a 2005 0309

The invention relates to the thermal power plants without fuel burning and CO_2 production, namely to plants for solar energy conversion without solar cells.
The solar station with Stirling engine includes a solar concentrator (1) with mirrors, rigidly fixed onto one end of a frame (2), onto the other end being rigidly fixed with the possibility of slope angle change about the solar concentrator (1) a heat receiver with sun ray heat-generating elements (3), a Stirling engine (4) and an electric generator (5). The common axis of the electric generator (5) of the Stirling engine (4) and of the heat receiver (3) passes through the geometrical center of the solar concentrator (1). The frame (2) is articulately joined with the fork (7) of a turnover platform (8), installed onto a vertical immovable support (9). Onto the frame (2) there is articulately mounted a mechanism (11) controlling the station position in meridian plane. The Stirling engine (4) comprises at least three cylinders with pistons, placed round the circle. The pistons are joined by rods with the inclined flange of the central gear-wheel of a precession step-up gear, transforming the reciprocating motion of the pistons into rotary motion of the central gear-wheel, which, subsequently, is stepped up and transmitted to the rotor of the electric generator (5).

Claims: 3
Fig.: 9