

Investigation of Arson Fire Incident in Textile Garment Building Using Fire Dynamic Simulation

Authors : Mohsin Ali Shaikh, Song Weiguo, Muhammad Kashan Surahio, Usman Shahid, Rehmat Karim

Abstract : This study investigated a catastrophic arson fire incident that occurred at a textile garment building in Karachi, Pakistan. Unfortunately, a catastrophic event led to the loss of 262 lives and caused 55 severe injuries. The primary objective is to analyze the aspects of the fire incident and understand the causes of arson fire disasters. The study utilized Fire Dynamic Simulation (F.D.S) was employed to simulate fire propagation, visibility, harmful gas concentration, fire temperature, and numerical results. The analysis report has determined the specific circumstances that created the unpleasant incident in the present study. The significance of the current findings lies in their potential to prevent arson fires, improve fire safety measures, and the development of safety plans in building design. The fire dynamic simulation findings can serve as a theoretical basis for the investigation of arson fires and evacuation planning in textile garment buildings.

Keywords : investigation, fire arson incident, textile garment, fire dynamic simulation (FDS)

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