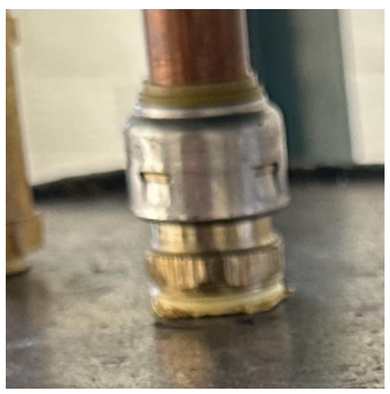
Scorch Cooler

Mission Statement

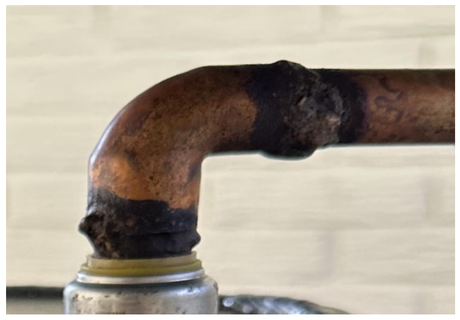
Our mission is to bring sustainable cooling to rural areas off the power grid through our innovative self-sustaining cooler. By harnessing the power of fire and employing ammonia as a coolant, we offer a decentralized solution that aligns with the available local resources and addresses the challenges of limited electricity access. This not only enhances resilience in areas prone to power outages but also contributes to environmental sustainability, utilizing eco-friendly technologies. Our goal is to empower rural communities to take control of their comfort, fostering a greener and more sustainable future while improving the quality of life in off-grid environments.

Manufacturing

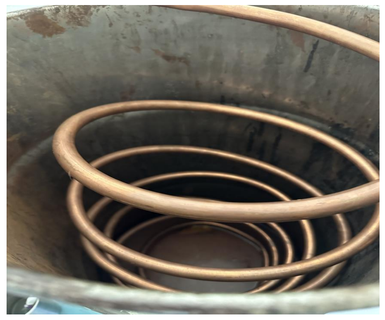
Welding



Tapping Holes (For Fittings)



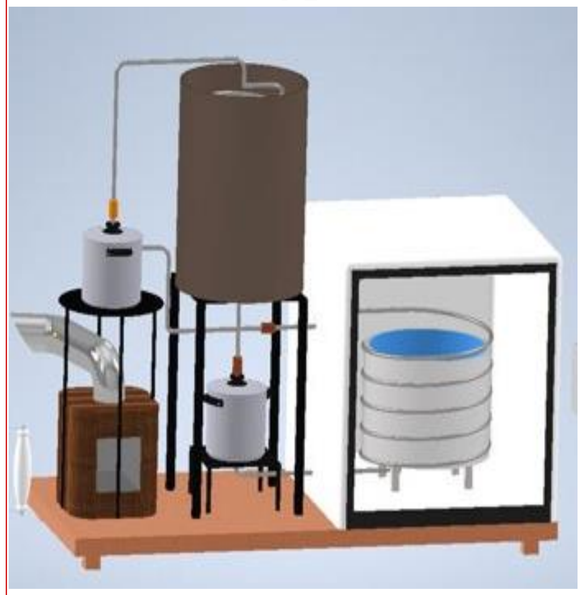
Soldering



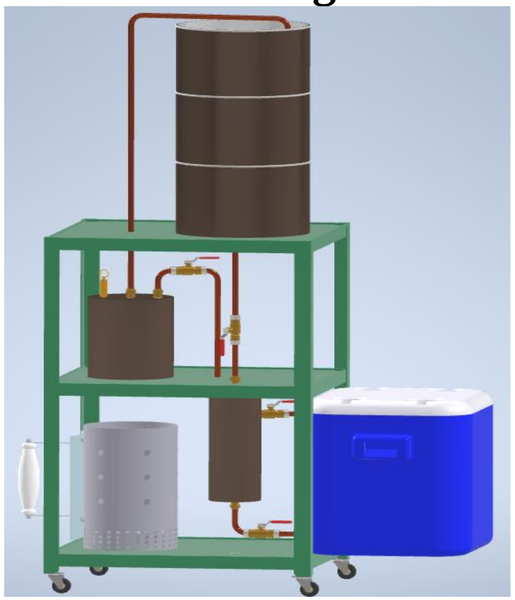
Cutting and Bending Pipe

Design

Prototype:



Final Design:



Safety Precautions

- Pop-Off Valve (Rated at 225 psi)
- Air test to check for leaks in the cycle
- Safety funnel for putting ammonia solution into a generator

Results

- Temperature drop of 20 degrees with ammonia solution
- Water inside the cooler would freeze if pure ammonia was inside the system
- The ammonia and water solution is not efficient enough to freeze the water inside the cooler