

Re: water pressure

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-12/msg01885.html>

- *From:* Maarten van Reeuwijk <maarten@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 27 Dec 2005 17:11:06 +0100
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Adnan wrote:

- > i'm sorry if this post made pissed you off but i just want to do
- > project for school..
- > ok so i wanted to do is this..
- >
- > make the water so move fast (like the water coming out of fire hydrant)
- > so i can simulate a tsunami...and i thought i could do this with blower
- > or wanted to know even if this is even possible..

A tsunami is a wave-phenomenon – so there it no use simulating this with a blower, which will mainly generate currents and wind waves (with short wavelengths). A tsunami is a so-called shallow-water wave i.e. where the wave's length is long compared to the waterdepth. Therefore it travels with a speed $c = \sqrt{g \cdot d}$ with g the gravity and d the depth. Plugging in a typical depth of 1km, gives that the wave travels with about 100 m/s, or 360 km / h. To simulate a tsunami I would recommend having a thin layer of fluid which you bring into motion by moving a board back and forth in the water at one end. The fun would be putting a beach on the other side, and seeing how far the water comes in.

If you want to set up an experiment it is never a bad idea to search the internet for the underlying physical mechanisms. Using "tsunami wave physics" gives several useful sites.

HTH, Maarten

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 - ◇ *From:* Maarten van Reeuwijk

- **References:**

- ◆ **water pressure**
 - ◇ From: Adnan
- ◆ **Re: water pressure**
 - ◇ From: kaatucan@xxxxxxxxxx
- ◆ **Re: water pressure**
 - ◇ From: Adnan
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 - ◇ From: CWatters
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