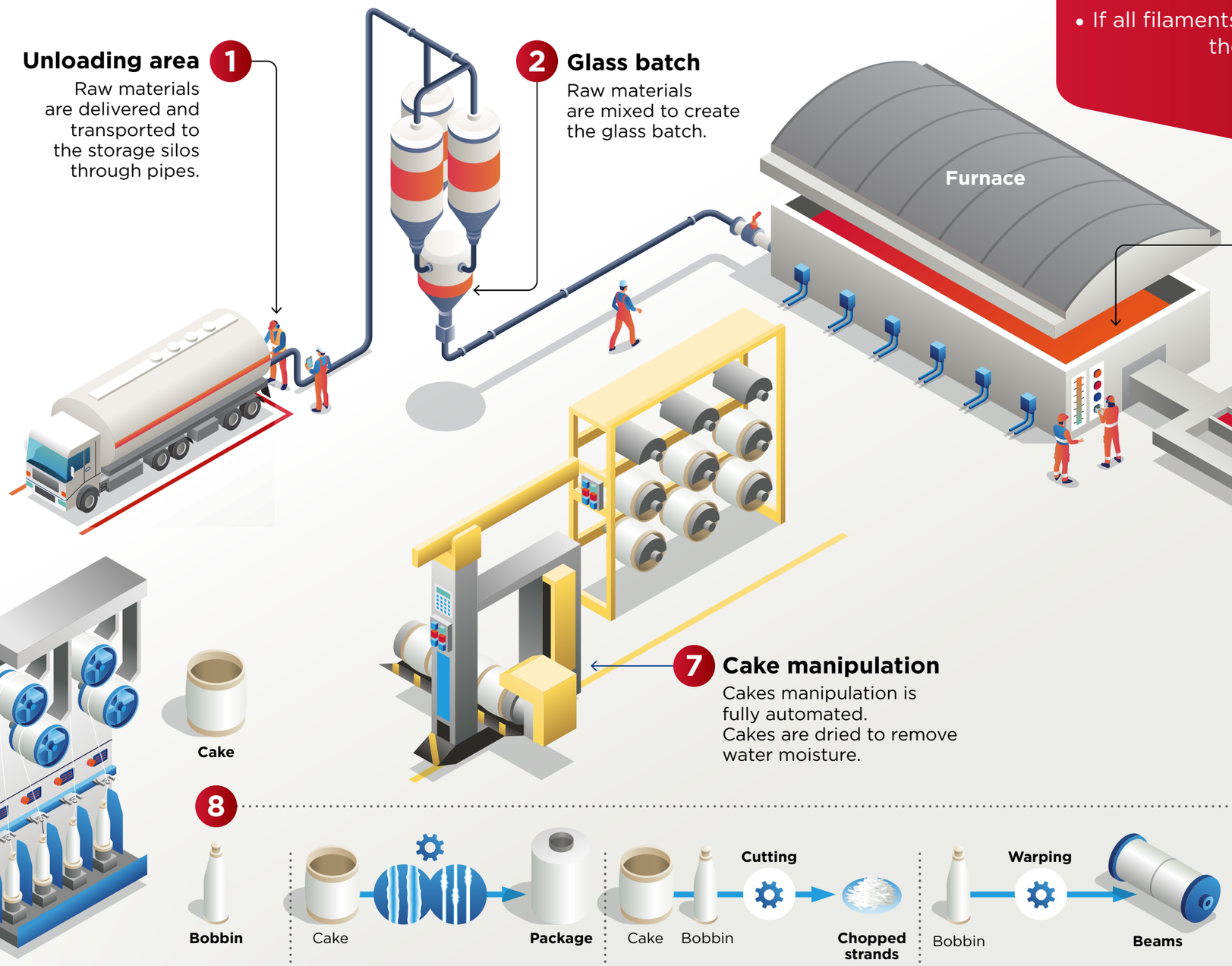
ZOOM ON

# FIBERGLASS PRODUCTION

## The main stages in the production of fiberglass

### DID YOU KNOW?

- Fiberglass is composed of extremely fine fibers of glass, each of which **can be thinner than a strand of human hair.**
- If all filaments from a bobbin of yarn would be placed end to end, their length would amount to more than **24,850 miles,** enough to circle the earth.
- Fiberglass is made by heating sand and other raw materials to **over 1500°C** until they melt into a liquid.




### 1 Unloading area

Raw materials are delivered and transported to the storage silos through pipes.

### 2 Glass batch

Raw materials are mixed to create the glass batch.

### 3 Melting

When heated, the powdery glass batch is converted to a homogeneous glass.

### 4 Fiberizing - Forming

Molten glass is transferred to the forming area via channels located at the end of the furnace and flows directly into fiber forming bushings.

### 5 Sizing

Sizing covers and protects all individual filaments and allows further textile processing.

### 6 Winding

Fiberglass is wound on cardboards tubes to form cakes.

### 7 Cake manipulation

Cakes manipulation is fully automated.
Cakes are dried to remove water moisture.

### 8

### A Twisting

Fiberglass twisting machine unwinds and twists the glass strand from the spincake, and meanwhile, winds it on the plastic bobbin.
The twisted bobbin yarn is steamed to improve fixation and avoid sloughing.

### B Voluminizing Texturizing

Air is injected continuously to the yarn (voluminized) or non-continuously (texturized yarn) which is then wound onto a paper tube.

### C Indirect chopping

Cakes or bobbins are cut into chopped strands.
Input material can be dry or wet.

### D Beaming

A defined number of parallel ends of single yarns from a creel is combined and wound with tension on a section beam or on a warp beam.

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