WHAT IS CLAIMED IS:

1. A fuel cell system comprising:

a fuel gas supply means for supplying fuel gas;

an oxidant gas supply means for supplying oxidant gas;

a fuel cell to which the fuel gas and the oxidant gas are supplied for generation of electricity;

an idle stop means for stopping generation of electricity by the fuel cell to perform idle stop; and

an unstable state detection means for detecting whether the generation of electricity by the fuel cell is unstable;

wherein if the unstable state detection means detects that generation of electricity by the fuel cell is unstable, idle stop by the idle stop means is prohibited so that the fuel cell continues to generate electricity.

2. A fuel cell system according to claim 1, further comprising a temperature sensing means for detecting an operation temperature of the fuel cell, wherein the unstable state detection means carries out a detection in accordance with the operation temperature of the fuel cell that is detected by the temperature sensing means and a first predetermined temperature under which generation of electricity by the fuel cell becomes unstable.

3. A fuel cell system according to claim 2, wherein the unstable state detection means determines that the generation of

electricity is unstable if the operation temperature detected by the temperature sensing means is lower than the first predetermined temperature.

4. A fuel cell system according to claim 1, wherein the fuel cell includes a plurality of single cells, and the fuel cell system further comprises a voltage sensing means for detecting voltage of each single cell, and wherein the unstable state detection means calculates a first voltage deviation that is a deviation between voltage of one single cell having a low voltage and an average voltage of the single cells, and determines that the generation of electricity is unstable if the first voltage deviation is more than a first threshold value.

5. A fuel cell system according to claim 1, wherein the fuel cell includes a plurality of single cells, and the fuel cell system further comprises a voltage sensing means for detecting voltage of each single cell, and wherein the unstable state detection means calculates a second voltage deviation that is a deviation between voltage of one single cell having the highest voltage and voltage of one single cell having the lowest voltage, and determines that the generation of electricity is unstable if the second voltage deviation is more than a second threshold value.

6. A fuel cell system according to claim 4, further comprising an electricity storage means for storing electric power

generated by the fuel cell, wherein the electricity storage means stores electric power from the fuel cell if voltage of the electricity storage means is lower than voltage of the fuel cell.

7. A fuel cell system according to claim 6, wherein the electricity storage means is a capacitor.

8. A fuel cell system according to claim 5, further comprising an electricity storage means for storing electric power generated by the fuel cell, wherein the electricity storage means stores electric power from the fuel cell if voltage of the electricity storage means is lower than voltage of the fuel cell.

9. A fuel cell system according to claim 8, wherein the electricity storage means is a capacitor.

10. A fuel cell system according to claim 1, wherein the prohibition of idle stop is released at a time when generation of electricity by the fuel cell becomes stable.

11. A fuel cell system according to claim 10, wherein the generation of electricity is determined as stable at a time when a predetermined time elapses after the prohibition of idle stop is carried out.

12. A fuel cell system according to claim 10, wherein the

generation of electricity is determined as stable at a time when a predetermined number of purging is carried out after the prohibition of idle stop is carried out.

13. A fuel cell system according to claim 1, wherein the generation of electricity is determined as stable at a time when an operation, by which at least one of the fuel gas and the oxidant gas is supplied to the fuel cell to an amount larger than a normal supply amount, is carried out for a predetermined period of time after the prohibition of idle stop is carried out.

14. A fuel cell system according to claim 1, wherein the fuel cell is mounted on a fuel cell mounted movable body which is driven by electric power of the fuel cell.

15. A method of controlling idle stop of a fuel cell system, which includes:

a fuel gas supply means for supplying fuel gas;

an oxidant gas supply means for supplying oxidant gas;

a fuel cell to which the fuel gas and the oxidant gas are supplied for generation of electricity; and

an idle stop means for stopping generation of electricity by the fuel cell to perform idle stop,

the method comprising the step of:

a first step for detecting whether the generation of electricity by the fuel cell is unstable; and

a second step for prohibiting idle stop by the idle stop means, if the unstable state detection means detects that generation of electricity by the fuel cell is unstable, so that the fuel cell continues to generate electricity.

16. A method of controlling idle stop of a fuel cell system according to claim 15, wherein the fuel cell system further comprises a temperature sensing means for detecting an operation temperature of the fuel cell, and wherein a detection is carried out in the first step in accordance with the operation temperature of the fuel cell that is detected by the temperature sensing means and a first predetermined temperature under which generation of electricity by the fuel cell becomes unstable.

17. A method of controlling idle stop of a fuel cell system according to claim 15, wherein the fuel cell includes a plurality of single cells, and the fuel cell system further comprises a voltage sensing means for detecting voltage of each single cell, and wherein the first step further comprises the steps of:

calculating a first voltage deviation that is a deviation between voltage of one single cell having a low voltage and an average voltage of the single cells; and

determining that the generation of electricity is unstable if the first voltage deviation is more than a first threshold value.

18. A method of controlling idle stop of a fuel cell system

according to claim 15, wherein the fuel cell includes a plurality of single cells, and the fuel cell system further comprises a voltage sensing means for detecting voltage of each single cell, and wherein the first step further comprises the steps of:

calculating a second voltage deviation that is a deviation between voltage of one single cell having the highest voltage and voltage of one single cell having the lowest voltage; and

determining that the generation of electricity is unstable if the second voltage deviation is more than a second threshold value.

19. A method of controlling idle stop of a fuel cell system according to claim 17, wherein the fuel cell system further comprises an electricity storage means for storing electric power generated by the fuel cell, and wherein the electricity storage means stores electric power from the fuel cell if voltage of the electricity storage means is lower than voltage of the fuel cell.

20. A method of controlling idle stop of a fuel cell system according to claim 18, wherein the fuel cell system further comprises an electricity storage means for storing electric power generated by the fuel cell, and wherein the electricity storage means stores electric power from the fuel cell if voltage of the electricity storage means is lower than voltage of the fuel cell.