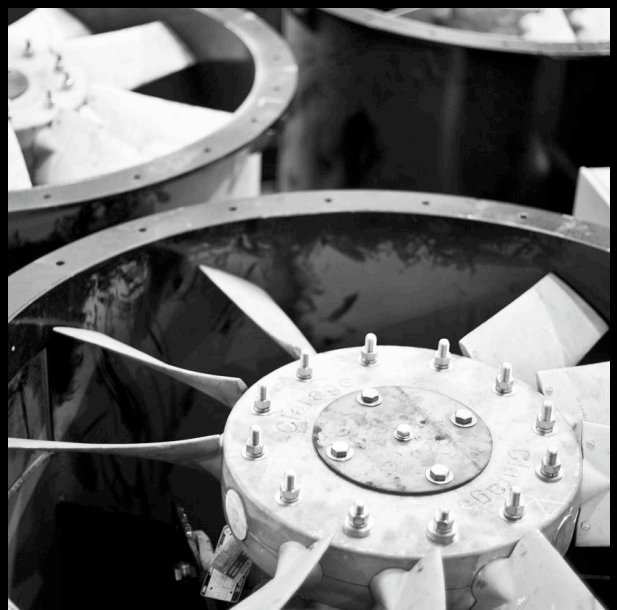
Alloy-Enhanced Fans Maintain Fresh Air in Tunnels

Marshall Space Flight Center

Twin City Fan Companies Ltd.
Minneapolis, Minnesota



NASA Technology

- As part of the Partnership for Next Generation Vehicles, a NASA scientist developed an aluminum alloy for high temperature applications
- The alloy, three to four times stronger than conventional aluminum, could be used in combustion engine, marine, and aerospace applications

Partnership

- NASA patented the technology and over the last decade has successfully licensed it to private firms
- The alloy has received an “Excellence in Technology Transfer” award for its commercial success
- In 2010 Twin City Fan licensed the technology in order to manufacture tunnel safety fans that would meet European safety standards

Benefits

- Twin City Fan now sells tunnel fans capable of operating in 752 °F that are three times lighter than their steel-made equivalents
- It now produces fans in 3 sizes, and plans on 12
- The compact design will allow the tunnels in which the fan is installed to be smaller, saving greatly on construction costs