

# Accepted Manuscript

Title: On predicting the length, width, and volume of the jet diffusion flame

Author: Yinhu Kang, Xiaofeng Lu, Tianfeng Lu, Xiaolong Gou, Xiaomei Huang, Shini Peng, Xuanyu Ji, Yang Zhou, Yangfan Song

PII: S1359-4311(15)01236-3

DOI: <http://dx.doi.org/doi: 10.1016/j.applthermaleng.2015.11.006>

Reference: ATE 7281

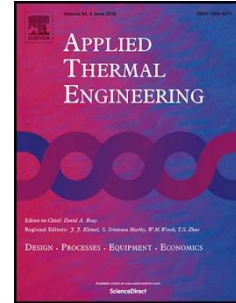
To appear in: *Applied Thermal Engineering*

Received date: 24-7-2015

Accepted date: 1-11-2015

Please cite this article as: Yinhu Kang, Xiaofeng Lu, Tianfeng Lu, Xiaolong Gou, Xiaomei Huang, Shini Peng, Xuanyu Ji, Yang Zhou, Yangfan Song, On predicting the length, width, and volume of the jet diffusion flame, *Applied Thermal Engineering* (2015), <http://dx.doi.org/doi: 10.1016/j.applthermaleng.2015.11.006>.

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**On predicting the length, width, and volume of the jet diffusion flame**

Yinhu Kang<sup>a,b,\*</sup>, Xiaofeng Lu<sup>c</sup>, Tianfeng Lu<sup>d</sup>, Xiaolong Gou<sup>c</sup>, Xiaomei Huang<sup>a,b</sup>,

Shini Peng<sup>a,b</sup>, Xuanyu Ji<sup>e</sup>, Yang Zhou<sup>a,b</sup>, Yangfan Song<sup>c</sup>

<sup>a</sup> School of Urban Construction and Environmental Engineering, Chongqing University, Chongqing 400045, China

<sup>b</sup> Key Laboratory of the Three Gorges Reservoir Region's Eco-Environment, Ministry of Education, Chongqing University, Chongqing 400045, China

<sup>c</sup> Key Laboratory of Low-grade Energy Utilization Technologies and Systems (Chongqing University), Ministry of Education of China, Chongqing 400044, China

<sup>d</sup> Department of Mechanical Engineering, University of Connecticut, Storrs, CT 06269-3139, United States

<sup>e</sup> College of Mechanical and Power Engineering, Chongqing University of Science & Technology, Chongqing 401331, China

**Highlights:**

- ▶ Flow, mixing, length and width behaviors of jet flames are theoretically studied.
- ▶ New forms of correlations for length, width, and volume of jet flames are proposed.
- ▶ Length, width, and volume correlations of the DME jet diffusion flames are developed.
- ▶ The current correlations have higher accuracy for the jet diffusion flames.

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\* Corresponding authors: Tel./Fax: +86 023-65102475.  
E-mail address: [cqkangyh@cqu.edu.cn](mailto:cqkangyh@cqu.edu.cn) (Y. Kang).

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