

Design, test and improvement of a vortex flow turbine



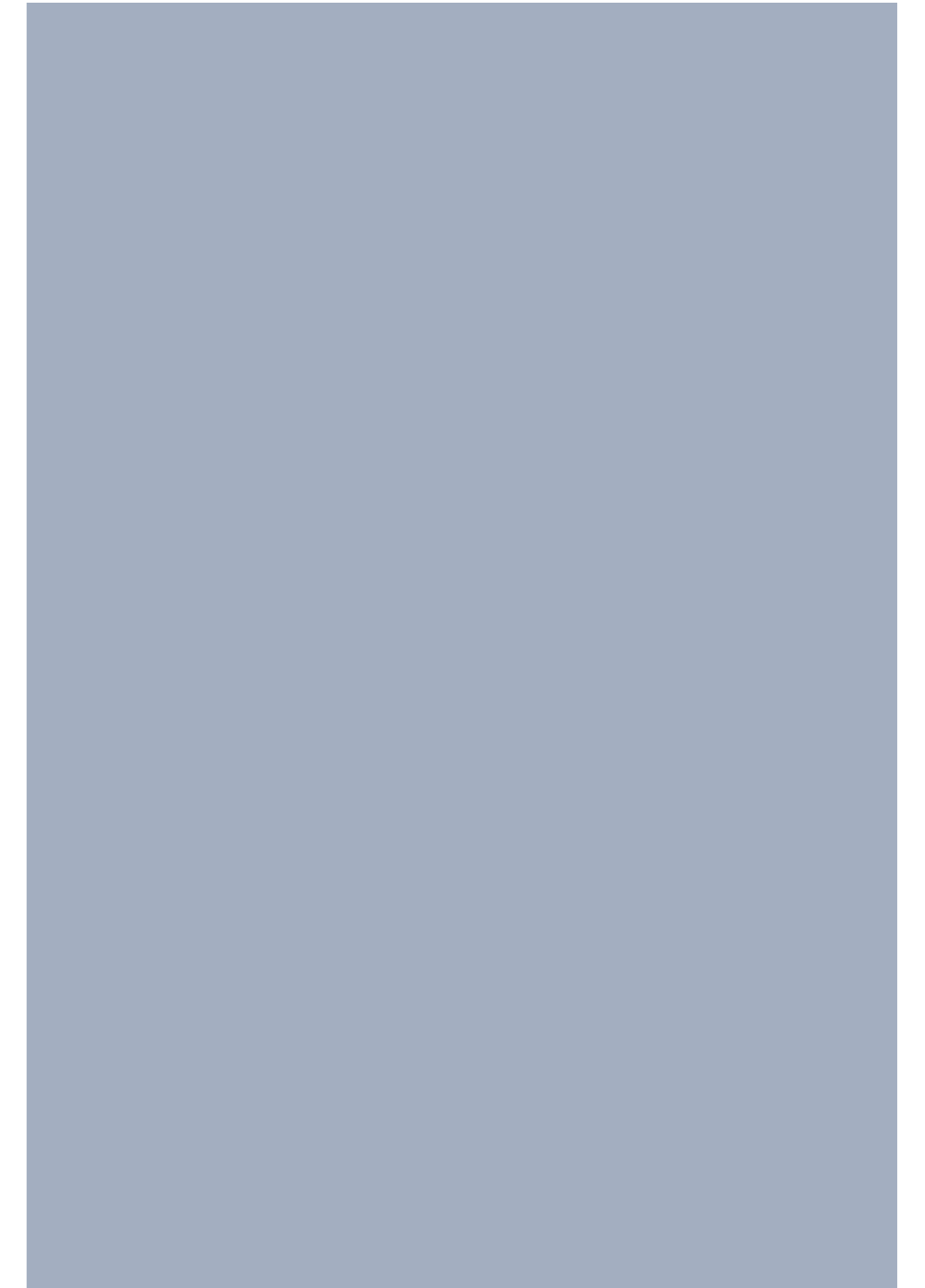
Design, test and improvement of a vortex flow turbine for developing countries

The bachelor thesis investigates the development of a vortex flow turbine applicable for developing countries, which can be built out of scrap parts. The aim is to provide an assembly instruction to the local population of third world countries, so that they can construct the vortex flow turbine by themselves to use the generated power for their daily needs.

The thesis presents the construction of the vortex flow turbine to perform tests and examines further construction improvements. The manufactured vortex flow turbine has been tested in a water channel to gain an insight into the overall performance and functionality of the vortex flow turbine.

The vortex flow turbine has been constructed in the HSLU laboratory out of scrap parts that have been collected from scrap yards or that would have been thrown away by companies otherwise. Afterwards, the vortex flow turbine was tested in a water channel in the HSLU laboratory.

The vortex flow turbine which has been constructed and tested in the bachelor thesis can be seen in the picture above.



Jonas Ritz

Project coach:
Prof. Dr. Sabri Deniz

Project expert:
Dr. Joel Schlienger

Industrial partner:
AquaZoom AG

Semester:
HS20