

## **Method for Conversion with Recovery of energy carriers in a Cyclical Process of a thermal engine**

### **Abstract**

The invention can be used in energy technology. In the method for conversion with recovery of energy carriers in a cyclical process of a thermal engine, a first recirculation cycle is formed: gas generator (1) – device (4) for converting kinetic and thermal energy into mechanical energy – hydrogenation reactor (5) – gas generator (1). The water is evaporated in steam boilers (2, 6), and the steam is then fed into a device (7) for converting the steam energy into mechanical energy, for instance into a turbine. In the process the steam boilers (2, 6) are located in the gas generator (1) and in the hydrogenation reactor (5). The steam is carried onward from the conversion device (4) into a condenser (8), and a second recirculation cycle is formed. Atmospheric oxygen from an air bubble is supplied to the gas generator (1). The air is cooled, and the cooling operation is repeated, until a maximum residual water content in the air of 0.2 g/m<sup>3</sup> is attained. The condensate that has formed is collected and used for feeding the steam boilers (2, 6). The invention makes it possible to simplify the process of recovering the carbon oxides that are formed in the thermal engines.

(Fig. 1)