

Abstract A computational procedure is presented to predict the flame spread results of LIFT method with data from the Cone Calorimeter.

The principle of the model is that the flame spread along the length of the specimen surface is caused by radiation both from the radiation panel and from the flame of the specimen which is assumed plane and parallel to the specimen surface.

The necessary input data for the model are the heat release rate at an irradiance level of 25 kW/m² and a number of ignition times at various, at least two, irradiance levels. All these data could be obtained from the Cone Calorimeter alone.

A detailed analysis of the computational model is described in the paper. The good agreement between the predictions and the test results indicates that it could be expected that the model could be used to predict the flame spread of LIFT test.

It is thought that this paper is a first step in the efforts to predict the flame spread of LIFT method using the Cone Calorimeter data. Further efforts should be made to examine the assumptions made in this paper with more experimental data.

Rapporten gjord av besöksstudent från Sichuan Fire Research Institute, Dujiangyan, China.