Holding a 1,200 degree Celsius brick with your bare hands and an interesting secret behind it

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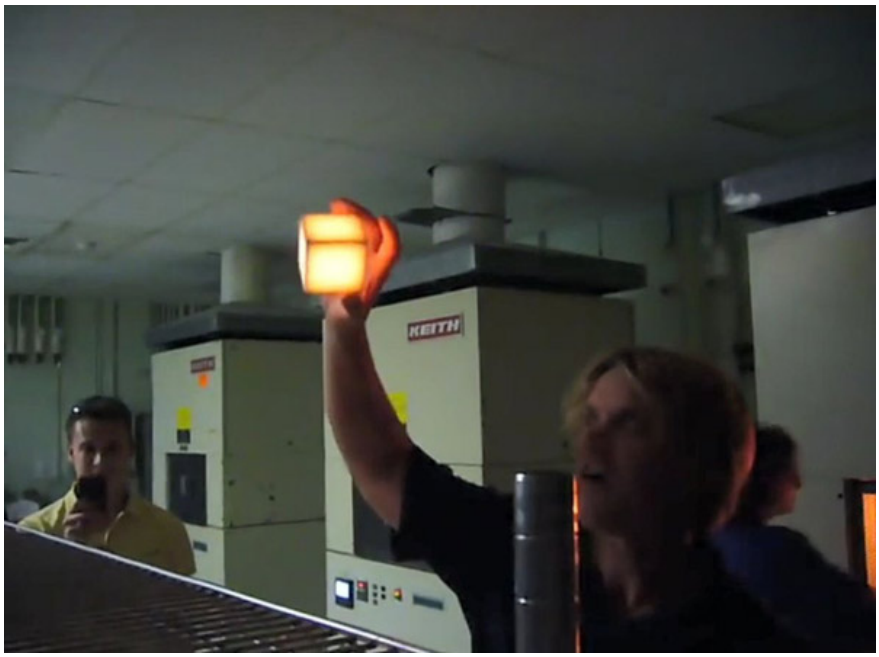
From 1981 to 2011, a reusable, space shuttle manned by the US Aeronautics and Space Administration (NASA) traveled many times between Earth and outer space. The ship can withstand friction and high temperatures can reach over 1,600 degrees Celsius when it hits a thick atmosphere when returning to Earth.

But the main body of the shuttle is finished in a lightweight aluminum that can be softened to about 200 degrees Celsius. Therefore, scientists have researched an insulating brick called LI-900. , a heat-resistant material that protects the main body from extreme temperatures.



Demonstration of super-insulated bricks, LI-900.
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The ultra-poor thermal conductivity of the LI-900 allows humans to be touched with bare hands, as soon as they are taken from the furnace after hours. Therefore, when these heat-resistant bricks are applied to the shuttle hull, they can protect the aluminum below from the heat when re-entering the atmosphere.

In the video, you can see the brick looks like sponges. It is heated in an oven to temperatures up to 1,200 degrees Celsius for hours, the equivalent of the heat of re-entering the atmosphere. When removed from the oven, it is extremely hot, to the point of glowing orange and looking very hot. However, the man in the video could immediately use his bare hands, without gloves, to help touch the LI-900.

Unlike conventional materials, LI-900 does not radiate heat by special structure. However, it also emits a certain amount of heat, so the man in the video only touches and lifts it up by touching the corners of the brick.