

Analisis fenomena nyala flashback pada bunsen burner dilengkapi rotating fan mixer = Analyze of flashback flame on bunsen burner with rotating fan mixer

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Abstrak

[ABSTRAK

Penelitian berikut ini bertujuan untuk mengamati fenomena flashback flame yang terjadi pada pembakaran rendah bahan bakar. Bahan bakar yang digunakan berupa LPG produk swasta, dan proses pembakaran yang terjadi pada Bunsen burner yang telah dilengkapi rotating fan. Tabung burner dibuat dari bahan pyrex untuk mengamati kecepatan nyala flashback. Penelitian difokuskan terhadap variasi rasio udara-bahan bakar dan variasi putaran rotating fan serta variasi diameter burner. Hasil penelitian menunjukkan bahwa laju rambat nyala flashback akan cepat terjadi pada diameter burner 15 mm dibandingkan dengan diameter 20 mm dan 25 mm. Adanya putaran rotating fan memperlambat kecepatan nyala flashback dan memperbesar nilai rasio udara bahan bakar pada setiap diameter barrel.

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ABSTRACT

This research intent to observe flame-flashback phenomenon on lean-fuel combustion. As primary fuel was used LPG and Bunsen burner who completed with rotating fan mixer. Burner tube was made from pyrex to observe and analyze flame-flashback velocity. Else, this experiment was conduct on variation of burner diameter and variation of rotation from rotating fan mixer. As the result, speed of flame flashback would be occurred on burner diameter of 15 mm than burner diameter 20 mm and 15 mm. Rotation of rotating fan mixer would be reduce flashback speed and also increasing the value of Air Fuel Ratio at each barrel. ; This research intent to observe flame-flashback phenomenon on lean-fuel combustion. As primary fuel was used LPG and Bunsen burner who completed with rotating fan mixer. Burner tube was made from pyrex to observe and analyze flame-flashback velocity. Else, this experiment was conduct on variation of burner diameter and variation of rotation from rotating fan mixer. As the result, speed of flame flashback would be occurred on burner diameter of 15 mm than burner diameter 20 mm and 15 mm. Rotation of rotating fan mixer would be reduce flashback speed and also increasing the value of Air Fuel Ratio at each barrel. , This research intent to observe flame-flashback phenomenon on lean-fuel combustion. As primary fuel was used LPG and Bunsen burner who completed with rotating fan mixer. Burner tube was made from pyrex to observe and analyze flame-flashback velocity. Else, this experiment was conduct on variation of burner diameter and variation of rotation from rotating fan mixer. As the result, speed of flame flashback would be occurred on burner diameter of 15 mm than burner diameter 20 mm and 15 mm. Rotation of rotating fan mixer would be reduce flashback speed and also increasing the value of Air Fuel Ratio at each barrel.]