

FATAL ALERT

December 12, 2010

On December 12, 2010, a welder was fatality injured during a 36 inch gas line pipe welding operation. Prior to accident the Tie-In Foreman brought the welding crew into the gas line trench to prep for welding activities. The Tie-in Foreman along with tow welders and two helpers were attempting to close the gap at the bottom of the 2 sections of gas pipe to be welded on. The Tie-In Foreman realized the bore pipe and the gas line pipe were not aligning properly, so he decided to place two air bags under the bore pipe to help raise it. In addition, a side boom was positioned so that the wench could be used to lift and pull the bore pipe to one side. The Tie-In Foreman also had a side boom, boom up, lifting the gas line pipe up and in near where the welding was to occur and he had the side boom at the farthest end of the gas pipe move forward a few feet to apply "In-do" pressure to the two pieces of pipe. There were plans to have an excavator push down in the middle of the gas line pipe to close the gap on the bottom when the time came.

Once all the booms were positioned a 6 inch hinge weld was started on the top of the two section of pipe by the lead welder. The second welder was standing next to the gas line pipe preheating his area of the pipe to be welded. Before the hinge weld was completed and before the Tie-In Foreman could direct the excavator to apply pressure to the middle of the gas line pipe the gas line pipe dislodged from the clamp. When the gas pipe dislodged from a 5" deep and 36" wide alignment clamp, the pipe struck the second welder in the mid section and crushed him against the trench wall.

According to the company, in normal pipe joining procedures, it was stated that a "Bell hole" would be dug at the joint to give the welders working room and provide a safety zone, where the pipe would be held in place by the trench side walls preventing it from side movement. In this case a "bell hole" had not been dug because the trench was enlarged in order to place the bore machine into the trench to bore a hole under the roadway. The trench was again enlarged because of a water line that went across the trench. Doing this e-elongated and widen the trench the length of the gas line pipe. The gas line pipe was exposed to lateral movement the whole length of the pipe. The gas line pipe was only being held in place by the alignment clamp and the two side boom hoists.

The combination of the forward and upward pressure at the joining was too great for the alignment clamp to hold, resulting in the dislodgement and movement of the pipe. With no restraints on the pipe, the pipe was allowed to move side to side in the trench, resulting in the death of the second welder.

Significant Factors:

- The crew had seen pipe move un-expectedly in the past.
- There were no methods used to ensure the pipe could not move un-expectedly while employees were in the trench .while it was being lifted/shifted/pushed in the trench

Recommendations:

- Brief all employees on the facts and circumstances of this fatal mishap.
- Brief/retrain all employees on the dangers of working in the area of tie-ins.
- Train/retrain all employees to recognize and avoid unsafe work locations when working near/at pinch points.
- Ensure gas pipe secured against movement while employees are in a pinch point location.
- Ensure that the "bell hole" practice of securing the gas pipe from movement is not used as a method of pipe restraint given that if the pipe strikes the wall of the trench it could cause a cave-in.