[CLAIMS]

[Claim 1]

A traffic system comprising:

a vehicle having a power-receiving section on an outer surface of the vehicle; and

a ground facility having a power-supply section for supplying the power-receiving section with power by coming in contact with the power-receiving section, wherein

one of the power-receiving section and the power-supply section comprises:

a biasing part which applies biasing force to the one of the power-receiving section and the power-supply section so that the one of the power-receiving section and the power-supply section is biased toward the other of the power-receiving section and the power-supply section, and

the other of the power-receiving section and the power-supply section comprises:

a flat surface that extends along the outer surface of the vehicle, and

guide surfaces that are connected to the flat surface in forward and backward moving directions of the vehicle and guide the one of the power-receiving section and the power-supply section to the flat surface against the biasing force to bring the one of the power-receiving section and the power-supply section into contact with the flat surface when the vehicle moves backward or forward.

[Claim 2]

The traffic system according to Claim 1, wherein the guide surfaces have tapered surfaces that extend in directions away from either one of the power-receiving section and the power-supply section, one of which has the biasing part, in proportion to

a distance from connecting portions between the guide surfaces and the flat surface in the forward and backward moving directions.

[Claim 3]

The traffic system according to Claim 1 or 2, wherein the power-receiving section is provided at a floor portion or a lateral portion of the vehicle.

[Claim 4]

The traffic system according to any one of Claims 1 to 3, wherein a plurality of power-supply sections are provided.

[Claim 5]

The traffic system according to any one of Claims 1 to 4, wherein a plurality of power-receiving sections are provided.

[Claim 6]

The traffic system according to any one of Claims 1 to 5, further comprising a contact detection unit that is provided at the ground facility and detects a contact state between the power-receiving section and the power-supply section.

[Claim 7]

A power supply method for supplying the power to the power-receiving section using the power-supply section in the traffic system according to any one of Claims 1 to 6, the power supply method comprising:

a guiding step of guiding either one of the power-receiving section and the power-supply section, one of which has the biasing part to the flat surface against the biasing force using the guide surface so as to bring the one of the power-receiving section and the power-supply section into contact with the flat surface;

a power-supply step of beginning to supply the power after the guiding step; and

a power-supply-completing step of terminating the supply of power when the

supply of a preset amount of power is completed.

[Claim 8]

The power supply method according to Claim 7, further comprising:

a contact-checking step of checking the contact state between the power-receiving section and the power-supply section in response to a signal from the contact detection unit that is provided at the ground facility and detects the contact state between the power-receiving section and the power-supply section, the contact-checking step which is performed between the guiding step and the power-supply step; and

a contact-adjusting step of performing position adjustment of at least one of the vehicle, the power-receiving section, and the power-supply section based on a result of the contact-checking step and adjusting the contact state.

[CLAIMS]

[Claim 1]

A traffic system comprising:

a vehicle having a power-receiving section on an outer surface of the vehicle;

a ground facility having a power-supply section for supplying the power-receiving section with power by coming in contact with the power-receiving section, and

a contact detection unit that is provided at the ground facility and detects a contact state between the power-receiving section and the power-supply section, wherein

one of the power-receiving section and the power-supply section has:

a biasing part which applies biasing force to the one of the power-receiving section and the power-supply section so that the one of the power-receiving section and the power-supply section is biased toward the other of the power-receiving section and the power-supply section, and

the other of the power-receiving section and the power-supply section has:

a flat surface that extends along the outer surface of the vehicle, and

guide surfaces that are connected to the flat surface in forward and backward moving directions of the vehicle and guide the one of the power-receiving section and the power-supply section to the flat surface against the biasing force to bring the one of the power-receiving section and the power-supply section into contact with the flat surface when the vehicle moves backward or forward.

[Claim 2]

The traffic system according to Claim 1, wherein the guide surfaces have tapered surfaces that extend in directions away from either one of the power-receiving section and the power-supply section, one of which has the biasing part, in proportion to a distance from connecting portions between the guide surfaces and the flat surface in the forward and

backward moving directions.

[Claim 3]

The traffic system according to Claim 1 or 2, wherein the power-receiving section is provided at a floor portion or a lateral portion of the vehicle.

[Claim 4]

The traffic system according to any one of Claims 1 to 3, wherein a plurality of power-supply sections are provided.

[Claim 5]

The traffic system according to any one of Claims 1 to 4, wherein a plurality of power-receiving sections are provided.

[Claim 6]

A power supply method for supplying the power to the power-receiving section using the power-supply section in the traffic system according to any one of Claims 1 to 5, the power supply method comprising:

a guiding step of guiding one of the power-receiving section and the power-supply section which has the biasing part to the flat surface against the biasing force using the guide surface so as to bring the one of the power-receiving section and the power-supply section into contact with the flat surface;

a power-supply step of beginning to supply the power after the guiding step; and

a power-supply-completing step of terminating the supply of power when the supply of a preset amount of power is completed.

[Claim 7]

The power supply method according to Claim 6, further comprising:

a contact-checking step of checking the contact state between the power-receiving section and the power-supply section between the guiding step and the power-supply step in

response to a signal from the contact detection unit that is provided at the ground facility and detects the contact state between the power-receiving section and the power-supply section; and

a contact-adjusting step of performing position adjustment of at least one of the vehicle, the power-receiving section, and the power-supply section based on a result of the contact-checking step and adjusting the contact state.