

Title (en)
METHOD FOR SIMULATING THERMAL RADIATION BETWEEN SURFACES

Title (de)
VERFAHREN ZUR SIMULATION VON WÄREMSTRAHLUNGN ZWISCHEN OBERFLÄCHEN

Title (fr)
PROCÉDÉ DE SIMULATION DE RAYONNEMENT THERMIQUE ENTRE DES SURFACES

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EP 14701297 A 20140107

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Abstract (en)
[origin: WO2014106670A1] The invention relates to a method for simulating the influence of thermally coupled surface radiation on a solid body, which solid body has at least one surface that can be irradiated, by calculating the radiative transfer between grey, diffusive surfaces, characterised in that the surface or surfaces to be irradiated is/are divided adaptively and hierarchically into radiation tiles of equal or virtually equal radiation intensity, and the surface temperature brought about by irradiation is produced by means of a hierarchical view factor method. Said view factor method comprises the evaluation of a solid angle integral using a primary solid angle division. Said primary solid angle division comprises a homogeneous view factor discretisation, wherein that solid angle division is discretised adaptively and hierarchically into the part-regions thereof by spherical projection and wherein the sum of all the partial amounts of that solid angle integral can be determined by means of ray tracing.

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Citation (examination)
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• See also references of WO 2014106670A1

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