

Author's Response

Sir,

First of all, thanks for reviewing our paper. For fire dynamics simulator (FDS) computer simulation analysis, the heat release rate (HRR) calculation of combustible materials at a fire scene plays a very important role as it affects the results of the overall simulation.

The responses to the comments by reader are listed as follows:

1. In this paper, an undamaged switchboard that matched the one ignited in the fire was found from the fire debris. By measuring this sample, the weight of the inside combustibles multiplied by the heat of combustion of each combustible material to obtain the HRR of the switchboard, which was determined to be about 236.29 MJ/m² in Table 1. Moreover, we also considered the fire was ignited located inside a switchboard (Fig. 1) that oxygen should be unable to fully supply. For this reason, we determined the burning time to

reach the maximum temperature inside this switchboard was 338 sec through repeated numerous simulation tests. Then, we got 700 kW/m², which was 236.29 MJ/m² divided by 338 sec. So, we really used the value of 700 kW/m² for the HRR per unit area as input data to FDS.

2. In the authors' opinion, it is a very improper comparison between an electrical fire scene in this paper and a gasoline pool fire in the reader's comment.

This paper type is case report. So we wrote it as a brief description and analysis of an unusual case. In this response, we have described some details and information for this specific case to answer and to explain the excellent comments from this reader. Thank this reader for reviewing our article in great detail and providing these valuable comments.

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