

picoHydro Generator

International Development Design Summit 2008

The Challenge

Design a low-cost, time-saving, and simple manufacturing procedure to convert a Toyota pickup alternator into a picoHydro generator, reducing the cost of the system from \$300 to \$250.

Existing Manufacturing Method

Use tin snips to cut laminates for generator core by hand. Drill five holes with hand drill.



Alternator

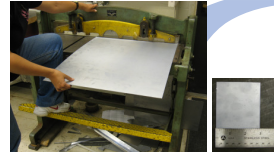


Generator core

Our Innovation

Tooling to improve the speed and ease of manufacturing and assembling a picoHydro generator core.

1 Cut 1mm thick mild steel sheet into squares



2 Trace shape using **template**



3 Punch out bolt holes using **template**



4 Center punch shaft hole using **template**

5 Drill hole for shaft using **jig**



6 Cut edges using **cutting tool**

