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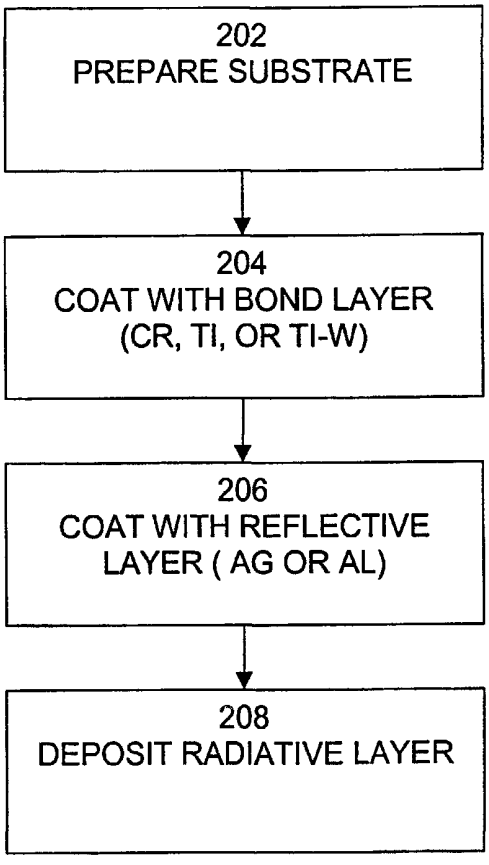
(54) Title: IMPROVED OPTICAL SOLAR REFLECTORS



(57) Abstract: An method, and method of production thereof, which provides excellent performance, reduced cost, and reduced breakage due to reduced manual handling. The present invention comprises a substrate, a bond layer coating the substrate, a reflective layer coating the bond layer, and a radiative layer coating the reflective layer. Preferably, the radiative layer comprises SiO_2, Si_3N_4 or SiO_xN_y has low absorbency of electromagnetic radiation having wavelengths of approximately 200 nm to approximately 2500 nm and high absorbency and emissivity electromagnetic radiation having wavelengths of approximately 2.5 μm to approximately 25 μm. Preferably, the bond layer comprises chromium, titanium, or titanium-tungsten and the substrate comprises aluminum, aluminum alloys, polyimide, carbon-filled polyimide, or carbon composite. The present invention may further comprise a barrier layer between the reflective layer and the radiative layer, preferably comprising MgF_2, which improves adhesion between the reflective layer and the radiative layer during thermal cycling. The present invention may further comprise a surface-leveling layer between the substrate and the bond layer, preferably comprising a silicone hardcoat material, which improves surface smoothness of the substrate. The radiative layer may have a modulated refractive index profile. The parameters of the modulated refractive index profile of the radiative layer may control amplitude, bandwidth and wavelength of rejection bands of the radiative layer.

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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B64G C03C G02B F24J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, COMPENDEX, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	--- -/--	4-6,44

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Beltzung, F

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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