

A nuclear reactor fuel assembly with a cross section in the shape of a regular hexagon comprises a top nozzle and a bottom nozzle, guide channels, fuel rods arranged in the nodes of a triangular mesh, and at least one grid consisting of non-detachably interconnected cells. Each cell is in the form of a tube, the longitudinal axis of which coincides with the longitudinal axis of a fuel rod, and the cross section of the tube is in the shape of a hexagon, the sides of which consist of a middle portion and two end portions. At least at the end faces of the cells at the upper nozzle end, the end portions of the sides have a bend which varies steadily in size along the longitudinal axis of the cell. In adjacent sides of a cell, the end portions adjoining a common vertex of the hexagon have oppositely oriented bends relative to the centre of the cell. In contacting sides of adjacent cells, the bends are oppositely oriented relative to the respective centres of the cells. There is no gap between the cells of a grid.