




Correction to: Burning Behavior Analysis in Meso and Large-Scale Oil Slick Fires With and Without Waves Using Outdoor Gas Emission Sampling (OGES) System

Hsin-Hsiu Ho *, *Fire Protection Engineering, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609, USA*

Kemal S. Arsava, Cold Regions Research and Engineering Laboratory (CRREL), US Army Corps of Engineers, 72 Lyme Rd, Hanover, NH 03755, USA

Ali S. Rangwala, Fire Protection Engineering, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609, USA

Published online: 22 May 2022

Correction to: Fire Technology

<https://doi.org/10.1007/s10694-022-01234-1>

In the PDF of this article, the labelling to the table 3, 4, 5, 6 and equation 1 in the article is incorrect and should have been the following information. The original article PDF has now been corrected.

Table 3

The labels in this table are all over the place and are not properly aligned with the appropriate columns.

*Correspondence should be addressed to: Hsin-Hsiu Ho, E-mail: hho@wpi.edu



Table 3
Summary of Combustion Product Concentrations Measured at 2.8 m Above Pool Surface

Fuel	Initial thickness (cm)	Wave number	Regression rate (mm/min)	Peak/Avg produced CO ₂ (vol %)	Peak/Avg produced CO	Soot [^] (g)	(vol %)	Burn time (min)	Peak/Avg consumed O ₂ (vol%)	Burn efficiency (%)
HOOPS	8			4.637/ 1.415	0.460/ 0.098	7.500/ 2.081	0.01	1.54	30.0	57
HOOPS*	8	Wave 1		4.540/ 1.817	0.475/ 0.118	7.834/ 2.946	0.10	1.86	42.0	95
HOOPS	8	Wave 2		2.798/ 1.137	0.299/ 0.054	5.331/ 1.685	0.01	1.45	54.0	97
Bunker	1			1.943/ 0.705	0.106/ 0.035	2.797/ 1.107		1.25	5.5	74
Bunker	1	Wave 3		1.122/ 0.405	0.053/ 0.019	1.523/ 0.653	0.02	1.72	6.0	86

*Rainy day

[^] Fine particle filter in Fig. 1

Corrected Table 3

Table 3
 Summary of combustion product concentrations measured at 2.8 m above pool surface

Fuel	Initial thickness (cm)	Wave number	Peak/Avg produced CO ₂ (vol%)	Peak/Avg produced CO (vol%)	Peak/Avg consumed O ₂ (vol%)	Soot [^] (g)	Regression rate (mm/min)	Burn time (min)	Burn efficiency (%)
HOOPS	8		4.637/1.415	0.460/0.098	7.500/2.081	0.01	1.54	30.0	57
HOOPS*	8	Wave 1	4.540/1.817	0.475/0.118	7.834/2.946	0.10	1.86	42.0	95
HOOPS	8	Wave 2	2.798/1.137	0.299/0.054	5.331/1.685	0.01	1.45	54.0	97
Bunker	1		1.943/0.705	0.106/0.035	2.797/1.107		1.25	5.5	74
Bunker	1	Wave 3	1.122/0.405	0.053/0.019	1.523/0.653	0.02	1.72	6.0	86
*Rainy day									
[^] Fine particle filter in Fig. 1									

Table 4

The labels such as Initial thickness, Wave number, and Peak/Avg produced CO₂ are all taking up multiple rows, which makes it aesthetically displeasing to read.

Table 4
Summary of Combustion Product Concentrations Measured by OGES Crane

Fuel	Initial thickness (cm)	Wave number	Peak/Avg produced CO ₂ (vol%)	Peak/Avg produced CO (ppm)	Peak/Avg consumed O ₂ (vol%)	Soot ^c (g)	Regression rate (mm/min)	Burn time (min)	Burn efficiency (%)
HOOPSa	8		0.247/	33/	0.117/	0.01	1.54	30.0	57
HOOPSa*	8	Wave 1	0.858/	105/34	0.292/	0.10	1.86	42.0	95
HOOPSb	8	Wave 2	2.197/	224/50		0.01	1.45	54.0	97
Bunkerb	1		1.860/	113/49			1.25	5.5	74
Bunkerb	1	Wave 3	0.490	1420/460		0.02	1.72	6.0	86
			2.146/						
			0.659						

^aCrane

^bZip line

* Rainy day

^c Fine particle filter in Fig. 1

Correct Table 4

Table 4[†]Summary of combustion product concentrations measured by OGES Crane[‡]

Fuel [∘]	Initial thickness (cm) [∘]	Wave number [∘]	Peak/Avg [‡] produced CO ₂ (vol%) [∘]	Peak/Avg [‡] produced CO (ppm) [∘]	Peak/Avg [‡] consumed O ₂ (vol%) [∘]	Soot [⋄] (g) [∘]	Regression rate [‡] (mm/min) [∘]	Burn time (min) [∘]	Burn efficiency (%) [∘]
HOOPS [⋄]	8 [∘]	[∘]	0.247/ [∘]	33/ [∘]	0.117/ [∘]	0.01 [∘]	1.54 [∘]	30.0 [∘]	57 [∘]
HOOPS [⋄]	8 [∘]	Wave 1 [∘]	0.858/0.455 [∘]	105/34 [∘]	0.292/ [∘]	0.10 [∘]	1.86 [∘]	42.0 [∘]	95 [∘]
HOOPS [⋄]	8 [∘]	Wave 2 [∘]	2.197/0.651 [∘]	224/50 [∘]	[∘]	0.01 [∘]	1.45 [∘]	54.0 [∘]	97 [∘]
Bunker [⋄]	1 [∘]	[∘]	1.860/0.490 [∘]	113/49 [∘]	[∘]	[∘]	1.25 [∘]	5.5 [∘]	74 [∘]
Bunker [⋄]	1 [∘]	Wave 3 [∘]	2.146/0.659 [∘]	1420/460 [∘]	[∘]	0.02 [∘]	1.72 [∘]	6.0 [∘]	86 [∘]

* Rainy day[∘]^ Fine particle filter in Fig. 1[∘][‡] Crane[∘][⋄] Zip line[∘]

Table 5

The terms are presented incorrectly. The division sign is missing, and the dot is not above the Q . z/Q .

Error

Table 5

Summary of Mass Flow Rate Correlations for a Buoyant Diffusion Flame from McCaffrey [14]

Regime	$z/Q^{2/5}$ (m/kW ^{2/5})	Correlation
Continuous flame	< 0.08	$m/Q = 0.111(z/Q^{2/5})^{0.566}$
Intermittent	0.08–0.20	$m/Q = 0.026(z/Q^{2/5})^{0.909}$
Plume	> 0.20	$m/Q = 0.124(z/Q^{2/5})^{1.895}$

Correct

Regime	$z / \dot{Q}^{2/5}$ (m/kW ^{2/5})	Correlation
Continuous flame	< 0.08	$\dot{m} / \dot{Q} = 0.011(z / \dot{Q}^{2/5})^{0.566}$
Intermittent	0.08 – 0.20	$\dot{m} / \dot{Q} = 0.026(z / \dot{Q}^{2/5})^{0.909}$
Plume	> 0.20	$\dot{m} / \dot{Q} = 0.124(z / \dot{Q}^{2/5})^{1.895}$

Table 6

Similar to Table 5, the terms are presented incorrectly. The division sign is missing, and the dot is not above the Q. Additionally, the units for the values under k are presented incorrectly. The s is appearing after the parentheses. There are multiplication signs appearing after the parentheses, and the superscript over m and kW are reversed in the last row. Please see the Correct portion for the proper units and values. $2/5/zQ$.

Error

Table 6
Summary of Centerline Constants for a Buoyant Diffusion Flame from McCaffrey [14]

Regime	k	η	$z\dot{Q}^{2/5}$ (m/kW ^{2/5})	C
Continuous flame	6.8 (m ^{1/2} /s)	1/2	< 0.08	0.9
Intermittent	1.9 (m/kW ^{1/5} s)	0	0.08–0.20	0.9
Plume	1.1 (m ^{1/3} /kW ^{4/3} s)	-1/3	> 0.20	0.9

Correct

Regime	k	η	$z/\dot{Q}^{2/5}$ ($\text{m}/\text{kW}^{2/5}$)	C
Continuous flame	6.8 ($\text{m}^{1/2}/\text{s}$)	1/2	< 0.08	0.9
Intermittent	1.9 ($\text{m}/\text{kW}^{1/5} \cdot \text{s}$)	0	0.08 – 0.20	0.9
Plume	1.1 ($\text{m}^{4/3}/\text{kW}^{1/3} \cdot \text{s}$)	-1/3	> 0.20	0.9

Eqn. (1)

The 2 in CO₂ should be subscript, like CO₂.

Error

$$MCE = \frac{CO2}{CO2 + CO} \quad (1)$$

Correct (2 should be subscript)

$$MCE = \frac{CO_2}{CO_2 + CO} \quad (1)$$

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.