

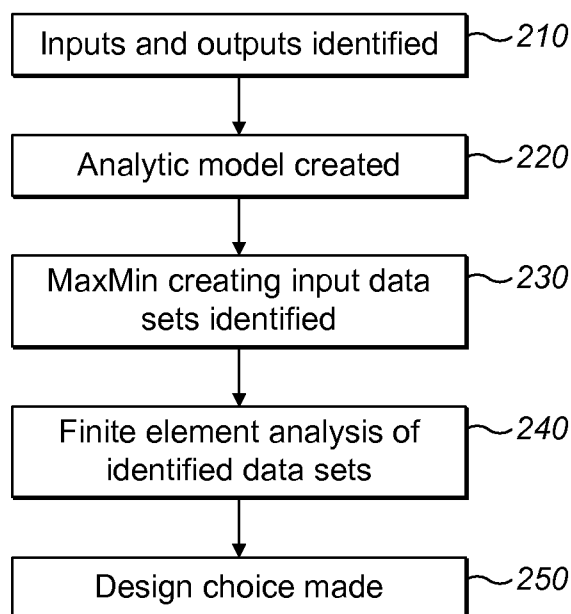


- (51) **International Patent Classification:**
G06F 17/50 (2006.01)
- (21) **International Application Number:**
PCT/IB2013/001151
- (22) **International Filing Date:**
22 April 2013 (22.04.2013)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
1207374.8 27 April 2012 (27.04.2012) GB
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(81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) **Title:** METHOD AND APPARATUS FOR DESIGN OF PIPELINE COMPONENTS**FIG. 2**

(57) **Abstract:** Methods and apparatus for pipeline component design are described. Input parameters and output parameters for the component design are identified (210). An analytic model is constructed using a design of experiments technique to represent influence of the input parameters on the output parameters (220). Value sets for the input parameters which meet a selection criterion for at least one of the output parameters are then identified (230). Finite element analysis is conducted (240) on the identified value sets, and a pipeline component design choice is identified (250) from results of the finite element analysis. Pipeline components are then manufactured according to the identified design.

WO 2013/160771 A3



Published:

(88) Date of publication of the international search report:

— *with international search report (Art. 21(3))*

23 January 2014