

Title (en)
SPARK PLUG FOR AN INTERNAL-COMBUSTION ENGINE

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Application
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Abstract (en)
[origin: ES8308167A1] In order to obviate the necessity for design compromise of spark plugs with respect to their operating temperature, so that the ceramic insulator (18) of the spark plug will rapidly reach the temperature at which deposits thereon will inherently burn off (about 400 DEG C.-450 DEG C.) while not becoming so hot as to cause spurious glow ignition within the combustion chamber of an internal combustion (IC) engine, the end portion of the insulator is formed with a central opening (19/3) within which a metal core (24) is included which has a temperature coefficient of expansion such that, at temperatures below between 400 DEG C.-450 DEG C. it is spaced by a narrow gap (25) from the inner surface of the insulator (see FIG. 1) but, as the spark plug becomes hot, the gap 25 closes (FIG. 2), thereby providing good heat transmission from the insulator to the center electrode structure (21, 23, 24) and thereby maintaining the insulator at a temperature below that at which it might glow. Suitable materials for the center electrode are aluminum bronze, or other materials having a heat transmission characteristic of at least 90 W/mK. The insulator, preferably, has a higher-than-usual flux content so that, at low temperatures, its heat transmission characteristics are poor, to insure rapid heating to free combustion temperature of possible deposits.

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