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Protection of Environment from Damaged Nuclear Station and Transparent Inflatable Blanket for Cities—Protection from Radioactive Dust and Chemical, Biological Weapons

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ABSTRACT

The author, in a series of previous articles, designed the "AB Dome" made of transparent thin film supported by a small additional air overpressure for the purpose of covering a city or other important large installations or sub-regions. In present article the author offers a variation in which a damaged nuclear station can be quickly covered by such a cheap inflatable dome. By containing the radioactive dust from the damaged nuclear station, the danger zone is reduced to about 2 km2 rather than large regions which requires the resettlement of huge masses of people and which stops indus-try in large areas. If there is a big city (as Tokyo) near the nuclear disaster or there is already a dangerous amount of radioactive dust near a city, the city may also be covered by a large inflatable transparent Dome. The building of a gi-gantic inflatable AB Dome over an empty flat surface is not difficult. The cover is spread on a flat surface and a venti-lator (fan system) pumps air under the film cover and lifts the new dome into place but inflation takes many hours. However, to cover a city, garden, forest or other obstacle course in contrast to an empty, mowed field, the thin film cannot be easily deployed over building or trees without risking damage to it by snagging and other complications. This article proposes a new method which solves this problem. The design is a double film blanket filled by light gas such as, methane, hydrogen, or helium - although of these, methane will be the most practical and least likely to leak. Sections of this AB Blanket are lighter than air and will rise in the atmosphere. They can be made on a flat area serving as an as-sembly area and delivered by dirigible or helicopter to station at altitude over the city. Here they connect to the already assembled AB Blanket subassemblies, cover the city in an AB Dome and protect it from bad weather, chemical, bio-logical and radioactive fallout or particulates. After assembly of the dome is completed, the light gas can be replaced by (heavier but cheaper) air. Two projects for Tokyo (Japan) and Moscow (Russia) are used in this paper for sample computation.

KEYWORDS

Radiation Shield, Protection Of Environment From Damaged Nuclear Station, Dome For City, Blanket For City, Protection Of Cities From Chemical, Biological And Radioactive Weapons, Encapsulating Nuclear Sites

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