A Laser Guided Press Brake

Bob Engelhardt
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I have a press brake that I made by adding dies to a 20 ton HF hydraulic press. It is limited to 21" wide stock, but that covers my needs pretty well. And it works pretty well. What doesn't "work" is getting the stock lined up so the bend is made where I want it. It's just too hard to see where the die is going to contact the stock. I made a fence that works nicely for repetitive bends but setting it up is too much work for one-offs.

What I came up with is a laser guide. I got a cheap ($5, shipped) laser level on eBay. I needed a laser level's laser and not a laser pointer to get a line of light and not just a point.

The laser was installed on the side of the press and a hole drilled for it to shine through. If it looks cock-eyed, it is. It took a bit a squiggling to get it pointed right.

Here's what it looks like. The laser line looks fuzzier and wider than it actually is. I think that's because I couldn't use a flash for the picture and the exposure was a little long. In actuality, the line is crisp and easy to align on.

Here is a test bend. I'm not sure what's most convenient when laying out bends: a line where the bend should start, or where it should end, or what. I made it so the bend is centered on the line. It's easily changed.

This is just Rev 0. Maybe only Prototype. I'm sure that improvements will be needed. There's one, for sure: I mounted the laser above the contact line, thinking that I needed to, in order to get a line of light. But the laser is blocked as the die descends. It's usable, but the stock has to be aligned and then held blind for a while. Being very careful not to allow it to move. The laser definitely has to be lowered.

Also, the laser kind of sticks out from the press and might be susceptible to knocks. If so, its guts are easily removed and remounted more securely.