Drink and Don’t Dunk

Project Recycled+Reusable+Portable coffee mug

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Materials Used (Wool+Metal)

Metal hook

Rivet

Metal Sterilization

- Place a clean pot that's large enough to submerge the metal into water onto a stove.
- Wash your hands thoroughly with soap and warm water. Rinse the soap from your hands with warm running water then dry with a clean towel. Cover your cleaned hands with a pair of sterile gloves.
- Clean the metal with a combination of mild soap and warm water. Rinse the metal off with running warm water. Check the metal carefully after rinsing to ensure that you've removed all traces of the soap.
- Place the metal into the pot. Cover it with water, making sure it's completely submerged beneath the water's surface. Cover the pot with its lid.
- Turn the stove on to a setting that will boil the water contained in the pot. Wait for the water to boil then set a timer for 15 minutes. Allow the water to boil the metal for the full 15-minute period.
- Use a pair of oven mitts to remove the pot from the stove and place it onto a heat-resistant surface. Allow the pot and it's contents to cool to room temperature.
- Pour the water from the pot. Change into a new pair of sterile gloves and remove the metal from the pot. Use the item immediately.

Process Documentation (Construction Details)

Step 1:
Cut the metal sheet in 8”x3.5” (.5” inch extra for joineries) dimension.

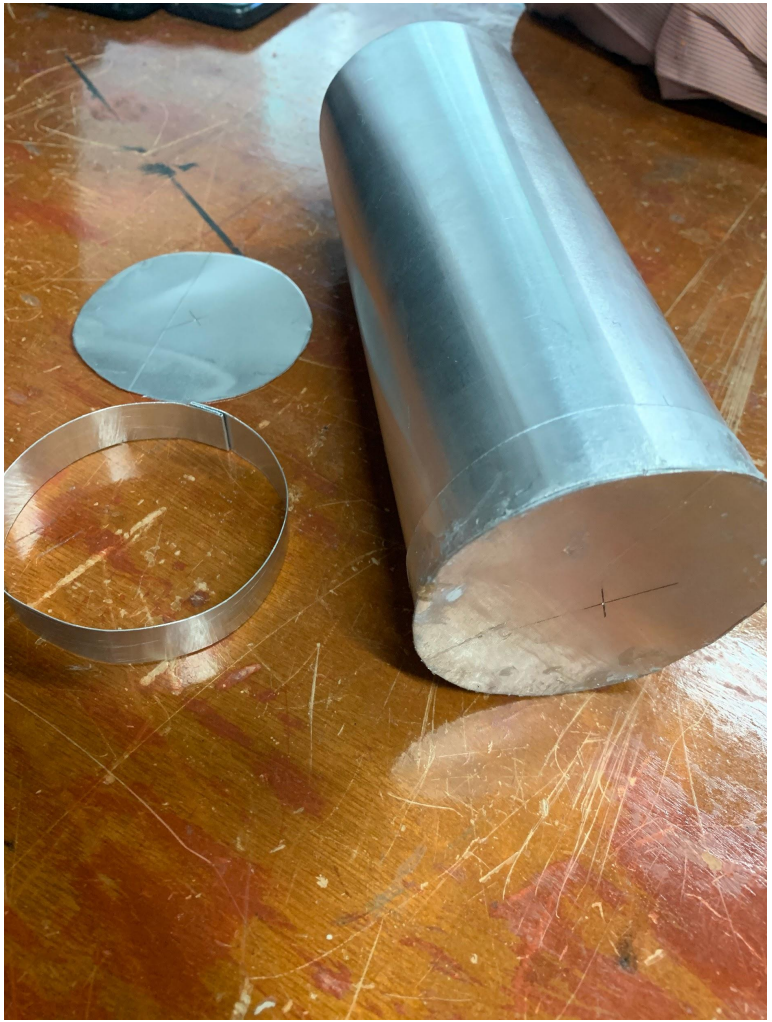
Step 2:
Press .25” with hand from both ends of the metal sheet in order to fixate a cylindrical shape.

Step 3:
Make the .25” fold stable by first hammering with the small hammer..

Step 4:
And then hammering with the larger hammer.

Step 5: Arrive at a metal cylinder

Step 6: Braid wool in order to make the insulating layer and to get a better grip



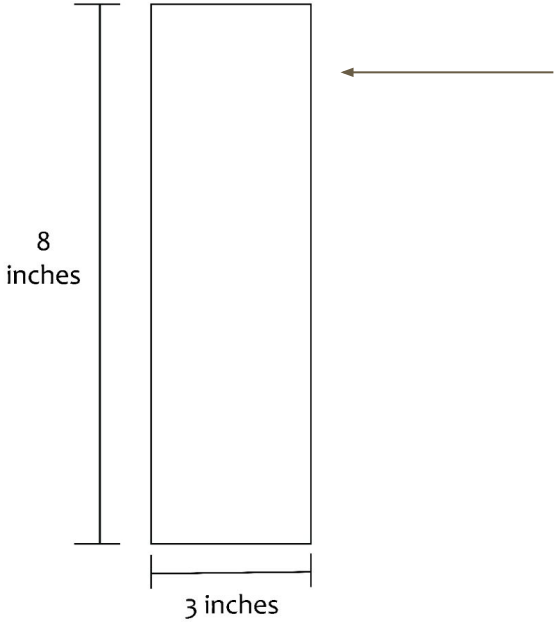
Step 7:
Cut out a circle of radius 1.5” and making two extra cylinders of 1.5”x8”. Later, glueing the circle and cylinder together to arrive at a metal cap.

Presenting the “Keep cup”

(Final)Step 8:
Finally, place a layer of wool cloth over the coffee mug in order to form an *insulating layer* and then making a 3” in height strip of braided colourful wool in order to form the grip handle. Further attach a hook to one side in order to make the coffee mug *easily mobile.*

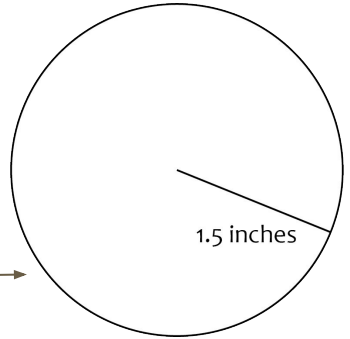
Tadaaa

Dimensions



Elevation

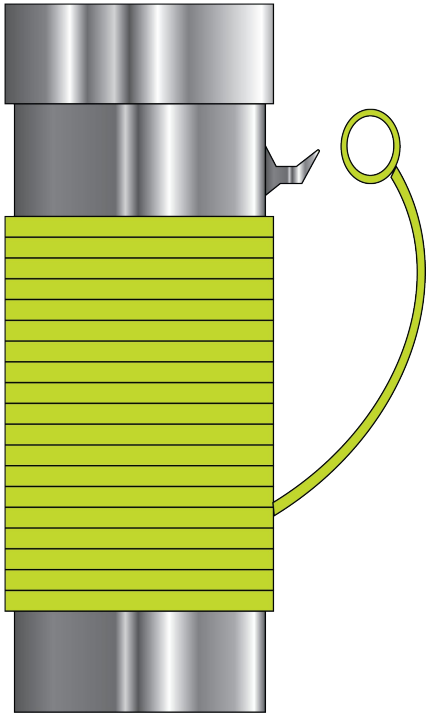
Plan



Sketches of Our Model

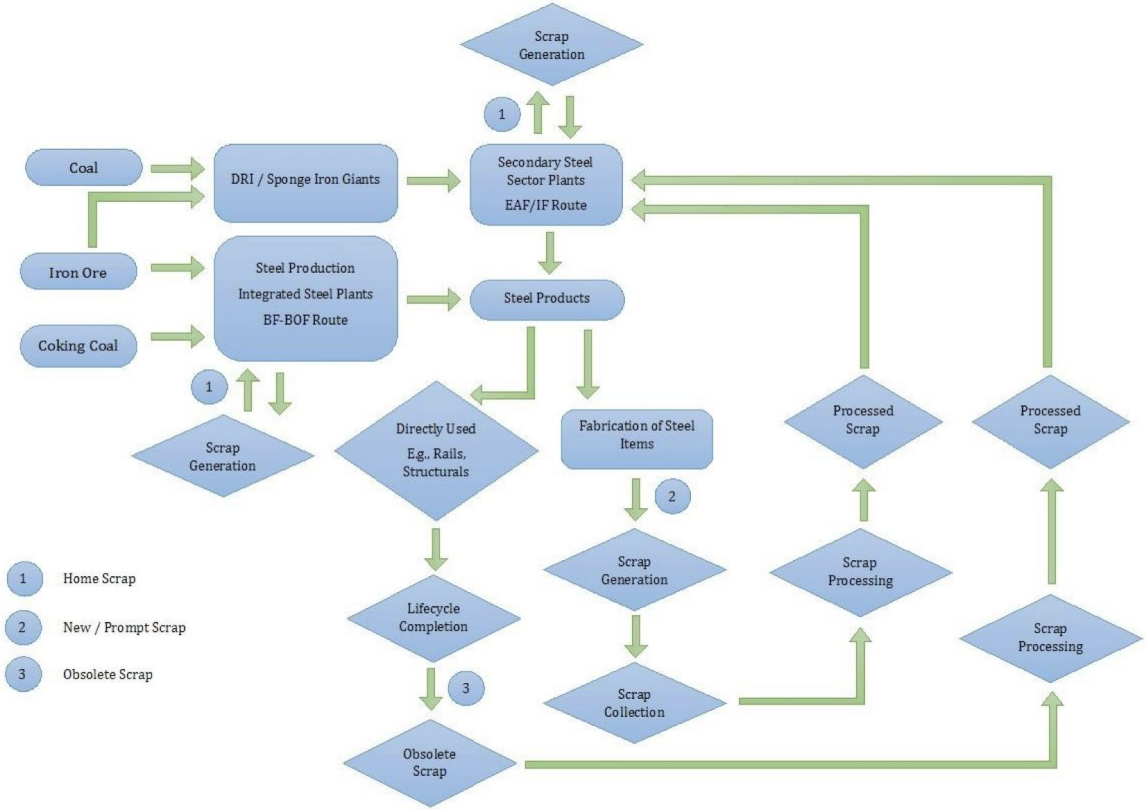
3-D

Plan



Elevation

Metal Recycling Process



Some statistics

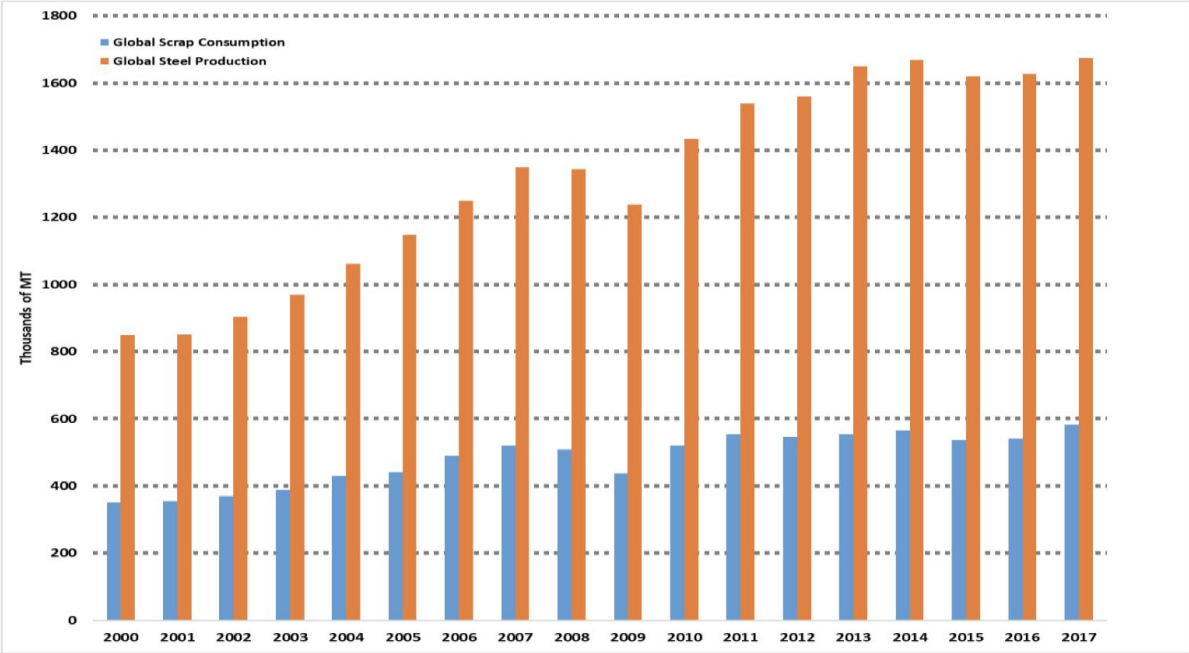


Fig-1: *Global Steel Production and Scrap Consumption*[1]

Why Wool and Metal?

- **WOOL**:
  1. Wool has excellent absorbency, so no leaks.
  2. Wool is a good insulator.
  3. Wool keeps warm.
  4. It is biodegradable.

- **METAL**:
  1. Metals are malleable so they can be converted into Coffee mugs and cups easily.
  2. Metals are good conductors of heat thus they work well With wool, which is the insulator.
  3. High melting point, so no need to worry about hot coffee.

- And hence, they form the perfect blend to pour a hot blended coffee in.

Why coffee mug?

- Coffee is the most popular beverage in the world, with more than **400 billion cups** consumed each year.
- The number of disposable cups thrown away has exploded to an estimated **2.5 billion a year**, or around **5,000 every minute.**Overall it is estimated that **0.1% of cups are recycled**.
- Now that we have established that:
  A. There is a lot of metal scrap produced globally
  B. There are a lot of disposed coffee mugs produced every minute in the word, even the ones that are labeled recyclable.
  C. Wool forms a perfectly good insulating material
  D. And finally that most coffee mugs are used only once,
  a metal/wool coffee mug made a lot of sense.

How is it used?

- It is used as every other coffee mug, but it is better in the following aspects:

  1. Of course, it is made out of reused metal thus decreasing metal wastage.
  2. It is reusable and portable.
  3. We have added the factor of a hook to make it more easily portable. It can thus be easily hooked on a bag or belt and be carried (especially when it is empty).

- When it comes to functionality, coffee mugs need to have the ability to keep the coffee warm for a longer time. We think a metal and wool blend works best in this case because of their natural properties.

- Secondly, leaks can be avoided because wool has excellent absorbency skills.

- Finally, to use the **keep cup**, you just need to **pour sip wash and reuse!** That easy.

We would love to see you try to make your own keep cups.

You can reach out to us for help.
Join the pour, sip, wash and reuse cult!

THANK YOU!