

My students have designed a frame that has a wide arc (7-8' radius but oblong 30"). The bender I have uses metal disks to bend around a small radius - won't really work for a even continuous bend. Does anyone have ideas of how to bend it? Would a jig on a piece of plywood work? I'm not sure if it could be made burly enough to bend steel tubes or not. We need two exactly the same bend (for either side of the car) Just wondering what kind of ideas there is out there?

Dave,

Check out this pic

http://www.rorty-design.com/images/roller_bender_web.gif

The machine is called a roll bender. The Eastwood Company sells them for \$1000! But, if you can have a local machine shop make the mandrels, you can build one pretty cheap. Otherwise you can try to find a local fab shop that might have one. They might have one that is powered, like this one.

http://www.vansantent.com/bending_machine_z302pr.htm

Sounds like your students are making an Ariel Atom. Better watch out! Their chassis is patented. Just kidding. We would have loved to make a chassis like that, but like you, we don't have a roll bender. Hmmmm..... maybe we should start building our own roll benders?

I'm just brainstorming over lunch.... but it looks like if you took two rims and had the third on a car you might be able to make something work. Use a car jack to control the height (radius) of the third rim. Start the car and bend away!

Try contacting a metal fabrication shop in your area to see if they would work with some of the students, teaching them how to bend the pipes for what they need. This would probably be more cost efficient than trying to buy the benders yourself. The shops in our area give this type of help to our students. DLuety2

Dave, my Red Green idea did lead me to come up with an idea that might have some merit.... chuck a SMALL (keeps the SFM low) pneumatic wheel in your metal lathe and put the headstock in back gears. On the bed of the lathe rig the other two rollers. Bayfield has lots of snow and a lot of boats. Find a couple of boat trailer rollers. (if you can't find the shape you need turn the correct shape on the lathe, or turn a couple out of maple on the wood lathe). Assuming you are using thin aluminum tubing, several passes (lifting the bottom two rollers each time) might give you the radius you desire. I hope this helps. If not it was fun brainstorming!

I've been thinking about and brain storming your bending problem, and have come up with another solution that may work for you. Try contacting a local electrician or electrical contractor, they should have a machine like a Greenlee portable pipe bender and may be willing to bring it to the school to help the students bend the pipes. Dave2