



Fall, 2010 - Making It Happen

Sparks are flying

Lately the ProBusS shop has produced more fireworks than the night sky on the 4th of July, thanks to customers ordering a variety of different fabrication projects.

We're often asked to design and engineer specific solutions for our customers, and many of these projects involved welding of one type or another. Which suggested this newsletter topic: important things to consider before your staff or an outside skilled tradesman tackles any welding project.

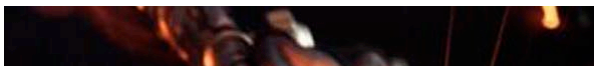
It's great to see the sparks fly. It's even better when you know you're **fixing the right problem in the right way**. Here's how to make sure you're right on...



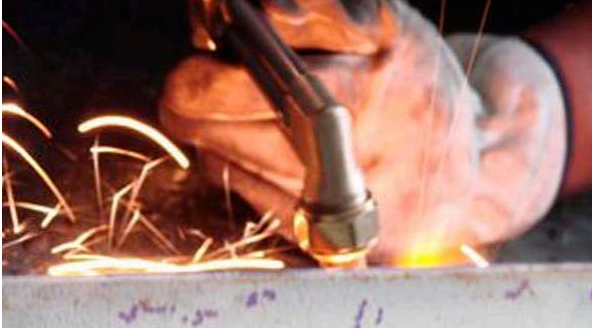
What are you trying to fix?

Let's take a common project, such as repairing racking components. Many parts can be repaired by welding, but sometimes, to be sure your racking is safe, secure, and durable, new components are required instead of reusing old ones.

That's why the most important thing in these situations is to find the root cause of the problem, rather than simply repairing the part time after time. Why exactly is a component failing? Sometimes it fails because the rack was being used to store materials it wasn't designed to handle. Sometimes the rack has been abused, by a forklift for example, or a part was repaired or installed incorrectly.



Determining the real cause of the problem tells you the appropriate solution. Maybe you need



a new component, or a different one, something fabricated out of a different material or to different specs. Find the cause and you can find the right solution.

Answer these 3 questions *before* welding begins

Here are three questions to ask before the torch touches metal:

#1. What's the material?

If the component was originally welded, most likely it can be repaired by welding. But knowing what the material is tells you if special processes or techniques were used, whether the component was heat treated after welding, etc. If construction drawings aren't available, check for specs or grade markings on the component. The original manufacturer can also provide material specs. If drawings, markings, and the manufacturer are AWOL, a small chunk cut from the part can be analyzed at a lab.

#2. Can it be welded safely?

Combustible fluids, flammable residues, and heavy concentrations of dust are explosions just waiting for the welding torch. As a rule of thumb, keep dangerous materials at least 30 feet away from any welding operation.

Also, get the lead out: although lead paints were banned over thirty years ago, there's a lot of equipment around from that era. Components could be covered with lead-based paint. A local testing firm can tell you if there's lead in the paint so you can remove it before it contaminates the plant.



#3. Does it require preheating or heat treatment?

Common structural steels don't require preheating when you're using the right welding materials and techniques. However, with welding materials thicker than 3/4", preheating to 200°F is a good idea. A few materials may need postweld heat treatment for durability, and code requirements may also dictate postweld heat treatment.

If you can imagine it, we can build it.

Fabrication, including welding, is one of our specialties at ProBusS. To give you a few examples, here are some recent projects that have been generating some sparks back in the shop:

- **custom work platforms** -slips and falls are **the second leading cause of industrial accidents**, so platforms that elevate the worker to the proper height improve productivity and safety; lately we've fabricated platforms with wood decks and some with expanded

steel decks for oily sites

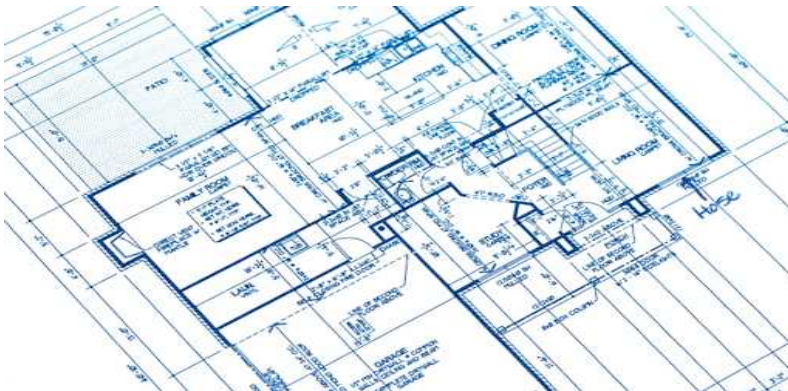
- **safety gates** -these one-way gates redirect pedestrian traffic to keep people from walking into busy aisles and moving forklifts
- **moving dollies** -for transporting products, materials, parts, and small equipment, it's hard to beat our top quality wood frame dollies with heavy duty casters and non-slip turf covers; we've fulfilled orders from a half-dozen to several hundred at a time
- **racking systems** -as plants squeeze out more efficiency and slowly expand capacity, the demand for new, repaired, moved, and reconfigured racking continues, and we've been busy doing all of the above



- **equipment bases** -these add-ons put equipment at the proper working height, boosting productivity and safety
- **safety panels** -custom-designed, welded wire mesh panels incorporate pass-through slots and protect people from moving carriages and other operating equipment

What can we build for you?

Whether it's safety equipment, critical machine parts, or a simple moving dolly, ProBusS can design and engineer components to your exact specifications. Our fabrication solutions are effective and economical, and we build them to last.



When you need ideas, answers, or a quote, we're happy to help. Call us at **616-490-4781**.