

FRST

Fire Scoping Model

The Westinghouse Fire Risk Services Team's FRST Fire Scoping Model is a productivity tool that automates fire PRA Task 6, Fire Ignition Frequencies, and Task 8, Scoping Fire Modeling, from the guidance document NUREG/CR-6850. The FRST Fire Scoping Model has been created and validated under our NQA-1 and ISO-9000 compliant QA program.

The image displays three overlapping screenshots of the FRST Fire Scoping Model software interface. The central window features the FRST logo and the text 'FIRE RISK SERVICES TEAM'. The left window, titled 'IgnitionSource', shows input fields for 'Compartment' (Test room 1), 'Source' (1), and 'Current Source' (1). It includes sections for 'Damage Criteria' (Temperature: 392,000 °F, 200 °C; Heat Flux: 10 kW/m²), 'Scoping Fire Modeling' (Eye Condition: flames or plume or radiation; Pipe Location: Fire in open; Vertical Distance to Target: 3.281 ft, 1 m; Horizontal Distance to Target: 0.328 ft, 0.1 m; Fire Diameter: 0.984 ft, 0.3 m; Distance from Fire to Ceiling: 3.281 ft, 1 m; Fire Duration: 60 min), and 'Fire Distribution' (α (Alpha): 0.04; β (Beta): 59.3; Distribution: Pumps (electrical fire)). The right window, titled 'Compartments', shows 'Viewing Compartment' (1 of 2) and 'Next Compartment!' button. It includes 'Weighting Factors' (Maintenance: Medium 1.3; Storage: Medium 1.3; Occupancy: Medium 1.3; Cable Mass: 2.205 lbs 1 kg) and 'Material' (Type: Concrete; Thermal Conductivity: 0.0011; Density: 2100; Specific Heat: 0.88). The 'Room Geometry' section lists: Ambient Temperature: 77.0 °F, 25 °C; Room Length: 13.123 ft, 4 m; Room Width: 13.123 ft, 4 m; Room Height: 9.842 ft, 3 m; Opening Area: 21.527297 m², 2 m²; Height of Opening: 3.281 ft, 1 m; Wall Thickness: 0.984 ft, 0.3 m.

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