

عنوان مقاله:

Solar Selective Surface on Aluminum

محل انتشار:

سومین همایش بهینه سازی مصرف سوخت در ساختمان (سال: 1382)

تعداد صفحات اصل مقاله: 14

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خلاصه مقاله:

Selective surface is used for the utilization of solar energy by photothermal devices. For this purpose spectrally solar selective surfaces on aluminum substrate were prepared by dc anodization in phosphoric acid solution solution(for enlarging pores) followed by A.C. Voltage coloring treatment in a concentrated metal sulphate solution. The optical performances, which are characterized by a high absorbtivity(α 0.9) in the visible and near infrared regions of the spectrum (0.38-2 microns) and a low emissivity (ϵ 0.2) for radiation of longer wavelength (greater than 6. microns) of these surfaces were studied. PIXE, RBS and Atomic Absorption Analysis were also done and measured. Effect of deposition conditions like anodizing voltage, coloring voltage, bath temperature, coloring time and concentration of .Nickel sulphate on spectral selectivity is discussed

کلمات کلیدی:

Solar Selective Surface, Solar Absorber, Selective Coating, Solar Material, Anodizing, Electroplating

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