

COMPACT STELLARATOR-LIKE CONFIGURATIONS, CREATED BY SYSTEM OF PLANE CIRCULAR CURRENT COILS

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Stellarator magnetic configurations with different combinations of plane circular tilted current coils were studied. Two types of coil combination used for forming of the magnetic configurations: cohesion tilted coils (Villarso coils) and uncoupling tilted coils. As torsatron type, so stellarator type systems with multipolarities $l = 2$, $l = 4$ and their combinations were studied. For the first time magnetic configurations with good confinement properties created by system of uncoupling coils stellarator type current combinations were obtained. Splitting of $l = 2$ coil system allows to obtain $l = 4$ harmonic, that goes to improvement of confinement properties of the configuration. Variation of value corrective field allowed to obtain quasisymmetric properties of the stellarator configuration.