Advanced Reactive System Screening Tool

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ABSTRACT

The new Advanced Reactive Systems Screening Tool (ARSST) retains all the capabilities of the acclaimed RSST, but provides several improvements and new features. Increased temperature ramps (0-30 C/min) better simulate fire exposure, and a Heat-Wait-Search mode of operation provides onset detection sensitivity as low as 0.1 C/min. Endothermic behavior (phase change) is accommodated, as is isothermal operation at elevated temperature, and the operating system is Windows based. A patented Flow Regime Detector allows the ARSST to distinguish between "foamy" and "non-foamy" runaway reactions. ARSST results are presented for several DIERS benchmark systems.