

Title (en)
Partial pre-mix flare burner and methods

Title (de)
Fackelbrenner mit teilweiseem Vorgemisch und Verfahren

Title (fr)
Brûleur de torche à pré-mélange partiel et procédés

Publication
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Application
EP 07253574 A 20070910

Priority
US 54036206 A 20060929

Abstract (en)
A flare burner (30) that is particularly suitable for use in connection with ground flares and other types of flares in which it is important to control the height of the flame envelope created by the burner is provided. The flare burner includes a pre-mix zone (31) including a pre-mix chamber (32) into which air is entrained. A uniform mixture of fuel and air is formed in the pre-mix zone and caused to exit an air/fuel outlet in the top of the pre-mix chamber. In one embodiment, the amount of air in the fuel/air mixture that exits the air/fuel outlet (50) is in excess of the stoichiometric amount of air required to support combustion of the fuel in the mixture. Fuel is injected around the perimeter (69) of the air/fuel outlet, combustion is initiated and a flame envelope is created. By injecting a mixture of fuel and air that includes excess air into the center of the flame envelope, combustion of the central portion of the flame envelope is accelerated which allows more fuel to be flared with a given flame envelope height. The invention also includes a ground flare and a method of flaring fuel with a flare burner.

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