CLAIMS

1. An apparatus for attenuating high energy radiation, the apparatus comprising:

an attenuation member for attenuating high energy radiation in a high energy radiation field emitted from a high energy radiation source towards a subject; and

a control unit for selectively activating the attenuation member.

2. The apparatus of claim 1 configured to identify a zone of a vehicle to pass the high energy radiation field, the vehicle being the subject, the control unit being configured to activate the attenuation member thereby to attenuate high energy radiation in the high energy radiation field directed towards the zone of the vehicle.

3. The apparatus of claim 2 configured to identify the zone of the vehicle from an image of the vehicle, the image comprising data relating to a vehicle user and for the control unit to activate the attenuation member in dependence of information derived from a series of images of the vehicle.

4. The apparatus of claim 3, wherein the series of images comprises a first image of the vehicle at a first point approaching the high energy radiation field and a second image of the vehicle at a second point approaching the high energy radiation field, and the control unit is configured to calculate a speed of approach of the vehicle from the first image and the second image and to activate the attenuation member in dependence of the calculated speed of approach.

5. The apparatus of claim 3 or claim 4, wherein the control unit is configured to activate the attenuation member in dependence of information derived from a reference image.

6. The apparatus of claim 2 configured to activate the attenuation member when a point in the zone crosses a predetermined point in the high energy radiation field.

7. The apparatus of claim 1, wherein the attenuation member is arranged to be deployed into and retracted from the high energy radiation field.

8. The apparatus of claim 1 comprising a partition having an aperture for the high energy radiation field to pass therethrough, and the apparatus is arranged for

the attenuation member to attenuate a portion of the high energy radiation field passing through the aperture.

9. The apparatus of claim 1 comprising a housing for housing the attenuation member, the apparatus being arranged for the attenuation member to be selectively activated by being deployed from within the housing and to be deactivated by being retracted into the housing.

10. The apparatus of claim 1 comprising an image receptor for acquiring data for producing a radiographic image of the subject.

11. The apparatus of claim 1 comprising a guideway for directing the subject into the high energy radiation field in a preferred orientation.

12. The apparatus of claim 1 comprising a plurality of attenuation members for selectively attenuating high energy radiation in a corresponding plurality of portions of the high energy radiation field.

13. The apparatus of claim 1 configured to identify a zone of a live subject, and for the attenuation member to be positioned selectively to attenuate high energy radiation in the high energy radiation field directed towards the zone of the live subject.

14. The apparatus of claim 13 configured for the attenuation member to be positioned selectively in dependence of information derived from an image of the live subject.

15. A method for attenuating high energy radiation, the method comprising:

selectively activating an attenuation member under control of a control unit to attenuate high energy radiation in a high energy radiation field emitted from a high energy radiation source towards a subject.

16. The method of claim 15 comprising:

identifying a zone of a vehicle passing through the high energy radiation field, the vehicle being the subject; and

activating the attenuation member to attenuate high energy radiation in the high energy radiation field directed towards the zone of the vehicle.

17. The method of claim 16 comprising:

identifying the zone of the vehicle from an image of the vehicle, the image comprising data relating to a vehicle user; and

activating the attenuation member in dependence of information derived from a series of images of the vehicle.

18. The method of claim 17 comprising:

calculating a speed of approach of the vehicle from a first image of the vehicle at a first point approaching the high energy radiation field and a second image of the vehicle at a second point approaching the high energy radiation field; and

activating the attenuation member in dependence of the calculated speed of approach,

19. The method of claim 17 comprising:

activating the attenuation member in dependence of information derived from a reference image.

20. The method of claim 17 comprising:

activating the attenuation member when a point in the zone crosses a predetermined point in the high energy radiation field.

21. The method of claim 15 comprising:

selectively activating the attenuation member by deploying the attenuation member into the high energy radiation field and retracting the attenuation member from the high energy radiation field.

22. The method of claim 15 comprising:

attenuating a portion of the high energy radiation field passing through an aperture of a partition.

23. The method of claim 15 comprising:

selectively activating the attenuation member to be deployed from within a housing and to be deactivated by being retracted into the housing.

24. The method of claim 15 comprising:

using an image receptor to acquire data for producing a radiographic image of the subject.

25. The method of claim 15 comprising:

using a guideway to direct the subject into the high energy radiation field in a preferred orientation.

26. The method of claim 15 comprising:

selectively attenuating high energy radiation in a plurality of portions of the high energy radiation field using a corresponding plurality of attenuation members.

27. The method of claim 15 comprising:

identifying a zone of a live subject; and

selectively positioning the attenuation member to attenuate high energy radiation in the high energy radiation field directed towards the zone of the live subject.

28. The method of claim 27 comprising:

selectively positioning the attenuation member in dependence of information derived from an image of the live subject.

CLAIMS

1. An apparatus for attenuating high energy radiation during vehicle inspection, the apparatus comprising: a plurality of attenuation members for attenuating high energy radiation in a corresponding plurality of portions of a high energy radiation field emitted from a high energy radiation source towards a subject vehicle; and a control unit for determining the corresponding plurality of portions of the high energy radiation field to be attenuated by the plurality of attenuation members based on comparison between the type of the vehicle as identified from an image of the vehicle and predefined criteria for the type of the vehicle defined prior to activation of one or more of the plurality of attenuation members, and for selectively activating the one or more of the plurality of attenuation members to attenuate the determined corresponding plurality of portion of the high energy radiation field; wherein the predefined criteria corresponds to typical driver and passenger locations in the type of the vehicle and the attenuating of the high energy radiation in the determined corresponding plurality of portions shields each of the typical driver and passenger locations separately.

2. The apparatus of claim 1 configured to identify a zone of the vehicle to pass the high energy radiation field, the control unit being configured to activate the one or more of the plurality of the attenuation members thereby to attenuate high energy radiation in the high energy radiation field directed towards the zone of the vehicle.

3. The apparatus of claim 2 configured to identify the zone of the vehicle from an image of the vehicle, the image comprising data relating to a vehicle user and for the control unit to activate the one or more of the plurality of attenuation members in dependence of information derived from a series of images of the vehicle.

4. The apparatus of claim 3, wherein the control unit is configured to activate the one or more of the plurality of attenuation members in dependence of information derived from a reference image.

5. The apparatus of claim 2 configured to activate the one or more of the plurality of attenuation members when a point in the zone crosses a predetermined point in the high energy radiation field.

6. The apparatus of claim 1, wherein the one or more of the plurality of attenuation

members is arranged to be deployed into and retracted from the high energy radiation field.

7. The apparatus of claim 1 further comprising a partition having an aperture for the high energy radiation field to pass therethrough, and the apparatus is arranged for the one or more of the plurality of the attenuation members to attenuate the determined corresponding plurality of portions of the high energy radiation field passing through the aperture.

8. The apparatus of claim 1 further comprising a housing for housing the plurality of attenuation members, the apparatus being arranged for the one or more of the plurality of attenuation members to be selectively activated by being deployed from within the housing and to be deactivated by being retracted into the housing.

9. The apparatus of claim 1 further comprising an image receptor for acquiring data for producing a radiographic image 5 of the vehicle.

10. The apparatus of claim 1 further comprising a guideway for directing the vehicle into the high energy radiation field in a preferred orientation.

11. A method for attenuating high energy radiation during vehicle inspection, the method comprising: determining a plurality of portions of a high energy radiation field to be attenuated by a plurality of attenuation members based on comparison between type of a vehicle as Identlfied from an image of the vehicle and predefined criteria for the type of the vehicle defined prior to activation of one or more of the plurality of attenuation members for attenuation, the high energy radiation field being emitted from a high energy radiation source towards the vehicle; and selectively activating the one or more of the plurality of attenuation members under control of a control unit to attenuate the determined plurality of portions of high energy radiation in the high energy radiation field; wherein the predefined criteria corresponds to typical driver and passenger locations in the type of the vehicle and the selectively activating the one or more of the plurality of attenuation members to attenuate the determined plurality of portions of high energy radiation shields each of the typical driver and passenger locations separately; calculating a speed of approach of the subject from a first image of the subject at a first point approaching the high energy radiation field and a second image of the subject at a second point approaching the high energy radiation field; and activating the attenuation member in dependence of the calculated speed of approach.

12. The method of claim 11 further comprising: identifying a zone of the vehicle passing

through the high energy radiation field; and activating the one or more of the plurality of attenuation members to attenuate high energy radiation in the high energy radiation field directed towards the zone of the vehicle.

13. The method of claim 12 further comprising: identifying the zone of the vehicle from an image of the vehicle, the image comprising data relating to a vehicle user; and activating the one or more of the plurality of attenuation members in dependence of information derived from a series of images of the vehicle.

14. The method of claim 13 further comprising: activating the one or more of the plurality of attenuation members in dependence of information derived from a reference image.

15. The method of claim 13 further comprising: activating the one or more of the plurality of attenuation members when a point in the zone crosses a predetermined point in the high energy radiation field.

16. The method of claim 11 further comprising: selectively activating the one or more of the plurality of attenuation members by deploying the one or more of the plurality of attenuation members into the high energy radiation field and retracting the one or more of the plurality of attenuation members from the high energy radiation field.

17. The method of claim 11 further comprising: attenuating the determined plurality of portions of the high energy radiation field passing through an aperture of a partition.

18. The method of claim 11 further comprising: selectively activating one or more of the plurality of attenuation members to be deployed from within a housing and to be deactivated by being retracted into the housing.

19. The method of claim 11 further comprising: using an image receptor to acquire data for producing a radiographic image of the vehicle.

20. The method of claim 11 further comprising: using a guideway to direct the vehicle into the high energy radiation field in a preferred orientation.

21. The apparatus of claim 3, wherein the series of images comprises a first image of the vehicle at a first point approaching the high energy radiation field and a second image of the vehicle at a second point approaching the high energy radiation field, and the control unit is

configured to calculate a speed of approach of the vehicle from the first image and the second image and to activate the one or more of the plurality of attenuation members in dependence of the calculated speed of approach.

22. The method of claim 13 further comprising: calculating a speed of approach of the vehicle from a first image of the vehicle at a first point approaching the high energy radiation field and a second image of the vehicle at a second point approaching the high energy radiation field; and activating the one or more of the plurality of attenuation members in dependence of the calculated speed of approach.