

Excess Energy from Heat-Exchange Systems

#Bin-Juine Huang¹, Ming-Li Tso¹, Ying-Hung Liu¹, Jong-Fu Yeh¹,
 Yu-Hsiang Pan¹, Ching-Kang Huang¹, Mou-Yung Liao¹, Po-Hsien Wu¹
 Department of Mechanical Engineering, Taiwan University, Taiwan, China
 Corresponding Author: bjhuang38@gmail.com

In ICCF22, we presented a vapor compression machine (VCS-1) using a 2.75RT freon compressor (Figure 1) which can produce excess energy [1]. The hot refrigerant vapor from the compressor (around 150°C) is used to heat the water flowing through a tiny passage of a triple-pipe heat exchanger. This may cause a violent cavitation of water. The machine was modified furthermore and tested for two years since then. The calorimetric method for COP measurement was improved. The COP inside the steam generator is defined as the heat carried away by water (Q_{wnet}) divided by the net heat input ($W_t - Q_L$), denoted as COP_x . This is used as the criterion to determine the possibility of excess energy generation. If the measured COP_x was greater than 1, then the cavitation-induced low-energy nuclear reaction (LENR) might occur. The test shows that the maximum COP_x reaches 1.97 (Figure 1) and COP_x increases with decreasing inlet water temperature.

We also modified the triple-pipe heat exchanger into double-pipe one and replaced the freon compressor with a 5 kW steam boiler operating at 110~130°C (Figure 2). COP_x reaches 1.55~2.55 and some peculiar phenomena were observed. The inner copper pipe (steam side) was deformed and the outer pipe wall (water side) was cracked and leaked, after a few hours' operation. The outside surface of the inner pipe (thickness 0.4mm) became shining black which contains 10~23% carbon and 20~28% oxygen. This is caused by a huge pressure (>160 bar) or a high temperature (>500°C) resulting in buckling of inner pipe and rupture of outer pipe that was probably induced by LENR.

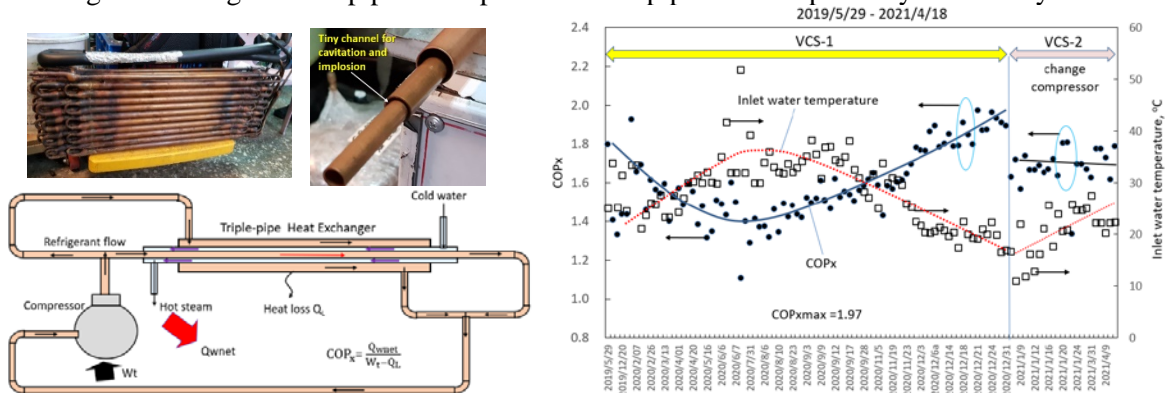


Figure 1. Schematic of vapor compression system (left) and test results (right).

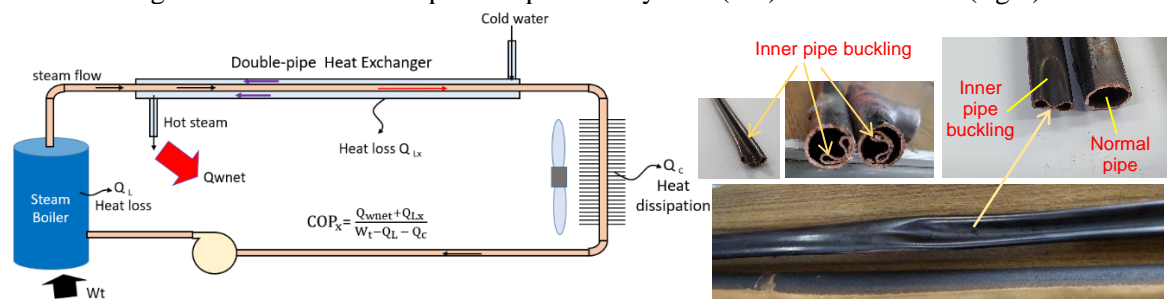


Figure 2. Schematic of double-pipe steam generator (left) and pipe deformation due to LENR (right).

References

- [1] Bin-Juine Huang, Ming-Li Tso, Ying-Hung Liu, Jong-Fu Yeh, "Excess Energy from a Vapor Compression System". ICCF22, Assisi, Italy, Sept 8-13, 2019.