Recruitment of contract applicants, Inventor Imaeda invented electric vehicle with fuel cell.

Recruitment of contract applicants about temporary exclusive license agreements to manufacture and sell electric vehicles with fuel cells.

TOYOTA, AICHI, JAPAN, March 30, 2023 /EINPresswire.com/ -- Representative of Inventor Imaeda, Shigehiro Imaeda (Family Register Name, Shigehiro) (Headquarters: Toyota City, Aichi Prefecture) has entered into temporary exclusive license agreements with domestic and foreign automobile manufacturers to manufacture and sell electric vehicles with fuel cells. On February 7, 2022, a patent application was filed with the Japan Patent Office (patent application 2022-016815, JP-A-2023-020847), and on May 12, it was unveiled for the first time in Japan at Dr. Nakamatsu's World Genius Conference! Apply for the Familiar Hint Invention Exhibition of the Japan Institute of Invention and Innovation in July! PCT international application filed on December 28, 2022, receipt received from WIPO on January 18, 2023 (PCT/JP2022/048659, unpublished).

Electric vehicle with fuel cell The content of the invention is an eco-friendly, resource-saving, compact, lightweight, inexpensive vehicle that can be mass-produced and will lead the development of a hydrogen society. This car uses electricity and hydrogen as its energy sources. Therefore, it is environmentally friendly as it emits only water. The car body has a power supply port and a hydrogen filling port. The basic structure is that an electric vehicle is equipped with a small, low-output, constant-output fuel cell, a fuel tank, and a filling port so that it can be charged while driving.

Currently, electric vehicles are increasing the capacity of the secondary storage battery to extend the cruising range, but they use lithium-ion batteries, and the batteries are large and heavy, and the price of lithium raw materials is soaring. is happening. Naturally, the car itself will be large, heavy, and expensive. The cruising range of this fuel cell electric vehicle is determined by the capacity of the hydrogen fuel tank. The capacity of the secondary storage battery was set to 8 kWh so that the capacity required for driving in the vicinity in one day was installed when driving without using hydrogen. This capacity is one-fifth the capacity of secondary storage batteries in ordinary electric vehicles.

A fuel cell installed in an ordinary fuel cell vehicle requires an output of the fuel cell that can produce the maximum output of the drive motor, and requires a change in the output. The required output of the fuel cell mounted on this fuel cell electric vehicle may be slightly larger than the output required when the vehicle is running stably. A constant output is sufficient.

Approximately 1/10 of the output of fuel cells mounted on ordinary fuel cell vehicles is sufficient. The capacity of the secondary storage battery to be installed in the fuel cell electric vehicle can be reduced to 1/5, and the output of the fuel cell to 1/10, so resource-saving, compact, lightweight, inexpensive, and mass production are possible.

As for how to use it, in the neighborhood, each household charges it at night every day and uses it for a whole day. Prepare for the next day. When going out, first run on electricity, then run while generating electricity with hydrogen from a fuel cell. If you run out of hydrogen, refill with hydrogen at the hydrogen station. It can be fully filled with hydrogen in about 10 minutes. It can run about 500 km when fully charged.

This electric vehicle with fuel cell is a hydrogen fuel cell vehicle, but it can run on electricity without hydrogen. Even if there is no hydrogen station nearby, it can run on electricity without using hydrogen, so it can be used even if hydrogen cannot be refilled at the hydrogen station. One of the reasons why existing hydrogen fuel cell vehicles are not selling well is that there are no hydrogen stations nearby and they cannot be refilled with hydrogen and cannot be used. Therefore, even if there is no hydrogen station nearby, this electric vehicle with fuel cell can be purchased and used in areas where electric charging is possible. If many electric vehicle with fuel cell are purchased and used in areas without hydrogen stations, the potential demand for hydrogen will increase in those areas, and hydrogen stations will be required. , the sales of hydrogen stations will increase. Many hydrogen stations will be built.

In this way, it is a vehicle that is necessary for the development of a hydrogen society and a driving force for the hydrogen society.

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