Spincraft Metal Fabrication

Containing potentially explosive aluminum dust and protecting workers

Metal fabrication company Spincraft has been in the engineering solutions business for over 90 years, so when the company needed a turn-key containment structure on short notice for a critical job involving potentially highly explosive aluminum dust, they turned to another industry veteran, ENPRO Services, Inc. for help.

When faced with this containment need, Spincraft Operations Manager, Joe Santa Fe sought recommendations from his Environment, Health and Safety (EHS) consultant Roxann Carstensen. Having worked with ENPRO for over 20 years on various projects, Ms. Carstensen knew the ENPRO team would be able to handle this highly specific, short-notice request.

Mr. Santa Fe and Ms. Carstensen shared details about ENPRO's work with Spincraft to provide context on the services provided and the overall service experience:

What services did ENPRO provide to Spincraft?
In spring of 2010 we required an air-tight, negative pressure containment structure to surround a component that needed to be hand-ground to very tight tolerance. During this process, over 100 pounds of potentially highly explosive aluminum dust were generated, and this dust needed to be contained in a static-resistant, grounded atmosphere to prevent a catastrophic explosion. The dust also could not be allowed to exit the containment to settle on other critical parts. Additionally, we needed a structure that allowed up to six workers to work and move around comfortably and safely inside the containment.

ENPRO designed and constructed the containment, including explosion-proof electrical components, personal protective grounding devices for the workers, negative pressure ventilation with environmentally sound HEPA filtration, and waste disposal. The structure was constructed of ground steel studs with static and fire-resistant polyethylene sheeting, explosion-proof lighting, and a negative pressure machine with 2000 CFPM of air flow and a three-layer filter system to capture the dust. The structure took approximately five days to build, and Spincraft used the containment system for three weeks. To ensure the safety of the workers, ENPRO also provided ground wrist bands, which were attached to a grounding rod that was installed by a licensed electrician, to prevent a static spark in the containment area.

The ENPRO containment system worked perfectly, and the job went off without any problems. They responded under very short notice for this critical job, and ENPRO met or exceeded all deadlines required without impacting the nearby factory workers.

What were the most positive aspects of your experience with ENPRO?
ENPRO handled our many deadlines and revisions with the utmost professionalism. It was a pleasure to work with the foreman and crew members, who conducted themselves in a professional and businesslike manner at all times. In addition to creating the containment structure, ENPRO's industry contacts and business associates made them a go-to resource for the many issues that came up during the planning and construction process. Each and every one of the crew members followed the safety policies to the letter, so we never had to worry about the safety or compliance details of the job.

How did you find the overall experience of working with ENPRO?
ENPRO was reliable, professional and a pleasure to work with. They were willing to do whatever it took to get the job done. When we asked the ENPRO crew to come in at 6:30 a.m., they did so with enthusiasm – even following SuperBowl Sunday!

Services Provided
Design and construction of an air-tight containment structure, including:

- Explosion-proof electrical components
- Personal protective grounding devices for workers
- Negative pressure ventilation with environmentally sound HEPA filtration
- Waste disposal

