

HYDROGEN PRODUCTION SYSTEM

Abstract

A hydrogen production system (1) is applicable to a combustion furnace-equipped plant, and includes: a boiler-equipped combustion system (10) including at least a combustion furnace and a boiler that generates steam by utilizing heat from combustion in the combustion furnace; an electrolysis system (50) including at least an ion removal device (52) into which at least a part of boiler blowdown water (F1) discharged from the boiler is introduced and that generates separated water (F2) in which unnecessary ions are removed and concentrated water (F3) containing the unnecessary ions, and a water electrolysis device (53) that electrolyzes the separated water to generate hydrogen; and a wastewater treatment system (30) including at least an inorganic wastewater treatment facility (32) that performs inorganic water treatment of plant wastewater generated in the combustion furnace-equipped plant, the plant wastewater containing remaining boiler blowdown water.

(Fig. 1)