubular_clamp_on_reactors.pdf

http://mastersonic.com/documents/mmm_applications/liquids_processing/flow-trough-reactors-applications.pdf

(http://www.mastersonics.com/documents/mmm_applications/liquids_processing/)

7. Ultrasonically assisted, very fast stress relief in big metallic structures.

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