ABSTRACT

A catalytic combustion apparatus is equipped with a reactor for catalytically burning a gas to be treated containing a combustible organic compound, which further comprises a condensate forming means for condensing a part of a gas after reaction in the reactor, to form a condensate, and a pH measuring means for measuring a pH of the resultant condensate. It is preferred that the catalytic combustion apparatus still further comprise a temperature adjusting means for adjusting a temperature of at least a catalyst-packed portion of the reactor based on data measured by the pH measuring means.