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(54) **DESIGN METHOD AND SYSTEM FOR DIRECT-CURRENT LOOP IMPEDANCE**

(57) Provided are a design method and system for a direct-current loop impedance. An optimal direct-current loop impedance is obtained by means of direct calculation by a mathematical model, such that tedious modeling and simulation time in electromagnetic transient software is reduced, thereby improving the calculation efficiency; by means of the design method, global solving is performed in a feasible region of system parameters, and the obtained optimal system parameter and direct-current loop impedance are results which most meet an optimization goal when the system is stable, such that a situation of there possibly being inconsideration or unthorough optimization in manual iterative design, etc., is avoided, and therefore the precision of direct-current loop impedance design is higher; and furthermore, parameterized parsing and optimization design can be per-

formed on a direct-current loop impedance according to different optimization design goals, such that there is no need to perform repeat targeted adjustment and iteration on the system parameters by a professional designer, thereby reducing manpower and time, and solving the technical problems of existing design methods for a direct-current loop impedance having relatively low efficiency and relatively poor precision.

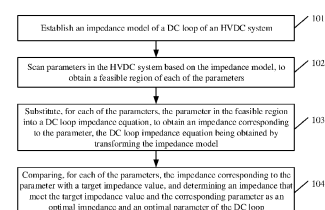


Figure 1