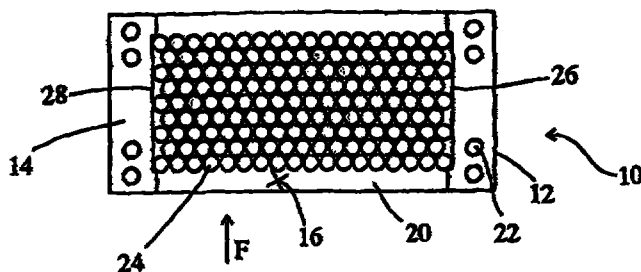




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(54) Title: FLAME ARRESTER



(57) Abstract

A flame arrester comprises a flow passage in which are disposed a plurality of generally aligned rods such that fluids flowing in the passage must pass between the rods. Rows of rods are used to construct the flame arrester element, ideally closely spaced and these present a natural surface over which air can flow with minimal flow resistance. The rods can be of any size and the gaps between them can be selected to arrest explosions due to different gases or vapours in air. The rod diameter can be altered to withstand different levels of explosion pressure, making it possible to construct both deflagration and detonation flame arresters. The rods can be made of solid material or tubes. If tubes are used these can carry cooling fluid making the arrester more effective at coping with continuous burning. Additional tubes of larger diameter and spacing can be added upstream. Rods in parallel rows can be offset with respect to the adjacent row. Suitable offset angles can vary. Examples are between 30 and 60 degrees, but this is not exhaustive. This arrester lends itself to being cleaned mechanically, simply by introducing a linear scraping device. This preferably passes over each rod to keep it clean. The scraping device can either be operated by manual effort or automatically in a variety of ways.