

建築物煙層下降評估方法探討之研究

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摘要

In recent years the building faced high level, underground, the compound use, as well as followed the transportation, the economy et cetera significant construction, appeared the use function and the structure diversification and the specialization, even because the building material and the structure method innovation created the great span, the big space and so on the new condition construction case increases day by day. This large-scale, high level and the compound use building of its fire protection and evacuation the risk also to compare high which comes to the general building, also nowadays domestic tidal current of along with the fire protection performance design, nearly impels the performance performance laws, the innovation technical increase architectural design elasticity of, and considers the personnel security and the cost most simplifies the demand, therefore revises and increase the building fire protection to evacuation the security performance design correlation stipulation.

Above Construction and Planning Agency to promulgate the fire prevented and evacuation performance laws, the fire prevented and evacuation in the safe self-criticism, the smoke layer drop calculation methods is indispensable. At present the domestic fire prevented and evacuation judgment organization approval in the midst of the somke layer drop calculation methods, barring "Architecture and

Building Research Institute” appear 「The building fire prevented and evacuation the security performance confirmation technical manual」, than “National Institute of Standards and Technology” research and development 「Fire Dynamics Simulator」, Japanese 「Two-layer zone model」 and so on the three appraisals methods.

This research will discuss the three different appraisals method, will have by way of the literature collection the various countries has about full scale room fire experiments the result data, as well as Taipei of Nankang Exhibition Hall in the soon completion space of the each kind of size scale will carry on the computation and the simulation. Finally will test the result and the entity space computed result, in view of the three appraisals methods on the formula theory and comparative analysis, and proposed the smoke layer drop calculation methods datum and the difference. Expectation reference to furnish or supply for domestic the fire prevented and evacuation performance designer being prepared fire prevented and evacuation Synthesis self-criticism or performance design in the future, and expectation datum to furnish or supply for the fire prevented and evacuation judgment organization of the somke layer drop calculation methods.

關鍵字：Somke Layer Drop、Fire Dynamics Simulator、Two-layer zone model