

We are quite busy now and the majority of our projects are being executed successfully. Unfortunately we had two very serious incidents in the same glass plant in the last few weeks. Everyone should already be aware of these events but I will go over them again due to the seriousness of the events.



I previously sent out a notice on the glass drain issue. Due to concerns about electrical grounding expressed by the client, Hotwork removed some of the supports for the trough. When drilling the hole, hot glass was encountered and the drill hung up while removing it. While struggling with the drill, the trough moved due to inadequate support. This allowed glass to start to flow between the covertile and the furnace block. The glass continued to leak until a water lance was inserted inside the furnace. About 20 tons of glass leaked onto electrode cables and several hundred tons of glass was left in the furnace and had to be mined. The client incurred extra costs and an extension of their planned outage. We are working with them to resolve the claim due to the glass leak. Lesson learned on this one – the trough and cover tile are critical components in the glass shutoff system. We have to be sure that we have adequately secured our equipment so that they can perform the intended function. The crew did a great job responding to a terrible situation but we really don't want to become expert at fighting glass leaks. Let's be expert at preventing them.



On the heatup at the same furnace, the plant was ready to takeover the forehearth so the Hotwork burners were isolated at the client valve and burned off until the burner went out. The gas hose was broken at the client supply which was then capped. Shift change occurred and the night shift was to tear down the disconnected forehearth equipment while continuing to operate the burners in the melter and riser. There was no time pressure or reason to rush. Karl Burger admits that he made a mental error when he went to the client supply valve for the riser burner. Without checking valve position or tracing where the hose went, Karl removed wire and popped open the QD encountering gas. He called to Nathan Perry to shut off the main gas while he tried to reconnect the fitting. Karl could not shut off the gas locally because there was no handle on the valve. While trying to reattach the fitting, the gas cloud was ignited by the hot forehearth. Karl says that he dropped to the ground to get out of the fireball. Nathan ran over 100 paces to the main supply valve and found that it did not have a handle. He located the handle behind a column, got it on the valve, and shut off the gas flow to the furnace. Karl had burns on his face and his wrists. His safety equipment was not damaged and he was not burned anywhere where his skin had been covered. Arrangements were made to get Karl medical attention and the process of re-lighting the melter and riser burners was begun. Karl ended up with 2nd degree burns to his cheeks, nose, ears and wrists. He was transferred to a burn unit where he received skin grafts. He is home and says that he is recovering well.

So what are the lessons learned on this one? I think that there are several:

- 1.) Breaking a fuel line is a hugely critical task. It should never be done casually or recklessly. Karl made a mistake in that he thought he was dealing with previously shut down equipment – but that equipment had been shutdown and isolated properly. Somehow he got to thinking that a

live connected gas line was already shutdown. When he approached that connection to break it, he did not think to even check the position of the supply valve at the connection point. He didn't trace the hose and check the pressure gauge in the AC box. He just removed the wires and popped the ears on the QD. ***It is a huge concern to me that anyone working at Hotwork could be this casual about breaking a fuel line.*** This is one of the most safety critical tasks that we perform. No one should ever break a fuel line without stopping, thinking, and double checking. ***If nothing else, it is critically important that everyone learn this from Karl's mistake – never break a fuel connection until you have personally verified the fuel isolation.***

- 2.) The magnitude of this event would have been significantly reduced if there was a handle on the valve at the connection point. When Karl heard gas, he could have just turned it off. When an emergency happens, it is too late to be searching for a valve handle. Fuel isolation valves are critical emergency/safety equipment. If the handle is missing, a safety device has been disabled. The time to address the issue is at setup. Clients often remove valve handles to prevent inadvertent opening of gas drops that are not used while in production. ***We have to insist that the safety devices (isolation valves) are made functional before we put them in service.***
- 3.) Nathan Perry is to be commended for; a.) knowing where the main shutoff valve was located and b.) immediately responding to Karl's shouts and getting to the valve as quickly as possible. Unfortunately, this valve also did not have a handle mounted which caused some delay in emergency response. Once again, the time to address a missing valve handle is at set up – not during an emergency. ***Every crew member must know the location of the main fuel isolation valve and know how they will operate it in the event of an emergency.*** You never know when an emergency may happen and you have to be prepared to act - when the emergency occurs, it is too late to trace lines and or find valve handles or wrenches.

Karl has been extremely cooperative in sharing photos during his treatment for the burns and in agreeing to this type of communication about the specific circumstances of this incident. Basically Karl says "I screwed up". It is not acceptable that this incident ever happened but I sincerely appreciate Karl's willingness to help in teaching others in order to prevent future incidents.

Hopefully, Karl will heal quickly and return to work soon. The client has been amazingly supportive of Hotwork in spite of these back to back incidents in their plant. They are a part of a large international glass producer and we cannot afford a bad reputation with them.

The Hotwork accident rates and Workers Comp experience rates will both be affected by this incident. We recently completed the Management Meeting where the 2013 sales forecast was discussed. Prior to these two incidents, the sales force was predicting a decline in business for 2013 versus 2012. The increase in safety incidence rates has the potential to decrease sales even further. Some of our historical base load business such as the Clairton coke oven work is currently projected to expire in early 2013. We need to retain all current customers and attract new ones just to replace some of the known issues such as Clairton. Our task just became harder due to our safety incidence rates. I remain optimistic that we will uncover new business and exceed the current forecast but we can only do that if we maintain our reputation for safe and reliable customer service.

Everyone should have received an email inviting them to set up a password for the login area of the new website. Only about 1/3 of the people invited have actually logged in so far. We hope to make this area informative and useful for company specific communications. Please try to visit this login area periodically and also take care to protect your identity so that company specific information remains inside the company.

We are busy and entering the holiday season. People often have other things on their mind at this time of year. Our business requires your full attention so please remain focused on your safety while at work. As Karl has just shown us, it only takes a momentary lapse to create serious potential incidents.

I wish Karl a complete and speedy recovery and I wish you all a safe and prosperous holiday season.

Tom