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Study on the Preheating Ignition Structure of High Frequency Coil of Parking Air Heater

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Abstract

The fire is heated in advance through the high-frequency movement of the coil for preliminary ignition. Make heating gas for parking. This includes the space for fuel combustion and a combustion base under the space for combustion. Not only that, but also an exclusive channel to transport fuel. And the frequency of the coil and the metal parts used for combustion and gasification. These metal parts are placed in the combustion base. The general pipeline that insulates heat and prevents combustion is to connect the fuel through the fuel outlet of the pipeline between the metal parts of the fuel vaporization and the high-frequency movement of the coil to form a channel for circulating fuel. The fuel oil is connected to the general pipe that insulates heat and prevents combustion through the oil outlet end of the pipe. The principle of rapidly heating the burning red metal through the high-frequency movement of the coil is that this product can realize the rapid ignition of the fuel oil after flowing out of the pipe through vaporization. Thus, after the fuel flows out from the fuel through the pipeline, the general pipeline that insulates the fuel and prevents the combustion effectively blocks the fuel vaporization metal parts that high temperature is transferred to the circuit board, thus ensuring the normal use of the circuit board. The fuel is bent to the top of the combustion base through the upper end of the pipe. The high temperature of the flame can play the role of heating in advance for preparation, so that the fuel will vaporize when burning through the pipe.

Keywords

Combustion; Heater; High Frequency Motion of Coil.

1. Background Technology

At present, the space used for traditional heating combustion is the space used for traditional combustion without heating in advance. The fuel oil is directly transported to the ignition mechanism for ignition and combustion through the pipeline. When the oil is about to be sprayed out, the diesel oil is just liquid when it passes through the pipeline, which causes a small flame with insufficient combustion, and carbon deposit is easy to form in the space used for combustion. Therefore, there are more inconveniences. At present, the space used for heating and the existing ignition methods in our country are to ignite the fuel by releasing the arc at the end of the electrode to generate a higher temperature, and the ignition generally needs to be carried out many times. Therefore, it is very troublesome to use a pre-heating and pre-ignition structure for high-frequency movement of the coil, and the parking air heater to solve the problem of pre-heating and pre-ignition of the space used for combustion.

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2. Description of Structure Content

High frequency motion of the coil is provided for heating in advance to prepare the ignition structure, so as to cope with the shortage of the existing technology. For parking air heater.

The technical scheme adopted to achieve the above purpose. A high frequency motion of the coil of the parking air heater, which is arranged at the lower end of the space used for combustion to provide the space for fuel combustion and the combustion base for fixing the space used for combustion, heats up in advance to prepare the ignition structure. There are also fuel oil that is used to transport fuel through pipes, and there are also high-frequency motions of coils placed in the combustion bottom bracket, and metal parts are used to vaporize fuel. The utility model comprises a high-frequency motion of a coil arranged at the lower end of the space used for combustion. The metal parts used for fuel vaporization are placed in the combustion bottom bracket, and the general pipe for isolating heat and preventing combustion is set between the metal parts for fuel vaporization and the high-frequency movement of the coil. When the fuel vaporization metal parts are heated in the high-frequency movement of the coil, the general pipe that insulates heat and prevents combustion is connected with the fuel through the pipe outlet to form a channel for fuel supply circulation, and the fuel is connected with the general pipe that insulates heat and prevents combustion through the pipe outlet. Connect the flame retardant pipe with the fuel vaporization metal parts to form a passage for fuel circulation. After the high temperature vaporization of the fuel in the general pipeline that insulates the heat and prevents combustion, the fuel is sprayed from the oil outlet of the combustion bottom, which is carried out in the vaporization state, as shown in Figure 1.

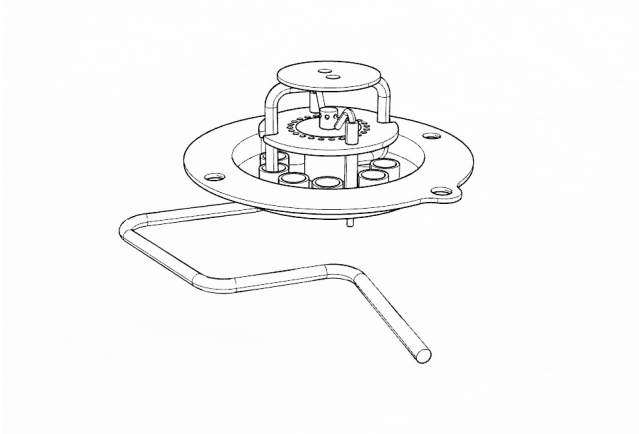

Figure 1. New fuel burning device

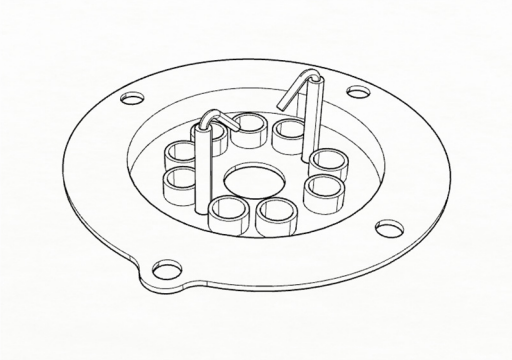

Figure 2. A preparation part for heating in advance

The fuel oil is partially bent from the space used for combustion through the pipe and is directly above the combustion bottom bracket to form a preparation part for heating in advance, and

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the fuel oil is connected with the general pipe in the combustion bottom bracket that insulates heat and prevents combustion through the pipe end bending, as shown in Figure 2.

The oil outlet of the combustion bottom bracket is provided with an oil outlet combustion net.

The general pipe used to insulate heat and prevent combustion is insulated ceramic pipe, as shown in Figure 3.

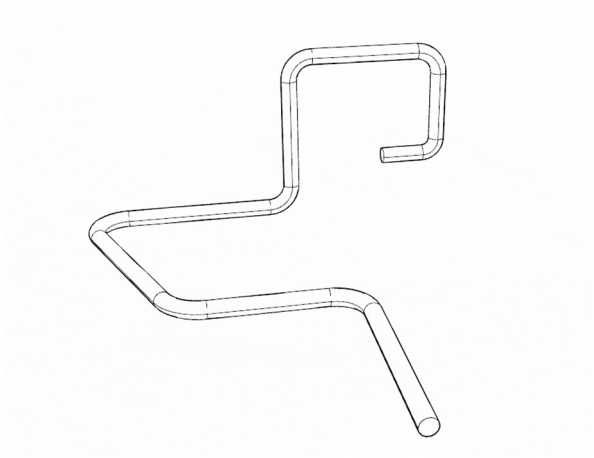

Figure 3. The insulated ceramic pipe

It also includes a circuit board. The circuit board is set at the lower end of the combustion bottom bracket through three fixed columns, and the high-frequency motion of the coil is electrically connected with the circuit board.

The combustion bottom bracket is provided with a number of air inlets connected with the space used for combustion.

It also includes a spoiler, which is set in the space used for combustion and is located on the preparation part of fuel heating in advance through the pipeline, as shown in Figure 4.

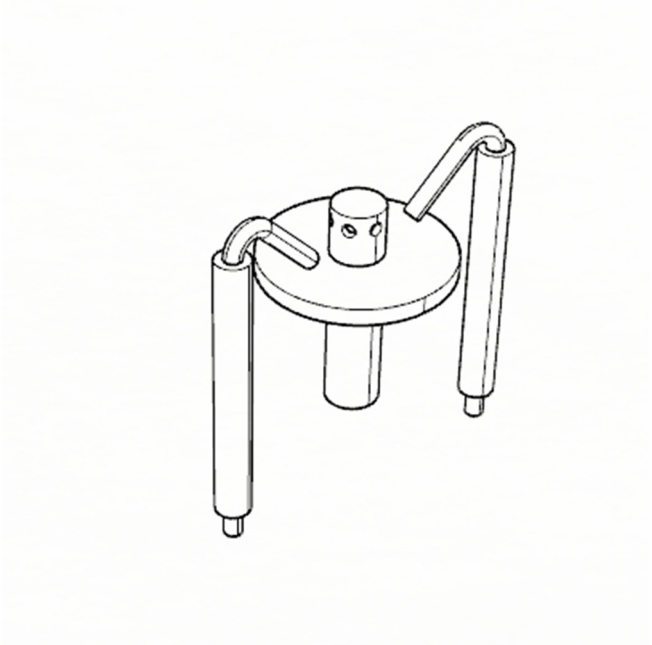

Figure 4. The spoiler setup

The fuel vaporization metal parts are composed of several sheet metal plates arranged around the whole row, and the inner wall of each sheet metal plate is connected into a whole, making it an integral whole, as shown in Figure 5.

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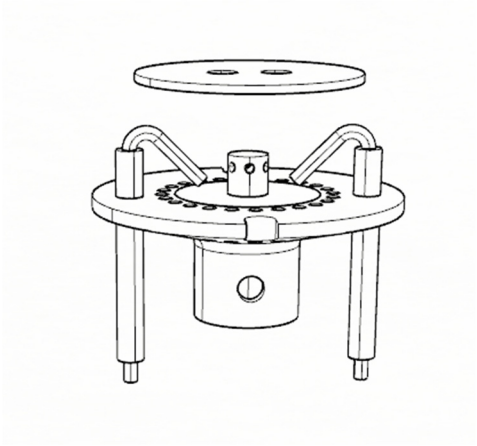

Figure 5. The inner wall of each sheet metal plate is connected into a whole

Favorable effect: It provides the principle of rapidly heating the red metal through the high-frequency movement of the coil, so that the fuel flows out from the fuel through the pipeline and can quickly vaporize the ignition coil to ignite the high frequency movement to heat in advance and prepare the ignition structure parking heater. The general pipe that insulates heat and prevents combustion plays an effective role in blocking the fuel vaporization metal parts that transfer high temperature to the circuit board, ensuring the normal use of the circuit board. Moreover, the fuel oil bends into the upper part of the combustion base through the upper end of the pipe, and the high temperature of the flame can make the fuel oil be heated in advance for preparation during combustion through the pipe, thus improving the fuel vaporization effect, and it can be ignited and heated in advance for preparation very quickly and conveniently, at the same time, it also has high safety. Very practical.

3. Specific Implementation Mode

As shown in Figures 1 to 2, the high-frequency motion of the coil of the parking air heater will be heated in advance to prepare the ignition structure, including the combustion of the space used for combustion fixed at the lower end of the space used for combustion, which is used to ignite the fuel. It also includes the passage of fuel oil used to transport fuel through the pipeline, and the high-frequency movement of coils, which are placed in the combustion base. In addition to the high frequency movement of the coil fixed at the lower end of the space used for combustion, it also includes the general pipe set between the fuel vaporization metal parts, the fuel vaporization metal parts and the high frequency movement of the coil to insulate the heat and prevent combustion, and the fuel set at the lower end of the space used for combustion is connected through the pipe outlet to form a channel for fuel circulation The fuel passes through the outlet end of the pipeline and the general pipeline that insulates the heat to prevent combustion. When the high frequency motion of the fuel coil in the general pipe that insulates heat and prevents combustion heats up the fuel vaporization metal parts, the high frequency motion of the insulation flame retardant pipe coil can rapidly heat up the fuel vaporization metal parts during use. After the fuel flows into the general pipeline that insulates the heat and prevents combustion from the fuel through the pipeline, the fuel is vaporized at high temperature and sprayed out from the oil outlet of the combustion base, and then burns after contacting the air. The flame formed after combustion reheats the combustion base and the fuel oil through the pipeline to realize the heating in advance for the high-frequency movement of the preparation coil. It is mainly for the purpose of ignition, and carries out the preliminary heating for preparation. The fuel is sprayed from the fuel outlet of the combustion base above the combustion base for vaporization. When the space used for combustion reaches a certain

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temperature, the prepared fuel heated in advance is directly vaporized through the pipeline, without the need to use the high-frequency motion of the coil for thermal vaporization. However, the time for heating the coil in advance for preparation will also be set with many continuous gears, which are controlled by the circuit board and determined according to the size and temperature of the model, as shown in Figure 6.

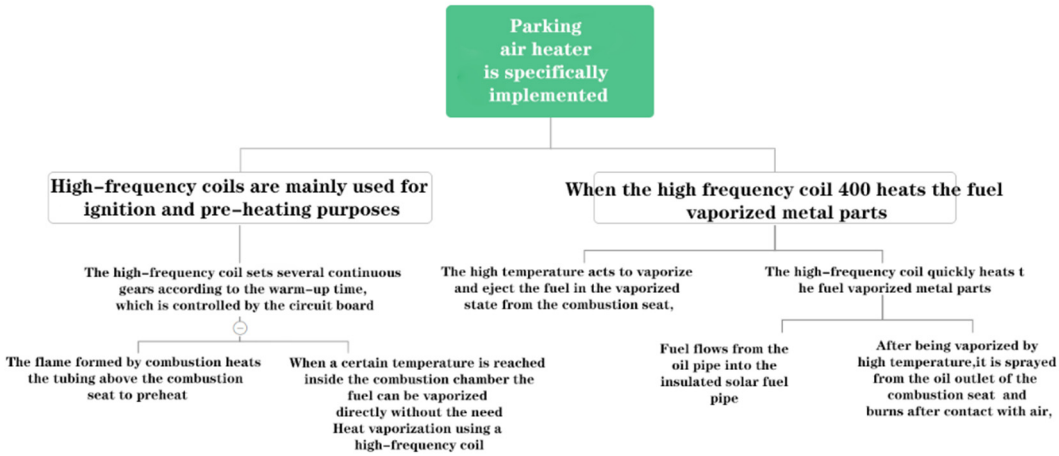

Figure 6. Circuit board control diagram

The space used for combustion is located directly above the combustion base, and the following fuel is partially bent through the pipeline after forming the preparation part for heating in advance. The fuel oil is prevented from connecting the fuel pipe by bending the pipe end and the internal insulation of the combustion bottom bracket. After being ignited by the combustor, the flame generated during combustion heats the fuel oil through the pipe, and the fuel flowing through the pipe heats up. If the temperature of the space used for combustion is high enough, it is enough to vaporize the fuel directly through the pipeline, so that the fuel injected through the pipeline will burn more fully and conveniently, as shown in Figure 7.

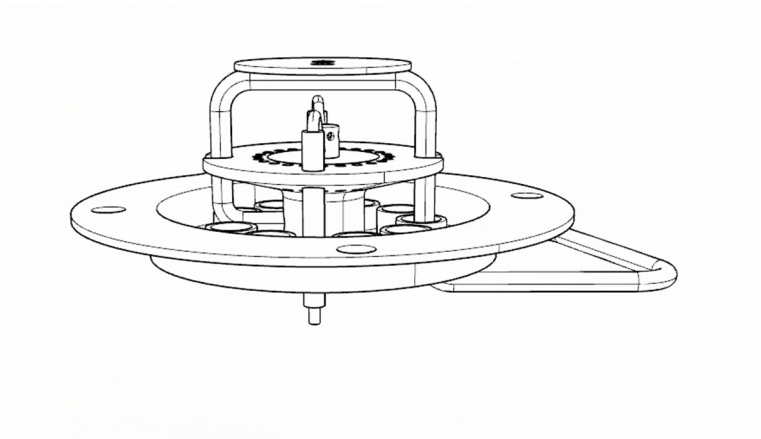

Figure 7. Heated fuel is injected through a pipe

A 210 combustion net is set at the oil outlet of the combustion bottom bracket. The function of the combustion net is to burn the vaporized fuel sprayed on the combustion net. With the fuel as the carrier, it has good combustion effect and sufficient combustion effect.

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The general pipe that insulates heat and prevents combustion is a heat-insulating ceramic pipe with the advantages of high temperature resistance and heat insulation. However, the high-frequency motion of the coil can only heat the metal material, and the ceramic material can not heat. Therefore, it can play a good role in heat insulation for the high temperature of the circuit board and other components, achieving effective protection, as shown in Figure 8.

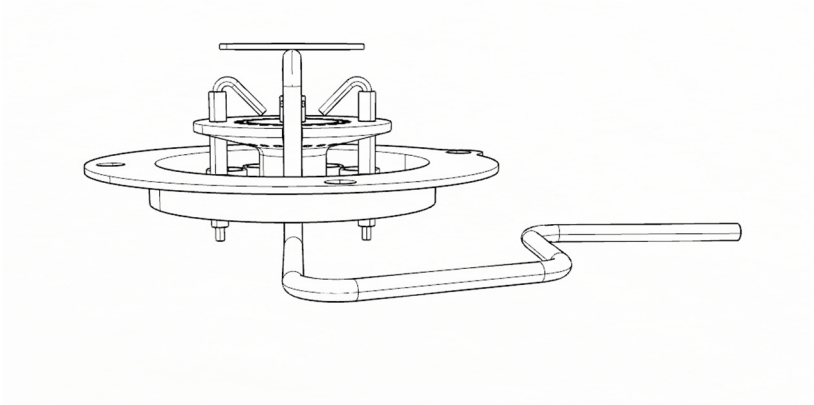

Figure 8. Heat insulation protection

It includes a circuit board. A circuit board is set at the lower end of the combustion bottom bracket. It is fixed by three columns to electrically connect the circuit board to the high-frequency movement of the coil. Since the high-frequency motion of the coil is a relatively mature technology at present, some necessary electrical equipment is set on the line board to drive the high-frequency motion of the coil. Its specific working principle and architecture will not be discussed in detail.

The combustion base is equipped with many air inlets connected with the space used for combustion, which need oxygen-containing air for combustion, and the air flow universal 220 is used to make the fuel burn more fully, as shown in Figure 9.

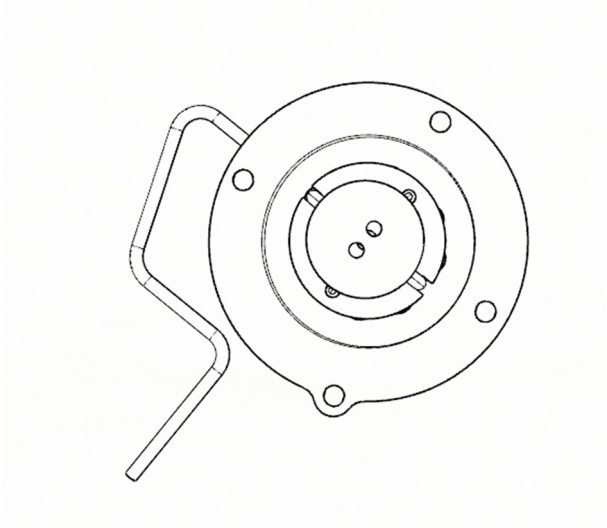

Figure 9. Many air inlets connected with the space used for combustion

It also includes the spoiler 800 set in the space used for combustion, the spoiler 800 set on the preparation part of the fuel heating in advance through the pipeline, and the high temperature of the spoiler part can be transferred to the fuel through the pipeline after burning red, improving the effect of the fuel heating in advance through the pipeline and the preparation part 310 heating in advance.

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In order to facilitate the vaporization and combustion of fuel, the vaporized metal parts for fuel are connected with the inner wall of various sheet metal plates similar to the heat sink structure to increase the contact area with the air, so as to make its own temperature emission more efficient, and several sheet metal plates are arranged around the whole row, as shown in Figure 10.

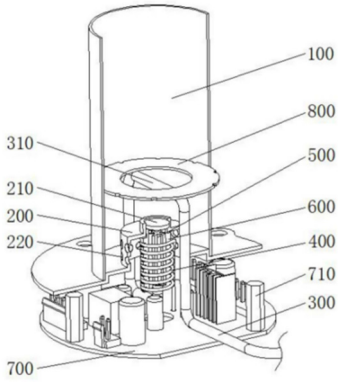

Figure 10. Temperature emission more efficient

4. Description of Attached Drawings

Figure 1 is the structural schematic diagram I;
Figure 2 is the structural breakdown diagram I;
Figure 3 is the structure breakdown diagram II;
Figure 4 is the structure breakdown diagram III;
Figure 5 is the structure breakdown diagram IV;
Figure 6 is the specific implementation thinking diagram;
Figure 7 is the structural schematic diagram II;
Figure 8 is structural schematic diagram III;
Figure 9 is the structural schematic diagram IV;
Figure 10 is the side view of the structure

5. Conclusion

Favorable effect: the principle of burning red metal is rapidly heated by the high-frequency movement of the coil, so that the fuel flows out of the pipeline and is quickly vaporized and ignited, while the general pipe that insulates the heat to prevent combustion plays an effective role in blocking the fuel vaporization metal parts that high temperature is transferred to the circuit board. Thus, it provides a kind of parking air heater with high frequency movement of the coil to heat in advance and prepare the ignition structure to ensure the normal use of the circuit board. And the fuel is bent towards the upper combustion base through the upper end of the pipe. When the fuel is burning, the high temperature of the flame can make the fuel heat up in advance through the pipeline for preparation, so as to improve the fuel vaporization effect. It is very fast and convenient to ignite and heat up in advance for preparation, and also has high safety. Very practical.

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