Instructions for papers

- 1. Please assure the originality and reliability of the content in your paper.
- 2. Please confirm to write your paper with clear English without obvious grammar errors.
- 3. Your paper must be not longer than 14 pages.
- 4. Please format your paper(s) according to the following requirements:
- (1) Text area, 257mm×170mm, single column, on A4 size paper, centered
- (2) Title, 14pt, Times New Roman, Bold, Center
- (3) Author, 10.5pt, Times New Roman, Capitalize the first letter of Firstname and all the letters of LASTNAME, Centered
- (4) Affiliation(s), 9pt, Times New Roman, Center
- (5) Abstract/Keywords, 8pt, Times New Roman, 3–8 Keywords.
- (6) Text body, 9pt, Times New Roman, single spaced, fully justified
- (7) Heading level 1, 10.5pt, Times New Roman, Bold, Align left, Capitalize all the first letters
- (8) Heading level 2, 9pt, Times New Roman, Bold, Align left, Capitalize all the first letters
- (9) Heading level 3, 9pt, Times New Roman, Align left
- (10) All tables/figures must have a number and title, 9pt, Times New Roman, Bold; Words in Table/Figure, 9pt, Times New Roman
- (11) All equations and expressions in the paper must be numbered consecutively. The equation is centered while the equation number in parentheses is right aligned.
- (12) Graphics (including photographs) should be black and white. Resolution should be at least 600 DPI.
- (13) Cite each reference in text in numerical order and list in the References section. Indicate references *in the text* using superscript numbers in brackets. References section: 8pt, Times New Roman.

Experimental Study of Water Sprays Effect on Gas Flame Propagation

XI Yuhai¹, QI Shuxia¹, HANG Li² & ZU Ruru²

- (1 Department of Mechanics, University of Science and Technology, Xian 710000, Shaanxi, China;
- 2 Department of Chemical Engineering, Henan Institute of Technology, Zhengzhou 450000, Henan, China)

Abstract: The influence of water sprays on gas flame propagation was experimentally studied. The present results suggest that the mitigating effect of...... **Keywords:** explosion; flame propagation; water sprays

1 Introduction

The effectiveness of water as a fire-fighting agent is universally recognized and water sprays are widely used in protecting structures and against fire. Recently, researchers have again focused on studying water sprays as a means of mitigating gaseous explosions^[1-5].....

2 Experiment

A 1480-mm-long, 89×89-mm-quadratic cross, horizontal FAT (flame acceleration tube) closed at one end was used (Fig. 1)......

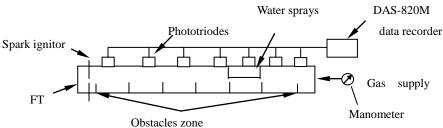


Fig.1 Apparatu

3 Results and Discussion

Fig.3 shows that, before the flame burns into the water sprays zone, the flame speeds with no spray are.....

Table 1 Optimization results

Method	The highest /mm	The minimum /mm
Scenario	543	442
Prophase	569	364
Anaphase	678	511

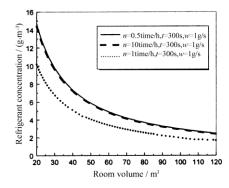


Fig.3 Relationship

4 Conclusions

The self-developed experimental system, the flame acceleration tube setup is valuable for the further study of the effectiveness of water spray on quenching gas flame. The present tests have demonstrated that water sprays can

References

[1] Thomas G O, Edwards

[2]