POROUS CERAMIC ATOMIZATION CORE AND ELECTRONIC ATOMIZATION DEVICE USING SAME

FIELD

[0001] The invention relates to the technical field of atomization, in particular to a porous ceramic atomization core and an electronic atomization device using the same.

BACKGROUND

[0002] Porous ceramic, as a mainstream liquid transfer material of atomization cores of existing atomization assemblies in this field, is widely used because of its advantages of good structural strength, uniform temperature of micro-pore structures, and high-temperature resistance. Porous ceramic atomization cores usually comprise a heating assembly and a porous ceramic liquid transfer assembly. In use, the heating assembly generates heat, the porous ceramic liquid transfer assembly atomizes liquid under high temperature of the heating assembly to generate a certain amount of gas, and when users inhale, an airflow will be generated to drive the gas to flow out, thus realizing a smoking effect.

[0003] However, existing porous ceramic atomization cores have the following defects: most existing porous ceramic atomization cores are provided with a porous ceramic body formed with one liquid transfer channel, a heating assembly is attached to the bottom of the porous ceramic body, and atomizing liquid is fed and transferred by means of one liquid transfer channel, so the liquid transfer rate is low, compromising the atomization effect of the porous atomization core. Since the heating assembly generally has a high temperature, cracks are probably formed in the contact surface between porous ceramic and the heating assembly, thus affecting the use of the porous ceramic atomization core. In addition, the atomized steam may encounter cold air at an air inlet (i.e., below the porous ceramic atomization core) to form condensate, leading to a waste of atomizing liquid and probably causing damage to electronic elements.

heating unit 3 is not limited. The heating wire and the electrodes may be formed by a cutting or corrosion process, and the electrodes are in contact with external electrodes.

[0042] Embodiment 2: As shown in FIGS.4-9, an electronic atomization device comprises an atomizer housing 10, wherein the porous ceramic atomization core 20 in Embodiment 1 is arranged in the atomizer housing 10, the top and bottom of the porous ceramic atomization core 20 are clamped by a sealing element 30 and a base 40 respectively, and a liquid chamber 50 is arranged between the atomizer housing 10 and the porous ceramic atomization core 20. The sealing element 30 is provided with a socket, the porous ceramic atomization core 20 is inlaid in the socket to be fixed, and liquid transfer ports 31 communicated with the liquid transfer channels 2111 and an air vent 32 communicated with the air passage are formed in the sealing element 30. The base 40 is provided with a receiving cavity, the porous ceramic atomization core 20 is arranged in the receiving cavity of the base 40, an air inlet 401 is formed in the base 40 and is correspondingly communicated with the notch 25 of the porous ceramic atomization core 20 to form an air passage. By means of the design of the sealing element 30 and the base 40, the atomization core is easy and convenient to assemble and high in reliability. When the electronic atomization device works, liquid in the liquid chamber enters the liquid transfer channels 2111 of the porous ceramic atomization core 20 via the liquid transfer ports 31 of the sealing element 30, air enters the porous ceramic atomization core 20 via the air inlet 401 of the base 40, the heating unit 3 of the porous ceramic atomization core 20 heats and atomizes the liquid into atomized steam, the atomized steam is mixed with the air entering the porous ceramic atomization core 20 via the air inlet 401 to form aerosol, and the aerosol flows out via the air vent 32 of the sealing element 30 to be inhaled by users eventually.

[0043] As shown in FIG. 7, a convex rim 24 extends outward from a top surface of each protruding portion 211 of the porous ceramic atomization core 20, all portions, other than the convex rims 24, of the porous ceramic atomization core 20 are received in the receiving cavity of the base 40, and the convex rims 24 abut against a top surface of a side wall of the base 40, such that the porous ceramic atomization core has a better sealing effect. Because it is difficult to accurately control the size tolerance of the porous ceramic due to the limitation of the production process of the porous ceramic, a large void space exits between the porous ceramic atomization core 20 and the base 40 after the porous ceramic atomization core 20 is assembled in the base 40.