

Abstract

A gas turbine system (1) includes: a combustor (13); an intake flow passage (101) connected to the combustor (13); an exhaust flow passage (102) connected to the combustor (13); a
5 compressor (11a) provided in the intake flow passage (101); a turbine (11b) provided in the exhaust flow passage (102); an ammonia tank (14); and a hydrogen generator-separator (16) having an ammonia supply port (16a) connected to the ammonia tank (14) and a hydrogen discharge port (16b) connected to
10 the combustor (13), the hydrogen generator-separator (16) being arranged on a downstream side of the turbine (11b) in the exhaust flow passage (102) or on a downstream side of the compressor (11a) in the intake flow passage (101), the hydrogen generator-separator (16) including an ammonia
15 cracking catalyst and a hydrogen separation membrane.