

Domes of eggshells

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Słowa kluczowe:

kopuła, ściskanie, wytrzymałość materiałów

DZIEDZINA:

Architecture, Physics

Cel doświadczenia:

Create a structure based on dome made of eggshells.

Spis materiałów:

1. two hard-boiled eggs (it is a good idea to have more boiled egg for more attempts)
2. a sharp knife
3. a cutting board
4. a spoon
5. a bowl
6. flat surface
7. a few heavy books

Etapy realizacji:

1. Cut the boiled eggs in halves. This has to be done with a sharp knife and a with a single hand movement.
2. Using the spoon, remove the yolk and white from the egg halves and put them in the bowl.
3. Place the domes of eggs on a flat surface, e.g. a table, to form a rectangle with the domes as its vertices.
4. Put gently one book on the eggshells; remember to place it uniformly.
5. Carefully add more books.

Caution!!! The knife used for cutting the boiled eggs must be very sharp; safety rules must be observed.

Pytania do doświadczenia:

1. What weight will the domes of eggshells hold?
2. Will the dome be as strong if the eggs are not cut in half?
3. Does the symmetrical arrangement of the domes matter?

Opis zjawiska:

Ciekawostki:

1. Dome is considered to be a safe and strong structure. Its resistance to earthquakes results

from the absence of pillars or beams in the structure. Furthermore, its shape ensures very low air resistance.

2. The Centennial Hall in Wrocław, constructed in 1911-1913, has a dome with an inner diameter of 65 meters at the base. As of the date of completion, it was the largest dome in the world.