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NASA TECH BRIEF

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Infrared Television Used to Detect Hydrogen Fires

The problem:

Modern test facilities have occasion to use large quantities of hydrogen gas from time to time. Because hydrogen is highly flammable and because hydrogen–air and hydrogen–oxygen flames are relatively imperceptible to the human eye, a device or system is needed that will make both the fire and its point of origin clearly visible to the naked eye.

The solution:

A closed circuit television that sees in the infrared and displays on a standard cathode ray monitor screen.

How it's done:

A standard, commercially available closed circuit television system is used to detect the hydrogen fires. The television camera vidicon tube is replaced by one with spectral response out to the near infrared area to approximately a 2.1 micron wavelength. Infrared bandpass filters are placed in front of the camera lens. These filters provide good contrast between and definition of hydrogen fires and the background and lighting conditions normally found in test areas.

Note:

Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B66-10363

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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Category 01

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