What is claimed is:

1. A vehicle-carried quick inspection system, comprising:

a carrying vehicle,

a foldable arm mount provided on the carrying vehicle and configured to be folded onto or within the carrying vehicle in a transportation state and to be unfolded to stride over an inspected vehicle in a working state so as to form an inspection passage through which the inspected vehicle passes during inspection;

an X-ray source capable of providing an adjustable radiation dose, provided on the carrying vehicle and configured to radiate X-rays of a desired dose to irradiate the inspected vehicle;

a detector provided on the foldable arm mount and configured to be located at a position opposite to the X-ray source and to receive information about X-rays passing through the inspected vehicle in the working state, in which the X-ray source and the detector are arranged on opposite sides of the inspection passage for the inspected vehicle and the inspected vehicle passes through the inspection passage;

a controller configured to control the X-ray source to irradiate different portions of the inspected vehicle with different doses; and

a first sensor configured to sense whether or not a vehicle is approaching thereto and to send a signal to the controller when it senses that a vehicle is approaching so that the controller actuates the vehicle-carried quick inspection system for being ready for inspection.

2. The vehicle-carried quick inspection system according to claim 1, further comprising a plurality of second sensors configured to sense a position of the inspected vehicle relative to the X-ray source and to transmit information about the position of the inspected vehicle to the controller.

3. The vehicle-carried quick inspection system according to claim 2, wherein the plurality of second sensors are arranged and configured to measure a relative speed between the vehicle-carried quick inspection system and the inspected vehicle.

4. The vehicle-carried quick inspection system according to claim 2, wherein the controller is further configured to, according to a sensing result from the second sensors, control the X-ray source so that the X-ray irradiation dose is reduced or the irradiation is stopped so as to avoid irradiation damage to a human body when a driver's cab of the inspected vehicle passes through the X-ray beam.

5. The vehicle-carried quick inspection system according to claim 2, wherein the controller is further configured to, according to a sensing result from the second sensors, control the X-ray source to irradiate a designated portion of the inspected vehicle with an extremely low dose or to stop irradiation onto the designated portion, and to irradiate other portions of the inspected vehicle with a working irradiation dose when the other portions pass through the X-ray beam.

6. The vehicle-carried quick inspection system according to claim 3, wherein the controller is further configured to perform inspection, in conjunction with the relative speed between the vehicle-carried quick inspection system and the inspected vehicle measured by the plurality of second sensors, so as to form an X-ray image.

7. The vehicle-carried quick inspection system according to claim 3, wherein the controller is further configured to perform inspection, in conjunction with the relative speed between the vehicle-carried quick inspection system and the inspected vehicle measured by the plurality of second sensors, so as to alarm and interrupt the inspection when a relative moving speed of the inspected vehicle exceeds a maximum limit value or is below a minimum limit value.

8. The vehicle-carried quick inspection system according to claim 1, further comprising an indicator light device configured to display an indication to allow the inspected vehicle to pass through the inspection system when the inspection system is ready for inspection, otherwise to display a prohibition indication.

9. The vehicle-carried quick inspection system according to claim 1, wherein the first sensor is a geomagnetic sensor, a microwave sensor, or a laser sensor.

10. The vehicle-carried quick inspection system according to claim 1, wherein the ray source is a γ ray source or a neutron ray source.

11. An inspection vehicle, comprising the vehicle-carried quick inspection system according to any one of claims 1 to 10.

12. An inspection method, comprising performing a quick inspection on a moving object by using the vehicle-carried quick inspection system according to any one of claims 1 to 10.