Review of Cavitation Induced Effects

[#]Roger Stringham[1], Thomas Claytor[2],Malcolm Fowler[3],
[1] First Gate Energy LLC, USA
[2] Ferme Tech. LLC, USA
[3] McFarland Inst. Services Inc., USA
E-mail: rogerssbiz@gmail.com, claytor@att.net, malcolm-fowler@zianet.com

The He4 mass spectrum measurements from prior work are interpreted with respect to the crystal structure of the target foils, FCC or BCC. This interpretation brings a clear picture of various metal target foils and how they interact using a range of frequencies when cavitating with argon saturated DOD. The DOD is circulated to keep the temperatures low for more efficient cavitation. Ar gas is used as a cover gas in the experiments. Being a noble gas, its polytropic gas constant is the highest. In the adiabatic bubble collapse, its energy raised to the power of gamma equals a constant, $(PV)^g$ = C, where g is the polytropic gas constant and is the ratio of their heat capacities. The g appears as an exponent in the PV energy expression and makes it very sensitive for maximizing that value. The gamma for Ar is 1.67. After DOD cavitation the TF (target foils) lattices were searched for He3, He4, and tritium. The mass spectrum measurements showed the presence of He4 atoms and a review of He detection as it relates to the target foil lattice.
The search for heat from 10 cavitated metals in light water and heavy water did not result in any positive results over 5% . However, the cavitated metals did show various anomalies that are difficult to explain in terms of the conventional understanding of cavitation. Several examples of “reaction” products and morphological constructs will be shown.
A novel Helium 4 detection system was constructed and has shown exceptional sensitivity down to the ppb level. A short description will be discussed showing the technique and method for the detection of He in the presence of hydrogen or deuterium gas.