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Digital Image Processing Technique to Test the Solid Rocket Plume

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Abstract: An infrared image recognizing system was developed based on VC + + . NET, and digital image processing was done to the solid rocket plume images with it. The luminance distribution of solid rocket plume was obtained, and the analysis and parameter identification of solid rocket plume was realized. The results show that the system is suitable for the total analysis and parameter identification of solid rocket plume images, and it provide a new method for analysis and parameter identification of solid rocket plume.

Key words: aerospace propulsion theory and engineering; infrared image recognizing system; solid propellant; luminance distribution; parameter identification

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