

Some wind chimneys rotate and some do not

Why does a chimney have wind circles around it?

The wind circles around the chimney upwards help push the gases being released even higher into the sky. The wind circles around the chimney downwards prevent it from moving sideways and make it more stable. I feel that both of those possibilities are important.

Do chimney interference effects affect wind-induced dynamic responses?

In this study, based on the interference effects on wind loads, the interference effects between two tall chimneys on wind-induced dynamic responses were analyzed. First, the interfered wind loads of two chimneys with different distances and incident angles were obtained by pressure measurement tests.

Why do some chimneys have spiral structures?

While walking around, I noticed that some chimneys have spiral structures, while others do not. One possibility is that the wind circles around the chimney upwards, pushing whatever gases being released even higher into the sky.

Where is a wind chimney used?

The wind chimney of building B was designed to be used in the center of buildings where two layers of spaces are connected through an interstitial vent (see in Fig. 3) and leads to natural ventilation in the indoor spaces.

How does wind impact a chimney?

As high-rise structures, chimneys are often subjected to significant wind-induced vibrations under wind loads owing to the lower stiffness and damping ratios. Moreover, the interference effects are greatly dependent upon the exterior shapes of structures.

How does a wind chimney increase air flow speed?

Finally, proper design with optimal angle and suitable aerodynamic form placement in wind chimney increases air flow speed. This increase in velocity above the wind chimney's outlet leads to reduce air pressure and increased suction, which leads to enhance natural ventilation in indoor spaces of the building.

As you relax in your hammock in the backyard on a hot summer day, you stare at the puffy, white clouds that float across the deep blue sky. The Sun heats your skin, and you wait for a light breeze to come along to provide ...

Windmaster chimney cowls are available in a variety of shapes and sizes. Some of them have lobster back designs that turn to face the wind. Other types rotate or spin to prevent wind from entering the chimney. The cowls will not only stop ...

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But they also don't need that much wind speed. A typical cut-in speed (the slowest speed at which the wind turbine can rotate and usefully generate electricity) is about 3 to 4 m/s, about a ...

Many chimneys had spiral "wings", while others didn't. I came up with two possibilities: The wind circles around the chimney upwards which pushes whatever gases being released even higher into the sky. The wind ...

At the critical wind velocity, the across-wind external wind forces of the flexible circular structures (e.g., chimneys) are likely to play a dominant role and become the main ...

Japan: In Japan, wind chimes, or "furin," became popular during the Edo period (1603-1868). These chimes were typically made of glass and were hung outside homes to ward off evil spirits and bring good luck. The sound of ...

Here are some common types of wind chimes and the kind of sound you can expect from each: Metal - Unlike other materials, tubular metal chimes can be tuned to produce specific notes. When struck, they vibrate more than other ...

Editor's note: This story was originally published in 2023. Wind farms are becoming more common in Indiana. The state already boasts the fourth largest "farm" in the U.S. and produces nearly 3,500 ...



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