

Equipment Establishment of Steam-Explosion Conversion System

Kai-I Huang, Ruey-Fong Chang, Yuan-Pin Shih*

Chen-Jinn Industry Co., Ltd. GTI-Greentech International Co., Ltd.

Taoyuan Innovation Institute Technology

Abstract

In this study, a miniature steam explosion pretreatment equipment was designed and constructed for biomass conversion. It was equipped with a human machine interface apparatus comprising electromagnetic coils and supervisory controls that instantly acquired variations of all relevant control parameters during system operation. There are two main sections in this study. First the strength calculation, stress analysis, construction design, and structure survey after completion of the assembly were finished for machinery. Second, the establishment of piping system and operation process were completed in the manufacture process.

Keywords: steam-exploration equipment, strength calculation, electromagnetic coils