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(54) Title: NUCLEAR REACTOR WITH FUEL ELEMENTS PROVIDED WITH EXPANDERS

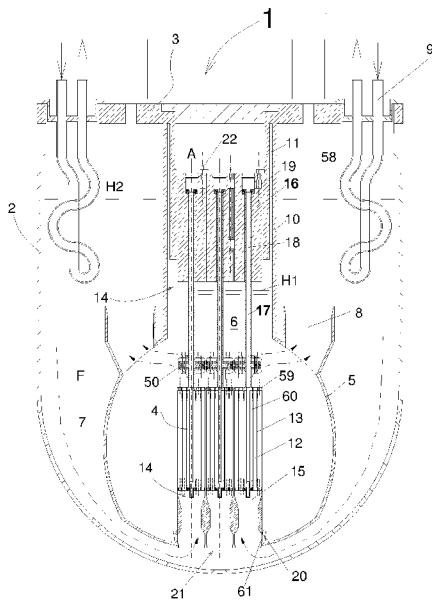


Figure 1

(57) Abstract: The present invention concerns a nuclear reactor (1), preferably a pool-type nuclear reactor cooled by liquid metal or molten salts, having a core (4) formed of a bundle of fuel elements (12) and immersed in a primary fluid (F) for cooling the core; the fuel elements (12) are provided with expanders (50) acting in a direction perpendicular to the axes (A) of the fuel elements (12) and having low thermal expansion elements (51) which engage alternatively with high thermal expansion elements (52) to amplify the radial expansion of respective end elements (53) which, when a predetermined expansion temperature is exceeded, engage with each other and space the fuel elements (12) from one another and in particular their active part (13) to introduce negative reactivity into the core.



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