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Snowboard Manufacturing Press

The purpose of this creative project is both academic and research oriented. The goal was to apply basic engineering principles to the design and construction of a rapid prototyping snowboard manufacturing press. The two main driving factors in snowboard performance are shape geometry and material selection. Current press designs are generally tailored for large production runs of single board geometry, and thus limit the ability to quickly change board parameters such as length, tip/tail shape, and camber profile. In addition to the geometric versatility of the new press design, virtually unlimited laminate lay-up combinations of can also be implemented. These design alterations can then be tested on-snow, and correlations between manufacturing technique, static test results, and qualitative rider feedback can be developed. Another project goal was the involvement of other students, and this past fall the press was utilized as a design project for a 5 person Multidisciplinary Engineering Design team (EGEN 310). Manufacturing of the press is currently underway, with snowboard manufacturing scheduled for fall of 2012. Qualitative testing, open to the public, will then start in early winter.