

ABSTRACT

Disclosed in the present invention is a municipal solid waste treatment system, method and apparatus, comprising: a pretreatment device; a pyrolysis device comprising: a pyrolysis gasification furnace and feeder configured to feed pre-treated municipal solid waste into the pyrolysis gasification furnace for pyrolysis to generate pyrolysis gas and slag; wherein the feeder comprises a main chamber body comprising: a feed gate, a discharge gate and an isolation gate; wherein the main chamber body is divided into a hermetically sealed upper chamber and a hermetically sealed lower chamber when the feed gate, the isolation gate and the discharge gate are simultaneously in a closed state; a pyrolysis gas purification device configured to remove hazardous substances from the pyrolysis gas, and separate macromolecular organic substance from small-molecule combustible gas, the macromolecular organic substance is recycled for further pyrolysis, the small-molecule combustible gas is collected into an external storage device; a slag sorting device configured to separate the slag into metal, incompletely pyrolyzed organic matter and ash residue, the incompletely pyrolyzed organic matter is recycled for further pyrolysis. The municipal solid waste treatment system can realize the maximize utilization of energy and resources in waste treatment.