

[54] ILLUMINATION SYSTEM FOR MATERIAL TESTING APPARATUS

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[57] ABSTRACT

To separate ultraviolet (UV) radiation emitted from a light source (9) from impinging on infrared (IR) filters, in which the respective filters filter the radiation from the light source to result in controlled spectral distribution simulating, at least approximately, sunlight, an outer UV filter (10) is located in a first section, adjacent a first mirror-filter combination (11), alternately located in polygonal form, for example square (FIG. 2) or triangular (FIG. 3) or in cylindrical form (FIGS. 5,6) surrounding the light source. The first mirror-filter combination includes a first UV mirror (12) having its mirror surface directed towards the light source and, externally thereof, a IR filter (13). A sandwich assembly of a second mirror-filter combination (14) is located interiorly of the sections, the sandwich assembly having an inner UV mirror (15), reflecting inwardly, an outer UV mirror (16) reflecting outwardly, and a IR filter (17) located intermediate the mirrors, the second mirror-filter combination being so positioned with respect to the UV filter (10) to place the UV filter entirely within the optical shadow of radiation emitted from the light source, so that the radiation is separated into UV and IR and visible light components, UV radiation being passed only through the UV filter and prevented from reaching any IR filter.

17 Claims, 6 Drawing Sheets

