OUR FUTURE IS CAST IN LAVA



Image: René Waclavicek / LIQUIFER Systems Group

Cologne, Germany – October 2nd, 2015. Team LavaHive is proud to announce their award of third place prize in the NASA 3D Printed Habitat Challenge, which took place at the 2015 World Maker Faire in New York City, 26-27 September 2015. The competition, part of NASA's Centennial Challenge Program, is designed to advance the technology needed to put humans on Mars. It offers prizes to engage the public in the process of advanced technology development.

LavaHive is a modular 3D-printed Mars habitat using a novel construction technique called 'lava-casting'. The habitat is made up of one inflatable dome brought from Earth, for critical crew areas, connected to a series of smaller domes, housing laboratory space and working areas. LavaHive incorporates recycled components as a key element of the habitat concept, including a re-used part of the entry vehicle acting as the inflatable habitat roof.

Team leader Dr. Aidan Cowley explains the motivations behind the project: "It is important that when we go to Mars we use what's already there to build and sustain a base. We envisage using Martian regolith as a building material, and take this a step further by recycling spacecraft parts that are usually crashed into the planet's surface – for example as the roof to the main habitat." Using the abundant material and energy resources on Mars greatly reduces efforts to construct the habitat. This philosophy, called In-situ Resource Utilisation, can allow the next stage of human exploration, virtually freed from the constraints imposed by the current approach where all necessary material is launched from Earth.

The team is comprised of professionals from nine European nations, working at the European Space Agency's (Esa) European Astronaut Centre in Cologne, and LIQUIFER Systems Group in Vienna. The multidisciplinary team has backgrounds in the fields of Engineering, Materials Science, Astrophysics and Space Architecture.

Further information:

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www.lavahive.com

3D Printed Habitat Challenge: "LavaHive: NASA 3D Printed Habitat Challenge Third Place" http://3dpchallenge.tumblr.com/post/128731340573/team-lavahive-lavahive-is-a-modular

Press about LavaHive:

Plugnmake: "From New York to Mars: NASA proclaims the winning designs of the 3D-Printed Habitat Challenge at World Maker Faire 2015" <u>http://plugnmake.com/nasa-3d-printed-habitat-challenge-at-world-maker-faire/</u>

Gizmodo: "Space Igloos, Lava Tubes and Hobbit Holes: Here Are Our Future Martian Habitats" <u>http://gizmodo.com/space-igloos-lava-tubes-and-hobbit-holes-here-are-our-1733626783</u>

The Telegraph: "Top 10 Mars habitats from NASA space habitat challenge" <u>http://www.telegraph.co.uk/technology/picture-galleries/11896687/Top-10-Mars-habitats-from-NASA-space-habitat-challenge.html?frame=3456046</u>

Popular Science: "8 Printable Martian Habitat Designs That We Want to Live In" <u>http://www.popsci.com/8-printable-martian-habitat-designs-that-we-want-to-live-in?image=2</u>

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