

عنوان مقاله:

Effect of fire location on the smoke temperature and CO distributions in a subway tunnel with train carriages: A numerical study

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خلاصه مقاله:

In this study, a numerical simulation of the full-scale train with four carriages is considered, and different fire scenarios on the subway tunnel floor are performed in terms of fire locations and heat release rate variations. The subway tunnel is longitudinally ventilated, where vertical temperature stratification and carbon monoxide (CO) are determined at the mid-line of carriages by a fire-dynamic simulator (FDS). Also, fire hazardous conditions are reported by under-ceiling sensors inside the carriages. The results show that both first and second carriages experience high temperature and CO concentration of smoke flow when the nearest fire location to the carriages is assumed with a fixed fire heat release rate of ۱۰MW (HRR). By changing the fire location in the tunnel, the unsafe situation of the first carriage is reported for two different fire source locations.

کلمات کلیدی:

Heat Release Rate of Fire, Fire Location, Train Carriages, temperature distribution

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1789390>

