修正面源計算之高斯空氣品質模式

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摘　　要

在都市地區常利用高斯模式以計算非反應性污染物擴散之濃度分佈，雖然目前有許多模式可供應用，但各模式對面污染源之處理均有缺點存在，因此在本研究中發展出一種新的面污染源計算程序，此一新的方法乃將面污染源以兩段線源代替，經由仔細的安排，利用此新方法可以非常有效率地求出準確的濃度分佈，在本研究中利用一假想的面污染源來檢討此計算程序之結果表現，發現此一模式結果較ISCST和RAM準確甚多，且所須時間少於ISCST模式所須時間的兩倍，如與PAL比較，則此一模式在近污染源附近結果較不準確，但所須時間只爲PAL之十分之一。此一模式極適合於作業性的應用。

英 文 摘 要

ABSTRACT

A new algorithm for determining the concentration distributions caused by area source(s) is developed. In this algorithm , the integration of the Gaussian plume concentration over the area of source was carried out by Gaussian quadrature rule and the area source was represented by two line source segments. The new algorithm was first test by a dispersion problem from a hypothetical area source . The results of this new method are compared with that obtained from ISCST , RAM and PAL models. The proposed algorithm is more accurate than the ISCST and RAM models ,it's computation-al time is only twice of ISCST and one tenth of PAL requirement . The proposal algorithm is incorporated into the ISCST model , A practical application of this new algorithm is given.

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