Prefabricated dome building with large panoramic windows.
Dome structure made of prefabricated reinforced polyurethane segments.
Large panoramic windows made of acrylic.

Due to many advantages such as superior resistance to wind, snow and seismic activities, better air circulation, general strength of structure, aesthetic qualities, etc. dome shape was an attractive form of architectural design for centuries and thousands of years. Polyurethane and acrylic are advanced materials with superior qualities.

Prior art.
Constructions build of prefabricated polyurethane elements are widely used, mostly for storage buildings.
Dome constructions made of prefabricated expanded polystyrene (EPS) segments are widespread in Japan and known in the rest of the World.

The geometry, parameters and characteristics of the dome house presented in the publication are unique, developed specially for this project and intentionally differ from all known alike technologies. The window concept does NOT have similar or alike application in residential or other dome house building known to the author or associate. Intention is to protect this simple concept from being patented and place it in public domain.

Description.

Claims (2)

1. Dome house constructed of prefabricated reinforced polyurethane segments. 10, 12 or 14 prefabricated reinforced polyurethane segments are used to build a complete dome house. Segments are reinforced with either steel, or composite bars. Reinforcement extensions are designed to be used for segments interconnection, and mounting the segments to the foundation or base. Interconnected rebars are forming stable structure. Male-female joints are used to connect the segments. Segments are glued together and sealed. One or several segments can be replaced with acrylic windows as shown on the drawing or in any other order.
The structure is mounted on the flat strengthened ground. Concrete is poured inside the dome building to stabilize the structure.
There 3 types of segments used in the construction.
Convex/concave trapezoid, bended straight and portal segments.
Portal segment can be used for door, window or for connecting 2 dome structures.

2. Panoramic windows made of acrylic.
Panoramic window has the same shape as a segment. It consist of 2 elements. Bottom and top. Either bottom or top element can be replaced with blank polyurethane part, which gives the design extra variability.
LIVING SPACE AREA - 35.5 M²

LIVING SPACE VOLUME - 94.0 M³