



Incident Investigation Report

1. Location & Date of Incident: Goose Creek, SC – January 2, 2014
2. Personnel involved: Will Doerting, Justin Mounts, Dave Parry (working on opposite shift, not present at time of incident)
3. Incident as reported: Burner was set up on a stand with nozzle/cone inserted into a melter opening with an automated sliding door able to move up and down on a cable. Burner was chained to the door. This door was opened enough at the bottom to allow burner access. Before job start, Will and Dave spoke with plant contact to find out if there was a lockout system in place to de-energize the door while they were heating the melter. They were told that there was no lockout system to de-energize the door and that it was not necessary in order to proceed, so they went ahead and began firing.

[Note: All forklift drivers in the plant are given remote controls by which they are able to move melter doors up and down so that when the melter is in operation, they can quickly open the door, drop in their load of aluminum, and then close the door again.]

During night shift a few days into the job, a plant forklift driver in the vicinity was pushing buttons on his remote, and inadvertently closed the door on the operating burner. The weight of the door squashed the burner cone, which caused the bolts holding the cone to the burner body to break, separating the body from the cone. The cone was then forced out of the melter with the pressure from the door's weight. The burner body, still attached to the melter door, continued to fire, facing downward at the floor.

Both Will and Justin were watching the recorder on the opposite side of the melter when the burner came out, so they did not see it occur. However, they immediately noticed the drastic decrease in temperature from the three thermocouples in the vessel, and walked over to where the burner was firing to investigate the problem.

Seeing that the burner was firing at the floor, Will immediately shut off the gas on the 'T' to which the burner was directly linked, thus cancelling the burner operation.

4. Injuries: none
5. Property damaged: One roll of thermocouple wire linked to TC#3 was burned up when the burner came out of the furnace and flipped around.



Incident Investigation Report

6. Remedial Action: Gas 'T' going directly to burner was shut off. Burner was put back in place and restarted 1.5 hours later after electrician came and remade electrical connection as the fuse for the blower had blown at the same time.
7. Prospective Long Term Solution/ Procedural Change: Use this instance as an educational awareness tool for technicians to relay the importance of lockout procedures when automated systems could potentially affect the vessel they are working to heat.
8. Reported by:

Kari Evelyn, January 8, 2014,
Printed Name, Date & Signature

Kari Evelyn

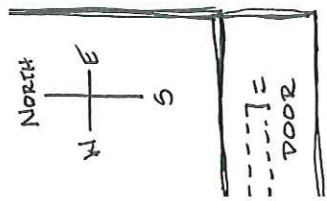
9. Reviewed By:

Printed Name, Date & Signature

Printed Name, Date & Signature

10. Document Revisions:

11. Attachments: (Facility Report/Photographs/Medical report)

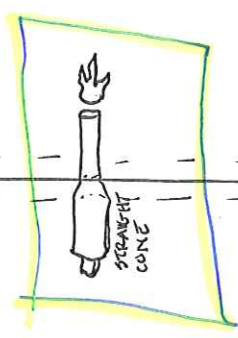


30 AMP
ON EXTERIOR WALL
~250 FT FROM BLOWER

← 40 FT →

#5 MELTER

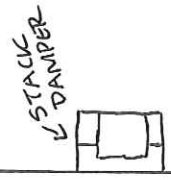
TC #1 ONE



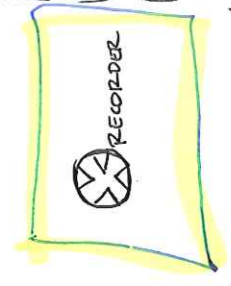
TC #3

TC #2
INSERTED
VIA TAP
HOLES ON
NORTH SIDE
OF MELTER

↑ 30 FT
O.A.L. ↓

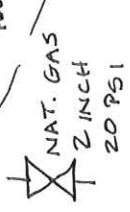


BLACK BLDG.

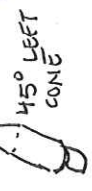


40 FT
FROM
BLOWER

460 V

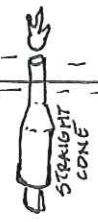


~20 FT FROM
CORNER OF
MELTER



TC #5

TC #4



INDUSTRY SERVICES @ JN ALUMINUM
GOOSE CREEK, SC
#5 MELTER
D. PARRY, K. COLWELL / W. DDERING, J. MOUNTS
DRAWING BY W. DDERING - JAN 1, 2014

HOTWORK

Log Sheet

JAN 1, 2014

Date ~~Dec. 31, 2013~~

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CUSTOMER Industry Services @ JW Aluminum

SITE Goose Creek, SC

TANK OR UNIT #5 Melter

OPERATORS D. Perry, K. Colwell / W. Doerting, J. Mounts

TIME	RATE o/h	TARGET	THERMOCOUPLE(s)				
			#1 Melter (South Side)	#2 Melter Ramp (South) L.	#3 Melter Ramp (North) R.	#4 Melter North Chamber	#5 Melter External Well
0100	+50°f/hr	600	368	598	475	597	211
0200		650	403	650	517	652	219
0300		650	424	660	528	646	265
0400	+100°f/hr	650	430	658	529	651	261
0500		750	483	751	590	748	238
0600		850	443	713	582	842	126
0700 30		1000	523	966	757	1068	123
0800 30	Hold	1000	678	1007	803	992	162
0900		1000	696	997	787	995	170
1000		1000	709	998	811	1007	428
1100		1000	740	1006	828	1015	468
1200		1000	767	1004	837	1007	492
1300		1000	773	1003	839	1002	487
1400		1000	794	1013	861	1009	546
1500		1000	809	1013	869	1004	610
1600			823	1009	880	1005	694
1700			828	1012	878	1009	760
1800			827	1002	871	1004	810
1900			829	1014	876	1017	826
2000			836	1014	875	1008	846
2100	+100°f/hr		850	1017	895	1008	846
2200		1100	915	1094	967	1107	847
2300	Hold	1200	380	755	548	1190	893
2400		1200	582	1137	741	1202	896

HOTWORK

Log Sheet

Date JAN 1, 2014

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CUSTOMER INDUSTRY SERVICES @ JW ALUMINUM

SITE GOOSE CREEK, SC

TANK OR UNIT MELTER #5

OPERATORS D. PARRY, K. COLWELL / W. DOERTING, J. MOUNTS

TIME	RATE °/h	TARGET	THERMOCOUPLE(s)				
0100	@ 02:10	- REALIZED	TC HAS	TIP WAS BURIED UNDER RUBBLE + ALUMINUM			
0200			IN	CORNER OF THE EXTERNAL WELL			
0300		- MOVED IT TO	THE CENTER				
0400	@ 05:25	- WAS DEALING W/ MELTER #3 BURNER PULL					
0500		- CAME BACK TO 5 AND BLOWER IS DEAD IN					
0600		MAIN CHAMBER					
0700		- LOST POWER - PROBABLY FORKLIFT / CORD DAMAGE					
0800	@ 05:57	- RELIT BURNER					
0900	@ 06:45	lost power to blower again					
1000	@ 07:20	Relit.					
1100	@ 07:30	Spoke to Alan from Industry Services, he told me to hold					
1200		@ 600°f due to his concerns about the amount of plastic					
1300		burn in the dividing wall between the two halves of the					
1400		melter. I told him we were pretty much up @ 1000°f, he					
1500		said that was fine and to hold it @ that for 12 hours.					
1600		He also asked me to ask the plant to put one of					
1700		their "pencil" burners in the charge well as we're not					
1800		getting any heat in this area. Note- there's no new material					
1900		in the charge well.					
2000	@ 9:30	Plant found an electrical supply in the control room that was 30amps					
2100		so I placed another burner in the charge well. lit off @ 450, will					
2200		let it sit for a few hours then bring it up @ 50°f/hr					
2300	@ 22:20	- PLANT FORKTRUCK DRIVERS HAVE REMOTES THAT OPERATE ALL FURNACE					
2400		DOORS. ONE OF THE OPERATORS ON THE OTHER END OF THE PLANT					
		WAS F*CKING AROUND + CLOSED THE MAIN MELTER DOOR					
		ON OUR BURNER. SNAPPED THE CONE OFF AND DROPPED THE					
		BURNER OUT OF THE FURNACE. ONE T.C. WIRE WAS BURNED ^{B3TC}					
		UP. AT THE SAME TIME, THE FUSE FOR THE BLOWER GAVE					
		OUT AGAIN. WAITING ON PLANT ELECTRICIAN NOW.					
	@ 23:40	- FINALLY RELIT BURNER AFTER DEALING W/ ELECTRICIAN					

OVER