



The demolition of buildings requires a lot of heavy machinery that crushes concrete and separates valuable materials for repurpose. Usually, these materials are then transferred to an offsite location. This procedure wastes both time and resources. Further, in order to prevent harmful dust clouds from blooming, an incredible amount of water is wasted. Well, a Swedish student by the name of Omer Haciomeroglu, aims to change that with his concrete-eating robots.

“The ERO (short for erosion) Concrete Recycling Robot was designed to efficiently disassemble concrete structures without any waste, dust or separation and enable reclaimed building materials to be reused for new prefabricated concrete buildings”, Omer explains. “It does so by using a water jet to crack the concrete surface, separate the waste and package the cleaned, dust-free material.”



Photo credit:

<https://www.fastcoexist.com/3028697/this-concrete-eating-robot-can-recycle-an-entire-building-on-the-spot>

Not only will these robots execute demolition, but pre-demolition a fleet of the ERO robots will scan the buildings in order to determine the best route to execute the procedure. As the robot subsequently works, it essentially erases the building. “The ERO deconstructs with high-pressure water and sucks and separates the mixture of aggregate, cement and water. It then send the aggregate and filtered cement slurry separately down to the packaging unit to be contained”, Omar stated.

Once demolition is completed, there is essentially nothing that has gone to landfills or sent to other locations for additional processing. “Even the rebar is cleaned of concrete, dust and rust and is ready to be cut and reused immediately” he continued.

Although so far the design remains a concept, influential organizations are beginning to take notice. Last year, Omer Haciomeroglu’s astounding concept won him the Student Designs category of the International Design Excellence Awards.

Source:

<http://counterxcurrentnews.com/2014/02/concrete-eating-robot-recycles-old-buildings/>