

Title (en)

RADIATION APPLIANCE, METHOD AND ARRANGEMENT FOR POWDER COATING DERIVED TIMBER PRODUCTS

Title (de)

STRAHLUNGSGERÄT, VERFAHREN UND ANORDNUNG ZUR PULVERBESCHICHTUNG VON HOLZWERKSTOFFEN

Title (fr)

APPAREIL À RAYONNEMENT, PROCÉDÉ ET ENSEMBLE DE REVÊTEMENT PAR POUDRE DE MATÉRIAUX DÉRIVÉS DU BOIS

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Application

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Abstract (en)

[origin: WO2008006681A2] The invention relates to a radiation appliance for irradiating surfaces, especially for rapidly heating surfaces of objects (8) especially moved past the radiation appliance, especially MDF elements during the powder coating thereof. Said radiation appliance comprises a plurality of energy radiators (41) distributed over the irradiation surface, preferably heat radiators, especially infrared (IR) radiators or near infrared (NIR) radiators, which are especially movably arranged on at least one preferably mobile carrier (40. 40',40"). The radiation appliance is provided with a control device and at least one temperature sensor (51) which measures in a non-contact manner and can measure the temperature of the irradiated object in at least one region (58) of the irradiated surface of the object (8). Said control device and temperature sensor are designed such that the control device (52) can record the measured temperature of the at least one temperature sensor (51) and controls at least one energy radiator (41) which is associated with the region (58) of the irradiation surface for which the temperature measurement is carried out. The invention also relates to an arrangement and a method for powder coating especially plate-shaped or disk-shaped wooden objects, preferably MDF plates, using an arrangement comprising a powder application station (4), a first radiation appliance, especially in accordance with one of the preceding claims, and a region (6) for baking or cross-linking the powder, especially comprising a forced air oven and/or a second radiation appliance. The first radiation appliance (21) is arranged between the powder application station and the baking/cross-linking region, and the second radiation appliance is arranged in the baking/cross-linking region, especially the afterbaking region, the humidity of the wood objects to be treated being adjusted to between 7 and 7.8 wt. %.

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