

A SNOWMAN IN THE DESERT

They decided to ship a snowman to the desert. Would it survive the trip?

Meet Dr. Hyper and Dr. Megatron, two young guys with weird names and strange ideas. One of their wildest ideas was to send a snowman to kids in a hot country far away who had never seen snow. But could they ship it all that way and keep it from melting?

In a refrigerated container, sure. But they decided not to use refrigeration. Instead, they would try to insulate the snowman so well that it would survive the long trip.

This was a typically crazy stunt for Dr. Hyper and Dr. Megatron. They make videos for Panasonic, a big Japanese company. They film goofy experiments designed to show off the company's energy-saving products. Then they post the videos on YouTube.

They got the idea for this stunt from a girl named Amna. She lives in Bahrain, a really hot place in the Middle East. Amna had friended them on Facebook. She told them that her brother Saleh had never seen snow. So they decided to bring a snowman to Saleh! But they wouldn't use refrigeration. Instead, they would try to insulate the snowman so well that

it could travel from Japan to Bahrain—5,000 miles!—without melting.

They started by carving a mold in the shape of a snowman out of block of styrofoam. They packed the mold full of snow and put it inside a cardboard box. Now the snowman was ready to go. But would the styrofoam provide enough insulation?

Insulators keep cold things cold and warm things warm by slowing down the transfer of heat. Some insulators work better than others. Styrofoam is 98% air, which is what makes it a good insulator. That's why it's used to make coolers. But coolers only keep sodas cold for a few hours. The guys didn't think styrofoam alone could keep Mr. Snowman frozen.

During the trip, the snowman's box would be bombarded by heat. Heat travels in three ways, and the box would be exposed to all of them. The sun would heat it through radiation. Warm objects (like the floor of a truck) touching the box would heat it through conduction. And warm air around it would heat it through convection. To protect the snowman, the guys needed to line the box with the best insulation they could find.



Business Wire/Panasonic

The snowman was transported in a box covered with vacuum insulation panels.

So what's a great insulator? Nothing! That's right. Nothing—as in a vacuum—is one of the best insulators. Panasonic had a new vacuum insulation panel on the market, so the guys used that. It's got silvery foil on the outside and fiberglass on the inside. Air is sucked out of the fiberglass core, creating a vacuum inside the panel.

They lined the snowman's box with these insulation panels and set out. The trip—by plane and truck—took 40 hours. When they got to the desert, Saleh and Amna were waiting for them. So were 60 other kids! The pressure was on. It would be really bad if they opened the box to find the snowman's eyes, nose, and mouth floating in a puddle.

They took off the panels and opened the box. And there, smiling at them, was the snowman! He was perfect. The kids cheered. Then they reached out and touched the snow. It was so cold!

The little snowman began to melt. His last gift to the kids was to provide ammo for a snowball fight. Soon they were having a wild snow battle, the first one ever in a desert. Within minutes, all signs of the snowman were gone.



Business Wire/Panasonic

He made it! After a trip of 5,000 miles, the snowman was still frozen solid.