MAI-2014-21

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION
Metal and Nonmetal Mine Safety and Health

REPORT OF INVESTIGATION

Surface Metal Mine
(Alumina)

Fatal Falling Material Accident
November 18, 2014

Turner Industries Group LLC
Contractor ID No. HPQ
at
Alcoa World Alumina LLC
Bayer Alumina Plant
Point Comfort, Calhoun County, Texas
Mine ID No. 41-00320

Investigators

Mark J. Williams
Supervisory Mine Safety and Health Inspector

Lance Miller
Mine Safety and Health Inspector

Terence M. Taylor
Civil Engineer

Willie D. Gill
Mine Safety and Health Specialist (Training)

Originating Office
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South Central District
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Michael A. Davis, District Manager

OVERVIEW

Jerry L. McClelland, Contract Superintendent for Turner Industries Group LLC (Contractor ID# HPQ), age 44, was killed while installing a door on the side of a digester filtrate tank on November 18, 2014. McClelland was standing in front of the suspended door when the lifting lug broke, causing the 2,620 pound door to fall and strike him.

The accident occurred due to management's failure to ensure persons were clear of the suspended load. Management also failed to ensure the door was securely rigged before being lifted. Furthermore, management also failed to ensure that the lug and welds were not used beyond the design capacity intended by the manufacturer where such use created a hazard to persons.

The door fell because the welds attaching the lug to the door stiffener were undersized for the encountered stresses. Further, the welds were irregular in shape and contained defects, such as lack of fusion, porosity, and undercutting, which adversely affected the weld's capacity.

GENERAL INFORMATION

Bayer Alumina Plant, a surface alumina mill, owned and operated by Alcoa World Alumina LLC (Alcoa), is located in Point Comfort, Calhoun County, Texas. The principal operating official is Ben Kahrs, Operations Manager. The mill operates multiple shifts, 24 hours a day, 7 days per week. Total employment is 672 persons.

Bauxite ore is shipped to the mill from several foreign sources. The ore is conveyed to a mill where the Bayer process is used to extract alumina from the bauxite. The finished product is used to produce aluminum metal and other materials for a variety of industrial uses.

Alcoa had contracted Fluor Corporation (Fluor), a worldwide construction and project management company located in Irving, Texas, to complete various capital projects which included pipe installation and control installation for process and boilers.

Turner Industries Group LLC (Turner), a contractor specializing in modular and vessel fabrication, is located in Baton Rouge, Louisiana. Fluor subcontracted Turner Industries to remove an old digester filtrate tank and fabricate and install a new replacement tank. Turner's Tank Division had been at the plant for approximately 2 months.

The Mine Safety and Health Administration (MSHA) completed the last regular inspection at this mine on October 12, 2014.

DESCRIPTION OF THE ACCIDENT

On the day of the accident, November 18, 2014, Jerry L. McClelland (victim) started work at 7:00 a.m. McClelland held a meeting with his crew to discuss their tasks for the shift which included the installation of a door on the digester filtrate tank. The installation of the door had been delayed for two days due to the unavailability of a crane.

Following the meeting, the crew went to the filtrate tank and observed that a pool of green liquid, known as liquor, had accumulated due to leaking pumps. Austin Wagner, Construction Manager (Fluor), was notified of the problem with the liquor and he informed, Alex Martin, Equipment Care Coordinator (Alcoa), that the area needed cleaned up.

The Turner crew spent the rest of the morning cleaning up the area of slip/trip and fall hazards and putting away equipment no longer needed. At approximately 11:45 a.m.,

the crew returned from lunch as the cleanup of the liquor was completed. Jeremy Cervenka, Crane Operator (Alcoa) was contacted by Walter D. Jones Jr., Foreman (Turner) to operate the crane so the door could be lifted into place on the tank.

McClelland, Michael W. Green and Emmett A. Galloway, Welders, went to the filtrate tank to prepare for the door installation. Jones and Brandon P. Fontenot, Helper, traveled to the crane to begin rigging the 8-foot x 10-foot door.

A ¾-inch clevis and a 4-inch nylon sling were used to rig the door to a lifting lug welded on the door. Cervenka stopped the lift when the door was lifted approximately three to four feet off the ground. When interviewed, Cervenka said he told Jones he was not comfortable with the rigging because he did not think the lifting lug was strong enough to hold the door. Cervenka suggested that either additional lifting lugs be welded on the door or a clevis be placed through a bolt hole at the top of the door. Jones elected to use the bolt hole connection and the door was lifted over to the tank door flange located approximately 70 feet from the crane.

At approximately 12:05 p.m., Jones was positioned on top of the filtrate tank relaying signals by radio to Cervenka because his view of the door installation was blocked by filtrate tank's piping and support structure. McClelland instructed Fontenot to unhook the crane's cable from the bolt hole and re-rig it as was previously done to the lifting lug using the ¾-inch clevis and 4-inch nylon sling.

McClelland gave hand signals to Jones to lift the door into place while Green and Galloway were positioned on the outside edges of the door, preparing to align the bolt holes with bars. McClelland stood near the middle of the door, pushing it toward the door frame to assist with the alignment.

At approximately 12:10 p.m., McClelland was pushing the door when the lifting lug broke off the door, causing the 2,620 pound door to fall to the floor and onto him. Green and Galloway quickly moved away from the door as it fell and were not injured. Fontenot and Jones immediately re-rigged the crane to the door bolt hole and the door was lifted off McClelland.

Andreas Irizarry, IE Technician, called emergency personnel and responded to the call for help at approximately 12:12 p.m. McClelland was placed in a company ambulance and transported to the mine gate where Calhoun County EMS took over at approximately 12:27 p.m. and transported him to the hospital. Hope D. Kurtz, Calhoun County Justice of the Peace, pronounced the victim dead at 1:20 p.m. The cause of death was attributed to blunt force trauma.

INVESTIGATION OF THE ACCIDENT

At 12:23 p.m. Kelly Grones, Health and Safety Manager (Alcoa), notified James Murph, Mine Safety and Health Inspector, who was on site conducting an inspection, of the accident. An investigation was started the same day. An order was issued pursuant to Section 103(k) of the Mine Act to ensure the safety of the miners.

MSHA's accident investigation team traveled to the mine, made a physical inspection of the accident scene, interviewed employees, and reviewed documents and work procedures relevant to the accident. MSHA conducted the investigation with the assistance of mine and contractor management and employees, and the miners' representatives.

DISCUSSION

Location of Accident

The accident occurred at the Digestion R40, 35A2 Filtrate tank area. The tank was being built on the mine site to replace an old tank. The floor was a flat concrete area which served as the floor of the previous filtrate tank.

Filtrate Tank Installation

The tank being installed was 15 feet high and 30 feet in diameter with a capacity rating of 74,000 gallons. The tank was built by welding rolled metal plates together at the mine site. Many lifts had taken place in the past seven weeks prior to the accident to build the tank wall and ceiling. During the project, Alcoa provided experienced crane operators to operate the crane to lift and move material to build the tank. The door flange was welded on to the tank shell as the door was the last item to be installed on the tank.

Filtrate Tank Door

The steel door was 10 feet high, 8 feet wide, and in the shape of a rectangle, except that the corners of the door were rounded (photo 2). The door plate was ¾ inches thick. There were four horizontally-oriented stiffening angles stitch welded to the door. The angles were designated as L4x3x3/8 and were spaced evenly from the top to the bottom of the door. The four-inch leg of the angle was oriented perpendicular to the door plate. The three-inch leg was parallel to the plane of the door and projected toward the bottom of the door. There were 68 bolt holes evenly spaced around the perimeter of the door. The door was to be fastened with ¾-inch-diameter bolts to a flange mounted on the side of the tank. Using a certified scale, the weight of the door was measured as 2,620 pounds.

Door Lifting Lugs

Two U-shaped lifting lugs had been fillet welded to the door. One lug was on the top stiffening angle and the other was on the bottom stiffening angle. At the time of the failure, only the top lug was being used to lift the door, as it was ready to be bolted into position against the tank flange. Reportedly, the lugs were made in batches of 14 from a sheet of A36 steel. A computerized plasma cutting machine was used to cut and size the lugs. The machine cut results in a slight slant across the ½-inch thickness of the cut faces. The lugs were 4-3/4 inches tall, 4 inches wide and ½-inch thick (photo 3). Each leg of the U-shape lug was 1-1/2 inches wide. The lugs were welded around the perimeter of each leg with two passes of weld metal. The initial pass was made with P5 6010 rod and the cover pass was made with a 7018 rod. Reportedly, between the passes the welder used a wire brush to clean off the flux. With two passes, the base of the weld was to have an ultimate tensile strength of 60 ksi[1] and the top of the weld was to have an ultimate tensile strength of 70 ksi. The lug was mounted on a slight skew with the left leg 3/16 inches higher (i.e., toward the top or the door) than the right leg of the lug. Both the door and weld were then painted.

According to the Alco's supply shop, their lugs have a rated capacity of 2 tons (4,000 pounds). However, this capacity would apply if the loading is parallel to the plane of the lug and if it is secured with adequate fillet welds. In this application, the lug was oriented horizontally on the vertical door such that the plane of the lug was parallel to length of the stiffening angle. When the door was lifted into the vertical position, the loading was perpendicular to the weak direction of the lug. The rated capacity would not have applied to this type of side loading condition. It is generally known in rigging practice that a lug should be loaded in a direction parallel to its plane, rather than perpendicular (i.e., side loaded). However, this lug was 4 inches wide at the base and it was being mounted to the 3-inch wide leg of the angle. If it would have been oriented perpendicular to the length of the stiffening angle, it would have hung off the edge by 1 inch.

Crane

The rental crane was a Link Belt, model RTC 8050. It is a mobile rubber tired crane that is, diesel powered with a hydraulic driven hoist and boom. The crane has an 80-foot maximum lift distance and a maximum 50 ton lift capacity. At the time of the accident, while lifting the door, the crane was being operated while setting on four outriggers. Investigators inspected the crane and no defects were found.

[1] ksi = kips per square inch, where 1 kip = 1,000 pounds.

The Door Lift

The lift was made by fastening one eye of a synthetic sling to the hook on the load line of the crane and attaching the other eye of the sling to the lifting lug on the door with a screw pin shackle. The synthetic sling was manufactured by Lift-All and was 10 feet long and 4 inches wide. It had a rated capacity of 11,500 pounds in a vertical lift, which was the configuration at the time of the accident. The screw pin shackle was manufactured by Crosby and it was the ¾-inch size and had a 4-3/4 ton working load limit (photo 4). Both the shackle and the sling had adequate capacity to safely lift the 2,620-pound door. A tag line was not used for the lift.

Based on the offset location of the lug, witnesses indicated that when the door was lifted and free hanging, the bottom of the door was kicking out approximately 9 inches away from the tank. However, based on the center of gravity of the door and the lug offset, the calculated kick out would have been approximately 13 inches. As the door was lifted into position to butt up against the flange on the tank, the workers installing the door had to push against the bottom of the door to make the door flush with the flange so that it could be bolted into place. The lug failed before the crew was able to install the first bolts. At the time of failure, it is likely that the door was near vertical, because when it hit the ground it fell backwards on the victim, rather than toward the tank, since the center of gravity of the door was biased toward the outside face containing the extra stiffeners.

As indicated above, when the door was in the near vertical position the loading was applied perpendicular to the plane of the lug rather than parallel, where it would have been much stronger. At the time of failure, with the door near vertical, the welds on the lug were subjected to two types of stress, shear and bending. The bending stress was the predominate stress and it was caused by the bending moment on the lug. The bending moment[2] is equal to the force applied perpendicular to the plane of the lug times the eccentric distance from the point of contact with the shackle to the welds at the base of the lug. The force was equal to the 2,620-pound weight of the door. The eccentricity (e) was taken as 3.625 inches for the condition when the screw pin was bearing on the inside lip of the lug. However, when the door was pushed vertical, the eccentricity would have increased because the screw pin would have rested on the side of the lug at the bottom of the U-shape of the lug, rather than just the inside lip. The bending moment on the lug using an e of 3.625 inches was 9.5 kip-inches. This moment was more than twice the yield moment of 4.5 kip-inches and was also greater than the plastic moment capacity on the lug, which was 6.75 kip-inches[3]. The plastic moment defines the ultimate capacity of the lug. The actual stress on the lug was well

[2] Bending moment is expressed in units of force-distance.

[3] This value was calculated based on yield strength of 36 ksi for A36 steel.

above the 36 ksi minimum specified yield strength of the A36 lug metal. The AISC[4] steel design code states that the allowable stress should have been limited to 75% of the yield strength or 27 ksi for plates. Therefore, the lug had been loaded well beyond its design capacity.

Lug Testing

A metallurgical evaluation of the failed lug and welds was conducted by MATCO Services, Inc. (MATCO), a company specializing in metallurgical evaluation and testing. In addition, MATCO subcontracted load testing of the intact lug from the bottom of the door to TUV Rheinland. With respect to the lug that failed during the accident, MATCO found a large amount of black slag at the root location of the weld in the gap that existed between the angle and the lug. This indicates that the surface was not flush when the lug was welded to the angle. They also found corrosion on the angle surface in the gap. MATCO stated that the ends of the lug had a dark grooved profile from torch cutting and were inclined at an angle to the flat surface of the steel angle. The fractures in the welds at the base of the lug did not exhibit mechanical damage or corrosion subsequent to the failure. They found that the lug was partly undercut by the welding process, particularly the top weld on the left side of the door. The fractures exhibited ductility (i.e., stretching) and they initiated at the bottom side of the lug. The width of the fractures varied due to the variation in the size of the weld bead. The fracture portions were light gray, and these represented the only areas where the lug was attached to the angle and where the weld could carry load (photos 5 and 6). The portions with lack of weld fusion to the base metal of the angle were darker and smoother. The welds on the bottom side of the lug were found to be the most discontinuous across the width of the lug. The total area of light grey fractures on the bottom (tension) sides of the two legs measured 0.124 inches^2. In addition, MATCO found internal gas porosity, particularly near the ends of the welds.

MATCO conducted ultrasonic and radiographic inspection of the intact lug assembly prior to testing. The inspections revealed some slag, undercutting, and porosity in the welds. They also conducted Knoop microhardness measurements on the original failed assembly, including: the lug base metal, the angle base metal, the first and second weld passes, and the heat affected zones (HAZ) of the lug and angle. The averages of the microhardness measurements were then converted into equivalent ultimate tensile strengths. Table 1 is a summary of the strengths.

Table 1- Ultimate Tensile Strength Measurements

Component	Ultimate Tensile Strength (psi)
Lug	70,066
Angle	82,300
HAZ Lug	110,600
HAZ Angle	89,300

[4] AISC is an acronym for American Institute of Steel Construction

Weld First Pass (6010 rod)	83,000
Weld Second Pass (7018 rod)	116,000

At the time of the failure, the lug was being side loaded in a bending manner. As such, the bottom welds were being loaded in tension and the top welds were being loaded in compression. The bottom side welds failed through the first pass of the weld (i.e., the weaker pass) and the failure occurred within the footprint of the lug. The fractures occurred solely within the weld metal on the bottom side of the lug. Although the lug had a lower ultimate tensile strength than the weld metal, the weld was the weakest component because of its smaller effective resisting area. This smaller area was a result of the irregular weld size and a lack of continuous fusion to the base metal of the angle.

The intact lug from the bottom of the door and a section of the bottom stiffening angle were cut off and tested at TUV Rhineland (photo 7). The testing replicated the loading type and direction of the failed assembly in service. During the testing, the lug deformed and the bottom welds cracked, but the lug did not separate (photo 8). The maximum load sustained was 3,330 pounds when the welds fractured. The surfaces of the weld fractures were similar to the surfaces of the welds that failed when the accident occurred. However, MATCO noted that the area of the weld failures appeared greater than that of the lug involved in the accident. This likely explains why the tested connection was able to sustain a larger load.

The fractured lug involved in the accident was 4-7/16 inches tall on the face that would have been closest to the bottom of the door and it was 4-1/2 inches tall on the top face. In comparison, this was shorter than the intact lug, which was 4-3/4 inches tall. The fractured lug fillet welds were 1/8 to 5/16 inches wide along the bottom face of the lug and 1/8 to 1/4 inches wide along the top face. In comparison, the intact lug welds were wider and therefore stronger varying from 1/4 to 3/8 inches wide on the bottom and top faces.

Weather

The weather on the day of the accident was partly cloudy, 52 degrees Fahrenheit, and a NE wind at 7 MPH. The weather was not considered to be a factor in the accident.

TRAINING AND EXPERIENCE

Jerry L. McClelland had 19 years of experience and had been a supervisor for approximately 17 years. A representative of MSHA's Educational Field and Small Mine Services reviewed McClelland's training records and found his training to be in compliance with 30 CFR Part 48 requirements.

ROOT CAUSE ANALYSIS

Investigators conducted a root cause analysis to identify the underlying causes of the accident. Listed below are the root causes identified and the corresponding corrective actions implemented to prevent a recurrence of the accident:

Root Cause: Management failed to ensure miners stay clear of suspended loads while conducting work activities requiring items to be hoisted or swung into place before being secured.

Corrective Action: Management established safe work procedures to be followed when persons work near suspended loads. All persons working near suspended loads were provided training regarding these procedures.

Root Cause: Management failed to ensure proper rigging procedures were followed when lifting heavy loads.

Corrective Action: Management established safe procedures to be followed when rigging loads prior to lifting. All persons involved with rigging a load were provided training regarding these procedures.

Root Cause: Management also failed to ensure the lug and welds were not used beyond the design capacity intended by the manufacturer where such use created a hazard to persons.

Corrective Action: Management established safe procedures to be followed when rigging loads prior to lifting. All persons involved with rigging a load were provided training regarding these procedures.

CONCLUSION

The accident occurred due to management's failure to ensure miners stay clear of suspended loads and that adequate rigging was in place before hoisting was initiated. The victim was standing in front of the suspended door when the lifting lug broke causing the door to fall, striking him.

As installed, the lug was undersized for lifting the 2,620-pound tank door. The lug should not have been side loaded. The lug was stressed beyond its yield strength and almost to its fracture strength. Although the lug was being used beyond its design

capacity, the door fell because the welds attaching the lug to the door stiffener were undersized for the stress caused by the side loading condition. Further, the welds were irregular in shape and contained defects, such as lack of fusion, porosity, and undercutting, which adversely affected the weld's capacity.

ENFORCEMENT ACTIONS

Issued to Alcoa World Alumina LLC

Order No. 8856251- Issued on November 18, 2014, under the provisions of section 103(j) of the Mine Act. An Authorized Representative modified this order to section 103(k) of the Mine Act upon arrival at the mine site.

> This action is due to a fatal accident that occurred at this operation on November 18, 2014, when a 2620 pound door fell from a suspended load and struck a miner. This order is issued to assure the safety of all persons at this operation. It prohibits all activity in the Digestion R40, 35A2 Filtrate tank area. The mine operator shall obtain prior approval from an authorized representative for all actions to recover and/or restore the affected area.

The order was terminated on December 24, 2014, after conditions that contributed to the accident no longer exist.

Citation No. 8778933 - Issued under provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.14205:

> *A fatal accident occurred at this operation on November 18, 2014 when the lifting lug on the 2,620 pound filtrate tank door failed as it was being moved into its final position. At the time of the failure, the lug was being side loaded in a bending manner. As such, the bottom welds were being loaded in tension and the top welds were being loaded in compression. Both the lug and the fillet welds attaching the lug to the door were undersized for this orientation of loading. The welds contained defects that further reduced their capacity. In this lifting configuration, the lug and the undersized defective welds were being used beyond their design capacity. During the lift the welds suddenly failed resulting in fatal injuries to one of the miners positioning the door.*

Citation No. 8778946 - Issued under provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.16007(b):

A fatal accident occurred on November 18, 2014, when a lifting lug welded to the door failed, allowing an approximate 2600 lb. door to break free of the rigging, crushing a miner below that was attempting to secure the door to the filtrate tank. The lifting lug had been installed on the door earlier to facilitate painting. The door was hooked to the rigging using a clevis through a bolt hole in the door. Once the door was swung into place and set down beside the tank, the crew unhooked from the bolt hole and re-hooked to the lifting lug.

Issued to Turner Industries Group LLC

Citation No. 8778947- Issued under provisions of Section 104(d) of the Mine Act for a violation of 30 CFR 56.16009:

A fatal accident occurred on November 18, 2014, when a Superintendent was struck by a suspended door (weighing approximately 2600 pounds) during the installation to a filtrate tank. The victim and coworkers were attempting to align the suspended door. As they were maneuvering it in place, the lifting lug welded to the door broke off, causing the door to fall to the ground crushing the victim. Management engaged in aggravated conduct constituting more than ordinary negligence in that they were directly supervising and participating in the task. This violation is an unwarrantable failure to comply with a mandatory safety standard.

Citation No. 8778934 - Issued under provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.14205:

A fatal accident occurred at this operation on November 18, 2014 when the lifting lug on the 2,620 pound filtrate tank door failed as it was being moved into its final position. At the time of the failure, the lug was being side loaded in a bending manner. As such, the bottom welds were being loaded in tension and the top welds were being loaded in compression. Both the lug and the fillet welds attaching the lug to the door were undersized for this orientation of loading. The welds contained defects that further reduced their capacity. In this lifting configuration, the lug and the undersized defective welds were being used beyond their design capacity. During the lift the welds suddenly failed resulting in fatal injuries to one of the miners positioning the door.

Citation No. 8778945 - Issued under provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.16007(b):

A fatal accident occurred on November 18, 2014, when a lifting lug welded to the door failed, allowing an approximate 2600 lb. door to break free of the rigging, crushing a miner below that was attempting to secure the door to the filtrate tank. The lifting lug had been installed on the door earlier to facilitate painting. The door was hooked to the rigging using a clevis through a bolt hole in the door. Once the door was swung into place and set down beside the tank, the crew unhooked from the bolt hole and re-hooked to the lifting lug.

Issued to Fluor Corporation

Citation No. 8778932 - Issued under provisions of Section 104(a) of the Mine Act for a violation of 30 CFR 56.16009:

A fatal accident occurred on November 18, 2014, when a Superintendent was struck by a suspended door (weighing approximately 2600 pounds) during the installation to a filtrate tank. The victim and coworkers were attempting to align the suspended door. As they were maneuvering it in place, the lifting lug welded to the door broke off, causing the door to fall to the ground crushing the victim.

Approved: _____ Date: 8/2/15

Michael A. Davis
District Manager

Appendix A

Persons Participating in the Investigation

Alcoa World Alumina LLC

Kelly Grones	Health and Safety Manager
Warren Matous	Safety Coordinator and Plant Protection

United Steel Workers of America, Local 4370

Carlos Delgado	Miners' Representative
Kevin McNary	Miners' Representative

Vinson & Elkins

Christopher V. Bacon	Attorney for Alcoa World Alumina LLC

Jones Walker

Patrick J. Vetters	Attorney for Turner Industries Group LLC

Mine Safety and Health Administration

Mark J. Williams	Supervisory Mine Safety and Health Inspector
Lance Miller	Mine Safety and Health Inspector
Willie D. Gill	Mine Safety and Health Specialist (Training)
Terence M. Taylor	Senior Civil Engineer

Appendix B

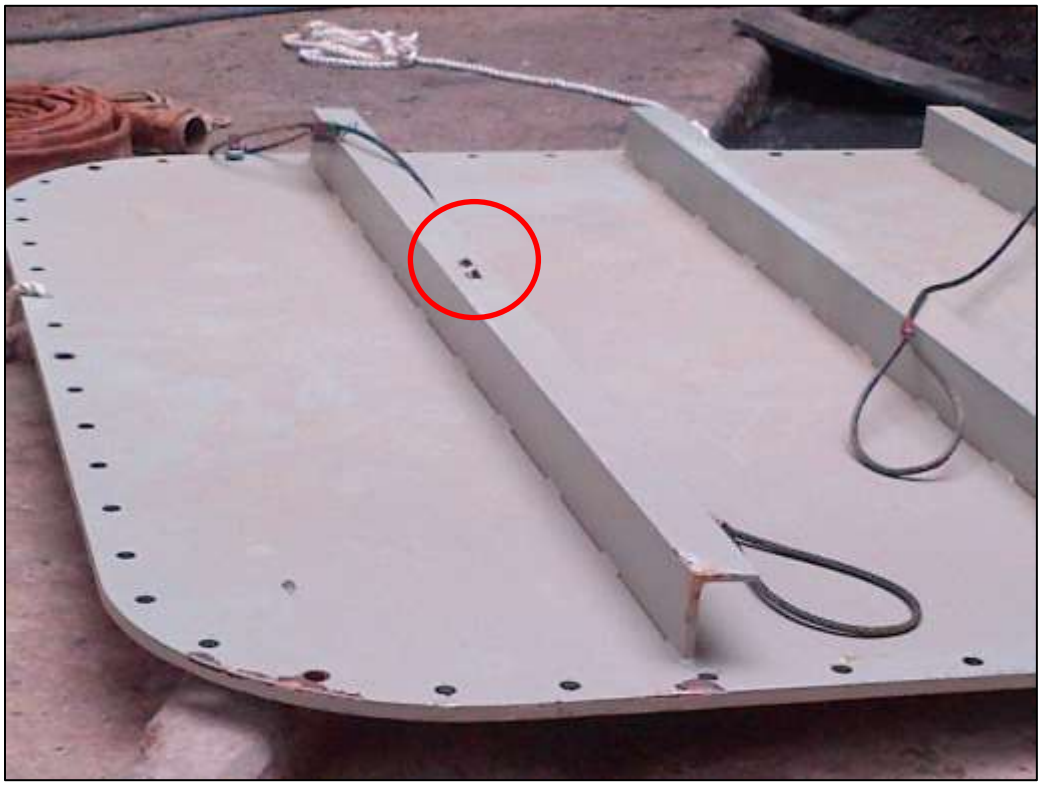

Photo 1 – Tank door with stiffeners and bolt holes around the perimeter. Circled location is where the top lifting lug was attached prior to failure.

Photo 2 – MATCO photo of the bottom face of the failed lifting lug.

Photo 3 – MATCO photo of Crosby ¾-inch screw pin shackle. Rated working load limit of 4-¾ tons.

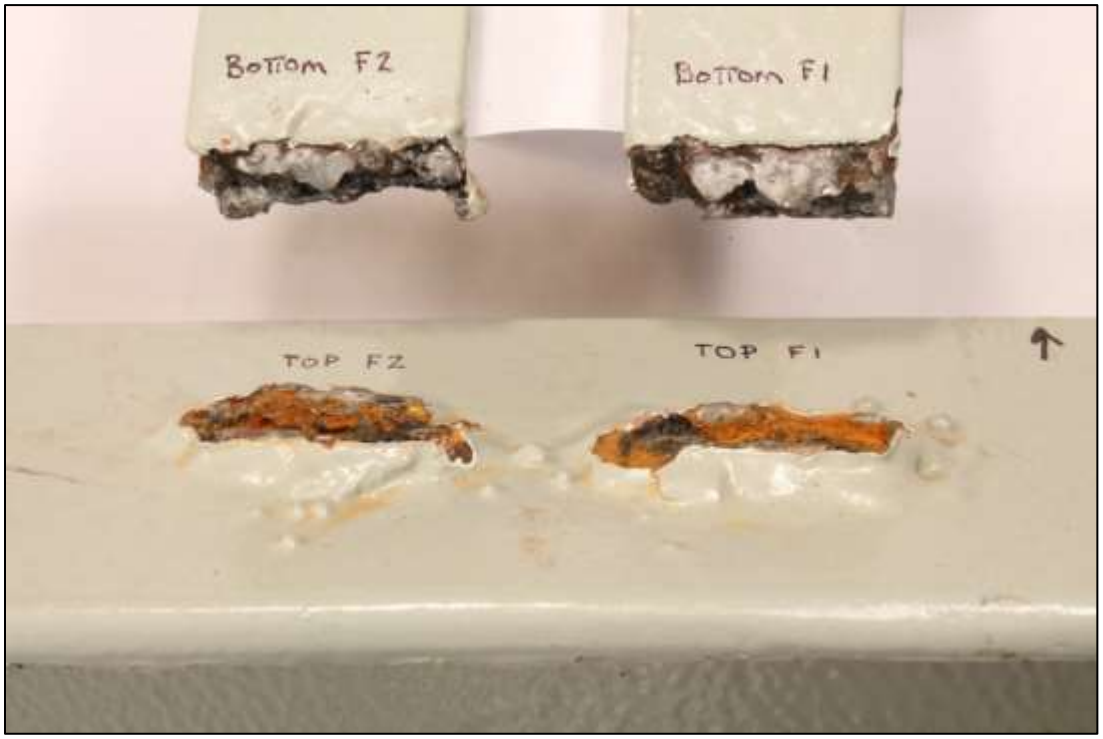

Photo 4 – MATCO photo of fractures at the bottom of the left and right legs of the lug and the mating fractures on the top of the stiffening angle. Note light gray (shiny) fracture areas on the lug were the only portions of the bottom weld that adequately fused to the angle. The bottom face lug welds were subjected to tension loading.

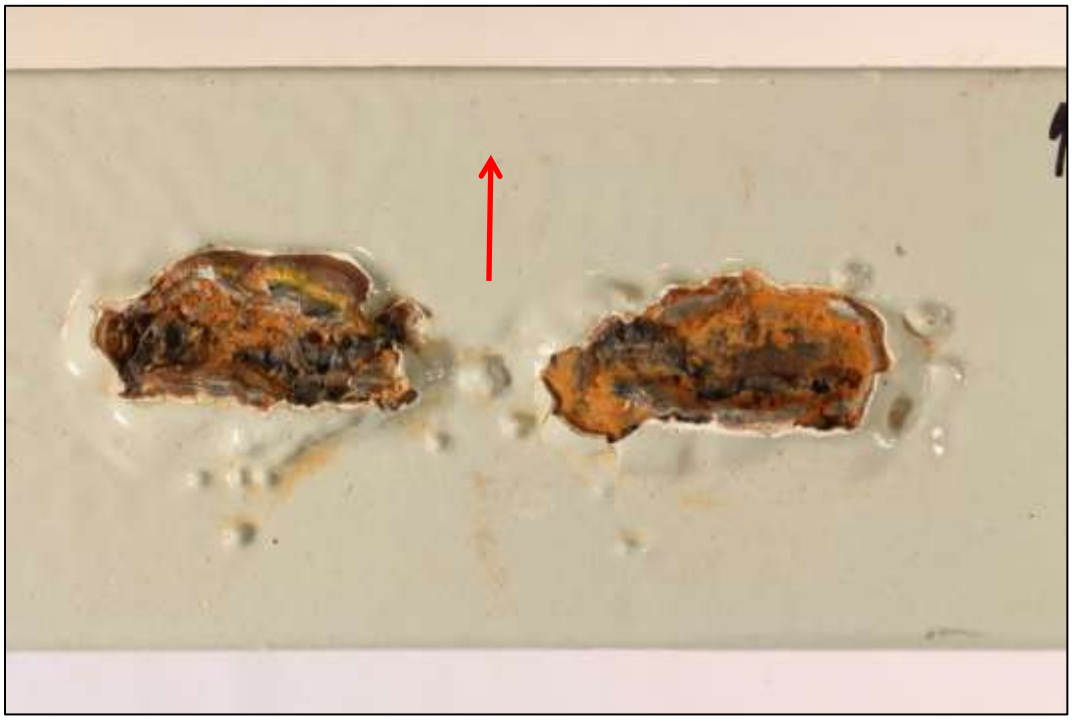

Photo 5 – MATCO photo of fractured welds on tank door stiffening angle. Arrow points to the top of the door.

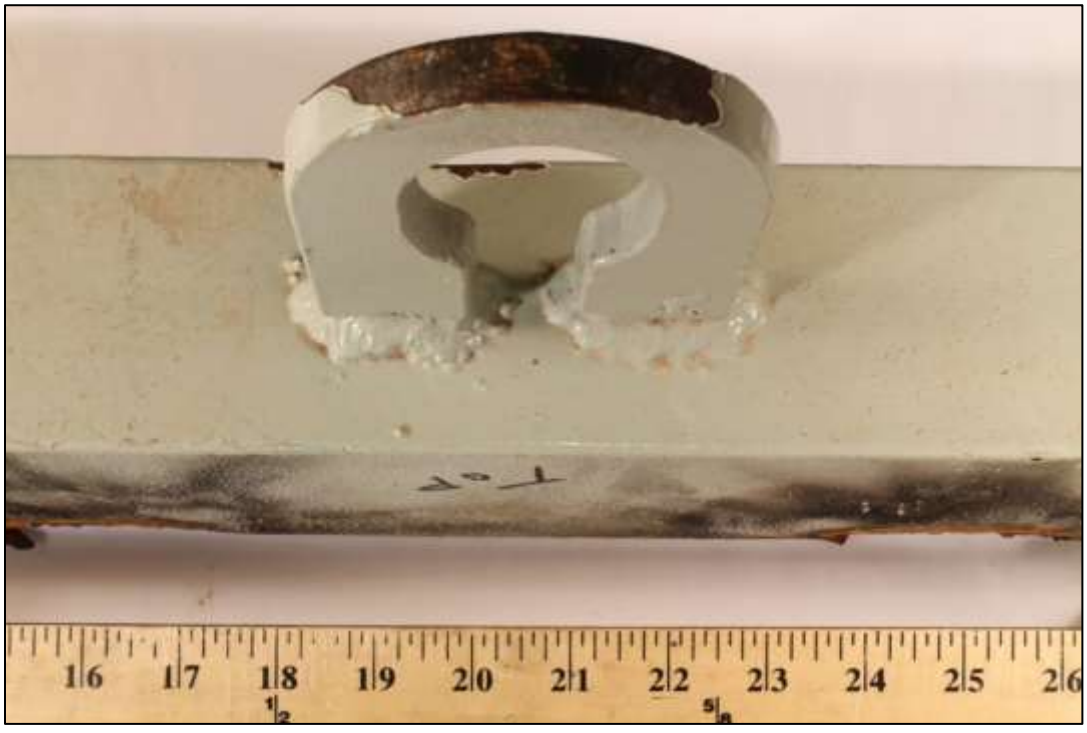

Photo 6 – MATCO photo of removed intact lug showing fillet weld connection to the stiffening angle. This lug was near the bottom of the door and was not being used when the accident occurred. Arrow points in the direction of the top of the door.

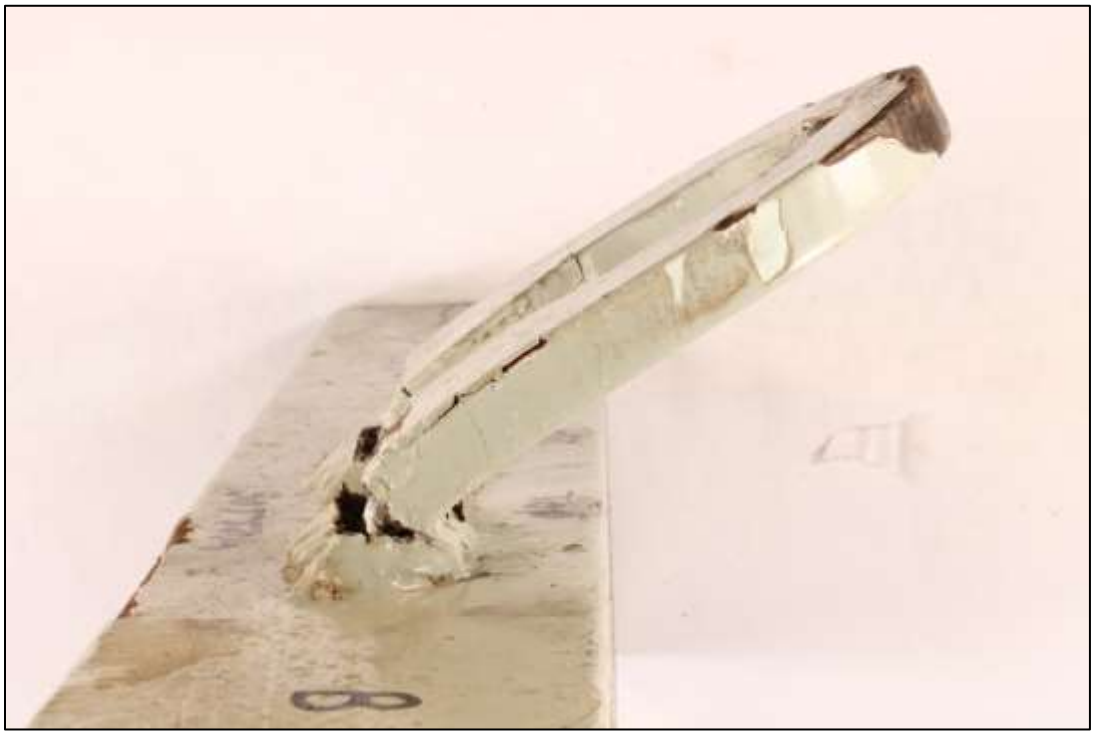

Photo 7 – MATCO photo of deformed shape and fractures after the intact lug was tested at TUV Rheinland. The arrow points in the direction of the top of the door

Appendix C

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Degree of Injury:
Jerry McClelland	*M*	*44*	*01 Fatal*

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 11/18/2014 b.Time: 13:05	*a. Date: 11/18/2014 b.Time: 7:00*

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
049 Job site supervisor	*087 Supervise and help*	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	*19*	*23*	*3*	b. Regular Job Title:	*8*	*0*	*0*	c. This Mine:	*0*	*13*	*0*	d. Total Mining:	*0*	*13*	*0*

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
069 Welded padeye broke off	*170 2620 lb steel door fell on victim*

13. Training Deficiencies:
Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

14. Company of Employment: (If different from production operator)
Turner Industries
Independent Contractor ID: (if applicable) *HPQ*

15. On-site Emergency Medical Treatment:
Not Applicable: | First-Aid: X | CPR: X | EMT: X | Medical Professional: | None:

16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim: *9999* *None (No Union Affiliation)*