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Abstract

In this report, various IR materials and coatings that have been utilised for suppression of IR signatures of aerospace vehicles are presented. The primary applications of these materials in suppression of IR signature include shielding the external surfaces from internally generated heat source, reducing hot spot signatures by effective dissipation of IR radiation and reducing the airframe signatures. Mathematical formulations are presented for estimating the emittance of composite specimen from intrinsic parameters of coatings and substrate. The effect of emittance on reducing aerodynamic heating is also discussed.