

Power plant of a gas-electric vessel consists of at least one solid-fuel gas generator, generator gas treatment systems for purification and cooling, gas engines that use generator gas as fuel, electric generators mechanically connected to the gas engines, converters, and electric motors for propulsion, as well as other marine equipment and needs powered by electricity from the electric generators. The system is additionally equipped with at least one flywheel mechanical energy storage device and at least one reversible electric machine, mechanically connected to the flywheel and capable of operating both as a motor and as a generator. The reversible electric machine is electrically connected via a converter to the power bus that supplies the electric motors of the propulsion systems and other marine equipment and needs, in parallel with the main electric generators.