

Safety Evaluations of Crowd Walking on Stairs and Platforms in Stations

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Stations in urban area are usually congested. If a station doesn't have enough capacity for unusually large numbers of passengers, they may be exposed to risks of crowd disasters. But so far criteria about crowd safety have not existed except the experiential knowledge. An experimental study was performed to reveal some of criteria about crowd safety on stairs and platforms, which are the riskiest places in stations. Through experiments, the density of crowd which makes passengers on stairs feel uneasy and the density variation at narrow parts of platforms were acquired. From these results, an approach to new criteria of crowd safety and evaluation methods using these criteria obtained was derived.