



## Antler Kiln

Torrefaction for a higher quality and lighter biocharcol production

Hiroshima Gas-Techno Service  
[www.hgts.co.jp](http://www.hgts.co.jp)

Hiroshima Gas-Techno Service was established in 1970 as a propane gas distribution company. Since then, the company works in gas industry to support the local industries. Taking advantage of acquired experiences and know-how, the company designs and constructs recoiling plant equipment.

Torrefaction is a thermal pre-treatment technology used to upgrade lignocellulosic biomass to a higher quality and lighter biochar. The biomass is heated to a temperature between 250 to 300. ° C in an atmosphere with low oxygen concentrations so that all moisture is removed. During the torrefaction process, the biomass devolatilises partially leading to a decrease in mass while the initial energy content is preserved so that the energy density of the biomass is amplified.

Antler Kiln is a highly efficient and reliable torrefaction technology to produce biochar from organic waste and biomass such as woody waste, palm kernel shell, sludge, and waste rubber without problems of tar as a by-product. Biomass is carbonised by self-sustaining combustion of py-produced gas and tar, and only solid biochar is produced. Produced biochar can be used for fuel for power generation, soil conditioner, lagging material for steelmaking, recarburising and reducing agent for steelmaking, water treatment agent, and odor eliminating and deodorising agent. Hiroshima Gas-Techno Service has a large scale test facilities and small test & research facilities of Antler Kiln in Hiroshima.

