SUMMARY

However, in these shielding methods, the installability and shielding properties of a shield body may be restricted by the shape of the organism which is to be an irradiation object, as well as the size of the irradiation site. Accordingly, there is required a shielding means that three-dimensionally shields the irradiation object and separates an irradiation region of the neutron beam from a non-irradiation region by means of a simple structure.

Thus, it is an object of the present disclosure to provide a box-type structure that has a simple structure having neutron beam-shielding performance and can accommodate an organism which is to be an irradiation target.

The present inventors have considered how to solve the above-described problems. As a result, the present inventors have found that a box-type structure accommodating an organism can be easily produced by configuring the box-type structure using shielding plates made of a specific material and having a neutron-shielding function, and by making the joining structure at the edge portions of the shielding plates firm, and thus have accomplished the present disclosure. The present disclosure provides the following.

In an aspect, the present disclosure provides a box-type structure comprising shielding plates made of a sintered body of lithium fluoride, having neutron-shielding performance,

wherein edge portions of the shielding plates are abutted and joined to each other.

(1) The present disclosure relates to a box-type structure including a plurality of shielding plates containing lithium fluoride and having neutron-shielding performance, wherein

edge portions of the shielding plates are abutted and joined to each other.

(2) The present disclosure relates to the box-type structure according to embodiment (1), wherein the edge portions of the shielding plates have a halving joint structure, and the halving joint structure has a stepped or inclined cutout shape.

(3) The present disclosure relates to the box-type structure according to embodiment (1) or (2), wherein the box-type structure has a plurality of faces, and at least one of the faces is removable.

(4) The present disclosure relates to the box-type structure according to any one of embodiment (1) to (3), wherein a part of the faces of the box-type structure has an opening portion.

(5) The present disclosure relates to the box-type structure according to any one of embodiments (1) to (4), wherein the shielding plates are joined with adhesive tape.

(6) The present disclosure relates to the box-type structure according to any one of embodiments (1) to (4), wherein the edge portions of the shielding plates are joined via an adhesive.

According to the present disclosure, in the box-type structure having neutron-shielding performance, since a plurality of shielding plates having neutron-shielding

performance are joined in combination, a simple three-