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(54) Title: GENERATING DIGITAL TWINS OF SEMICONDUCTOR MANUFACTURING EQUIPMENT

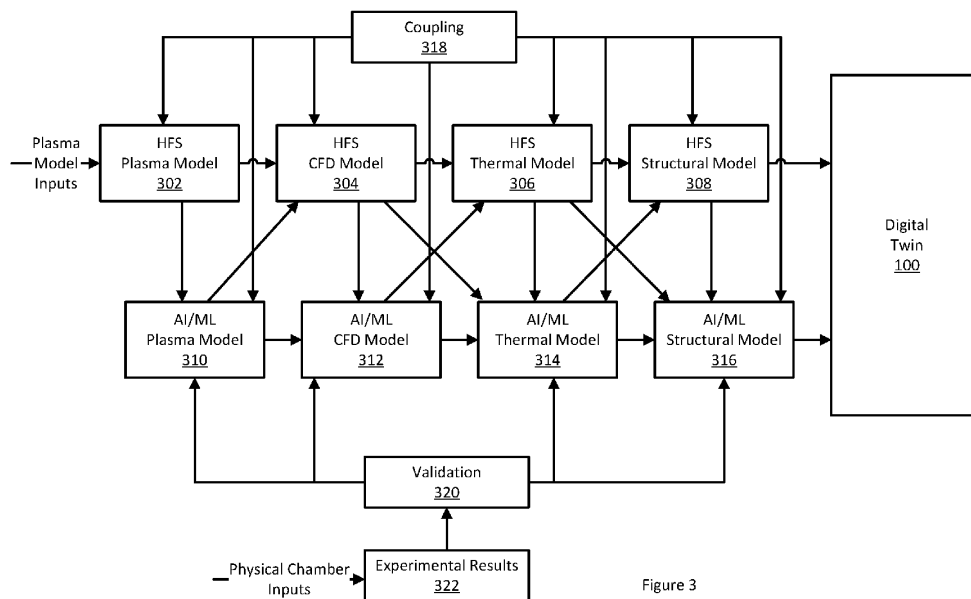


Figure 3

(57) Abstract: Various embodiments herein relate to systems, methods, and media for generating digital twins of semiconductor manufacturing equipment. In some embodiments, a digital twin of a process chamber of semiconductor manufacturing equipment is provided, comprising one or more non-transitory machine readable media comprising logic configured to implement: a first model of a first location of the process chamber; and a second model of a second location of the process chamber, wherein the first model is coupled to the second model, and wherein the first model and the second model are each of a model type that is one of: 1) an AI/ML model; 2) an HFS model; and 3) a closed-form solution, and wherein the first model and the second model each represent a class of physical phenomena that is one of: 1) thermal characteristics; 2) plasma characteristics; 3) fluid dynamics; 4) structural characteristics; and 5) chemical reactions.

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