Final Concept Proposal

Our proposal involves the utilization of the different melting points of the metals that compose the steel alloy. In our process, the scrap which comes back to the factory will be put into an air tight heat mixer. The mixer will feature a screen on the bottom within it, with a solid portion that can be adjusted to either enclose the contents of the mixer or slide away, making the screen the only thing holding the scrap up. Heat will be applied to its interior until the temperature is at the melting point of a desired metal within the alloy, reducing it to a molten form. The mixer will maintain each temperature for several minutes in order to ensure thorough separation. The solid bottom of the mixer will then be removed, allowing the desired liquid to fall through the screen into a container. This process can be repeated for the remaining metals, with new containers under the mixer. After each metal in the alloy is melted and separated, the mixer will cool down and the process is ready to start over with another batch. Technically, this process will require a device powerful enough to create temperatures high enough to melt metals that compose the alloy. It must be able to contain all this heat, so it must be comprised of a material with a high melting point, like tungsten, carbon, etc.
Bring car to the scrapyard

Separate nonmetal and metal parts

Break down metal parts into smaller pieces

Insert batch of metal into the mixer

Seal the mixer

Heat up mixer to desired temperature, melting the metal

Remove the solid bottom

Let molten metal fall through screen into a container

Remove filled container and replace with empty one