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(54) Title: MITIGATION OF SADDLE DEFORMATION OF SUBSTRATES USING FILM DEPOSITION AND EDGE ION IMPLANTATION

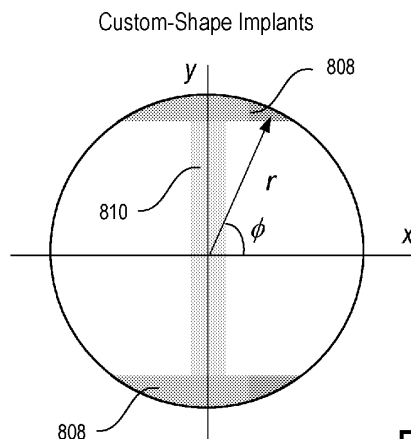


FIG. 8D

(57) Abstract: Disclosed systems and techniques are directed to correct an out-of-plane deformation (OPD) of a substrate. The techniques include obtaining, using optical inspection data, a profile of the out-of-plane deformation of the substrate and identifying, using the obtained profile, one or more parameters characterizing a saddle-shaped stress of the substrate. The techniques further include computing, using the one or more identified parameters, one or more characteristics of a stress-compensation layer (SCL) for the substrate and causing the SCL to be deposited on the substrate. The techniques further include causing a stress-mitigation beam to be applied to a plurality of edge regions of the SCL, wherein settings of the stress-mitigation beam are determined using the one or more identified parameters.

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