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I. Executive summary

The planned outage was completed at a cost of \$-----and required 19 days of downtime for Fuel yard and Boiler Outage. There was one safety incident with contractor working in fuel yard and no environmental incidents. All work and findings were routine with the exception of the following issue. The findings, which are warranty issues with the Siemens Turbine, will require further work in the April 2016 outage.

II. Detailed Information

A. Boiler (see attachment)

B. Turbine Generator

1. Minor Inspections

Roof Prep & Turbine Cap Removal

The roof of the turbine building had to be dismantled to access the turbine cap for removal. All hard electrical conduits had to be removed and replaced with flexible conduit for easy access in the future. All piping that was in the way for cap removal access had to be cut and flanged for future access. The top half of the turbine was pulled for piston ring / volute inspection which was found to be in excellent condition. The CV, guide pin was replaced with new one. Turbine cap was cleaned and placed back on; all insulation that was removed was inspected and all replaced with new. Preformed controls checked out by Siemens controls engineer and IC/E Techs. At this time 6/4/ 2015 we have not received the final report from Siemens. Warranty issues are still on going and should be resolved in April 2016 outage

Roof removal for Turbine work



Siemens Turbine work





2. Warranty Work

Generator Output Oscillation-Warranty

Please note that following information is preliminary. (Still waiting on Siemens Final Report.)

Oscillation at full power:

The Power/Pressure oscillations are still there but according to the operators there is a significant improvement from before. This might be because it was an offset between the MOOG balance point and the set point in the Logic before.

I don't think you can eliminate the oscillation with the control system. I do however think that you can tune the control system to make some reduction of the oscillation. This will require a couple of days with a Commissioning Engineer running the turbine at full load. Should be schedule for April -2 - 2016 outage.

Speed reading:

MAB10CS015 is not working properly. The correct speed is registered by the Over speed card and can be seen in the Bentley software. The Tachometer card output does not give out pulses at turning gear speed and the I pulse repeater diode is not flashing but gives a fix light at turning gear speed (MAB10CS005/010 tachometer card gives out pulses and pulse repeater diode is flashing). The input in PCS7 indicates zero speed with no faults but of course alarm for signal deviation.

In addition to this sometimes the speed disturbance alarm activates on MAB10CS005

These two reasons is likely to be the cause of the quick closing of the CV that GREC has experienced.

The tachometer card on MAB10CS015 has been exchanged by customer.

There is a firmware difference between the tachometer cards. MAB10CS005/010/015 5.35/5.39/5.41

There is a stationary computer with network connection to the rack. The Serial connection we “normally” use at Siemens is blocked for downloading software to the rack.

The following can be the cause of the MAB10CS015 problem:

The back end of the Tachometer card is not matching the 3500/50 card (according to Siemens instruction they need to match).

The tachometer card that is in the Bentley rack today is not provided be Siemens (I think Siemens special order cards from GE, I will confirm in report)

There is a firmware difference between the cards.

A. Fuel Yard

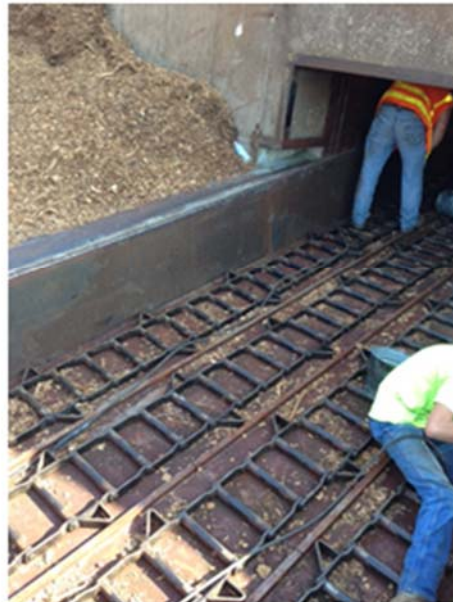
Inspections of fuel chutes findings were done and most all showed wear in impact areas. The under pile # 2 had the worst wear on both sides of bin. Skirtings' were replaced on all drop points and most of them had wear. All wear areas got AR 400 plate. Inspected all tripper bays, findings were good. Modified the chain guards on the oil bath system all three bays due to wear on bottom half's of guards. Seventy five impact rollers were replaced, and the bearings and shalt were replaced on # 5 take up

pulley. Replaced all sprockets and chain on # 1 & #2 chain feeders due to wear. All impact rollers were replaced on belt # 13 on the reclaimer. Inspection findings on the reclaimer found the wear plate on the reclaimer chute was worn out. Had plate rolled and changed out to AR-400. All oil in all the fuel yard gear boxes was change out. All three electro magnets had oil change out due to oil derogation. From inspections we decided to change out the hammers and belts on # 2 hog. Inspected # 1 hog, all in good shape. Change out all bags in # 1 dust collector and opened up the rotary air-lock. Changed seals and bin paddles, and oil change on the gear box also. Changed all bags in # 2 dust collector, and inspected. Changed all bags in # 3 dust collector and inspected, housing in bad shape due to excessive moisture issues. Drained and cleaned out the binding agent water tank.

#2 Underpile worn through



#2 Underpile, installation of wear plate



Rollers removed from #4 belt



#4 conveyor belt new rollers

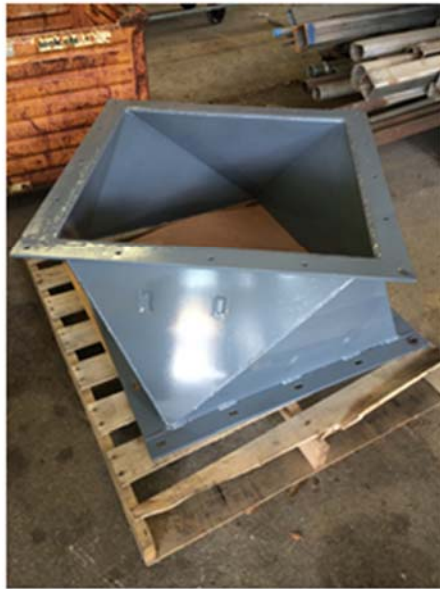


#10 conveyor chute removal



Chute full of patches

#10 chute, new piece #1, with Tricon hard plate



#10 chute, new piece #2, with Tricon hard plate



#9 conveyor side plates removed for replacement, both sides



B. Balance of Plant

Work Order #	Description	GREC Hours	Contractor Hours
WO-14-2375	FHS Replace conveyor rollers in fuel yard	90	
WO-14-0498	FHS Rollers tail end of stacker conveyor, skirting,scraper	80	
WO-15-0669	Semiannual hydraulic system filter change	10	
WO-15-0732	FHS Hyd pump tank bay 2 leaking sight glass	12	
WO-15-0480	FHS Replace hammer tips,shear bar,drive belts #2 Hog	80	
WO-15-0781	FHS #5 conveyor take-up shaft damaged	10	
WO-15-0481	FHS Replace sprockets and chain #1,#2 Chainfeeder	80	
WO-15-0077	FHS Electro magnet oil change all 3 magnets	20	
WO-15-0483	FHS PM #1 magnet belt	8	
WO-14-2619	FHS dust collector #1, change bags and cages	150	
WO-15-0517	FHS drain and clean binding agent water tank	20	
	ZDS Inspection and Maintenance	560	
WO-15-0973	RO Caustic lines check valves	36	
WO-14-2910	FLG Seal Baghouse dampers	12	
WO-14-2234	EHA GSU Transformer Casing Leak	20	
WO-14-2902	BLR Terminate new MOV Valve on 7th floor	20	
WO-14-2823	FCS Check slip rings on both fuel silos	20	

WO-15-0739	FHS #2 dust collector rotary airlock and bag replacement	120	
WO-15-0478	FHS ringspann coupling replacement	80	
WO-15-0579	Annual Economizer Ash Conveyor Maint and Inspection	20	
WO-14-2844	SBS #43 sootblower check for alignment	8	
WO-15-0716	ZDS Pump oil changes, Bullseye install	20	
WO-15-0740	FHS Repair chutes and leaks per work order list	160	
WO-15-0514	ZDS Discharge line on vapor comp. Expansion joint ordered	36	
WO-15-0543	ZDS Pillow Block Bearing needs replacing belt press	20	
WO-15-0721	SHP - AUX STEAM SUPPLY PIPING DRIPPING WATER, 6TH FLOOR NORTH SIDE	20	
WO-15-0482	AHS Replace hose to fly ash equalizing valve	8	
WO-15-0484	Install permanent ground to Generator shaft	30	
WO-15-0959	BSS Metso Analog input card 2-12 losing data	36	
WO-14-2831	SHP ZDS Double block and bleed install x 2	10	
WO-15-0547	FGS Relief valve is leaking on gas main	10	
WO-15-0181	CNS-FBV-1110-30 Curtain spray block valve not working from DCS	10	
	CND Water discharge from vent on Steam Air Ejector, possible steam trap issue	10	
WO-15-0202	BFW Check valve pressure seal is leaking	10	
WO-15-0759	SBS Soot Blow steam MOV leaks by	10	
WO-15-0810	BSS Packing needs replaced	5	
WO-15-0811	CND North holding ejector dripping water, steam coming out vent	10	
WO-15-0809	FWH feed water heater #2 leaking steam from west end	10	

WO-15-0812	BFW feed water recirc packing leaking	5	
WO-15-0813	SHP Needs packing or valve replaced	5	
WO-15-0814	SHP Drain ISO valve packing needs replaced	5	
WO-15-0126	RWS Deep well pumps A&B, auto prime not working in logic.	20	
WO-15-0782	DMN Valve showing no flow until 20% open	20	
WO-15-0170	BLR-TI-1005-20G EXTERNAL FAULT ALARM. Reading 2433 degrees, Need to replace thermocouples in boiler bed	10	
WO-15-0516	FWH Heat Exchanger gasket leaking	20	
WO-15-0512	FWH Flow block valve air line leak	10	
WO-14-2407	FWH-TI-1106-20 Visible Steam near Thermo well	10	
WO-15-0199	Substation battery charger communication failure to DCS	90	
WO-15-0771	CND Relocate steam trap for accessibility,CND-AE-1002	10	
WO-15-0247	BC Terra alba gypsum, re-seed BC with 3500 Lbs	10	
WO-14-1901	SIS Dos Circuit Breaker fail alarm in	20	
WO-14-1302	DMN Make-up pump not reading properly	10	
WO-14-2593	CNS fwh lp-1 lvl c transmitter reading low	10	
WO-14-0204	EMA sst common alarm back in, Sudden Pressure	90	
WO-15-0207	FGR insulate lube oil pipes	20	
WO-15-0208	FGR fan inlet dampers not reading the same	10	
WO-15-0553	AIR Tie in ZT22 air compressor lines	16	
WO-15-0333	2 Year Generator Step-Up Transformer Maintenance	20	

WO-15-0664	Annual Generator Step-Up Transformer Maintenance	20	
WO-15-0339	Annual Insp. And Clean of Intermediate Voltage Switchgear	90	
WO-15-0398	Annual Control valve calibration	40	
WO-15-0990	Install SS Braid hoses where designated	57	
WO-15-0671	Semi-annual MOV Actuator and Valve Maintenance	100	
WO-15-0403	Annual Transformer inspection	20	
WO-15-0404	Annual PLC inspection	20	
WO-15-0420	Semi-annual Silo Maint and inspection	8	
WO-15-0433	Annual Fan maintenance and inspection	40	
WO-15-0425	Annual motor testing and thermography	20	
	AVP Valve Repairs		250
	Meyers Sterner		108
	Custom Quality Scaffolding		973
	Florida Mechanical Crane (two cranes)		217
	Preston Link Electric		486
	Taylor Industrial Construction		1819
	Southern Power Systems		125
	Thompson Industrial Vacuum (does not include Silo)		185
	Veola Industrial Hydroblasting, Chemical Clean		148
	Milton Insulation		150
	Siemens Tech		30

	Fuel Yard Operators (GREC)	1020	
	GREC Hours / Contractor Hours Totals	3717	4491
	Grand Total	8208	

1. Large Motors & Switchgear

Performed motor circuit evaluation offline motor testing; Equipment tested was ID Fan motor, PA Fan motor, SA Fan motor, FGR Fan motor, Feed Water Pumps motors A & B. Performed Infrared Thermography for all 480 volt motor controllers and breakers that were in service with current load in MCC/PDC rooms .There were no problems found while testing motors, all test data is within specs for motor tested. Worked annual PLC PM Inspections; Worked annual transformer PM inspections ; Worked annual generator step- up transformer PM; Worked 2 year generator PM inspection; Worked EMA SST common alarm back in, Sudden Pressure . Cleaned all MCC/PDC rooms.....Checked the slip rings on both fuel silo's A &B. Repaired GSU Transformer casing oil leak.

**EHA GSU TRANSFORMER CASING LEAK,
Leak #1 -- NW corner**

Before:



After (two days later):



Leak #2 – SE corner

Before:



After (two days later):



2. Safety Valves & Misc. Control Valves

Performed safety valves inspections and tested after unit came on line. Worked all valve listed in MP2 for outage, 26 total. (2) SHP-TCV -1640-20 & 1639-20 Hammel: 2" Model V522JRC262ED9 S/N 1101338002A&B. Disassemble ,clean, inspect, change out trim, assemble with new soft goods.

(2) SHP- TCV-1634-20 & SHP-1636-20 Hammel: 3" model v522lrca2zzz9 s/n 1101338001 A&B . Disassemble clean inspect, change out trim, assemble with new soft goods.

(2) BFW-FCV-1109-30 & 1112-30 Copes Vulcan : 6" clean, inspect ,polish trim, assemble with new soft goods. Stroked and calibrate with plant IC/E Techs.BFW-FCV-1600-30 BFW Control valve, Hammel Dahl HB1101337001 6" 2500# Disassemble , clean polish trim, blue check, assemble with new soft goods.

CNS-CV-1601-01 Wal worth: 12" check 2500# Fig. 5566PSSCWE S/N V12RO9. Pressure seal leak. Disassemble, polish bonnet, and hone pressure seal bore, manufacture new pressure seal ring, assemble with new pressure seal supplied by AVP. New Pressure Seal Ring

CNS-FBV-1110-30 Condensate Ball Valve JAMESBURY: 4-730031226XTZ1 Remove, actuator, unpack valve, polish packing, pusher bore, repack with packing supplied by AVP mount actuator.

(4) Pre-Outage EVT of Main Boiler Safety Valves East Drum: 1749WB-5-S Set at 2003 PSI. West Drum: 1749WB-5-S Set at 1945 PSI . Main Steam: 1760WE-5-S Set at 1720 PSI.

Soot Blower: 2717WD Set at 700 PSI.

(1) SBS-MOV-1600-30 Pacific: 3" Model 55525-SNNN-2-4-M2C-NF2 Stock# RK218, S# 438475. Disassemble valve, clean, inspect, polish stem, polish wedge polish bonnet, disc valve body seat, assemble with new pressure seal and Packing supplied by AVP.

3 ea. SHP-HS-1129-30, 1145-30, 1128-30 Copes Vulcan: 2" S/N 10000002737570, 59, & 50 Disassemble, Clean inspect polish trim, assemble with new softgoods supplied by Plant stroke and calibrate.

2 ea. SHP-VA-1645-01, &02 Main Steam Drains Newco: 2" 2680# Globe Valves F22 Air-Arc seal weld, disassemble, clean, inspect, disc valve body seat, polish plug, lap plug to valve body seat, assemble and seal weld.

4 ea. Attenuator Block Valve Repacks (4 Valves) Repack Valves with Packing Supplied By AVP.

1 ea. SHP-VA-1135-01 Newco 3" Globe Valve: Repack Valves with Packing Supplied By AVP.

2 ea. Flowserve: 1" SW Globe Valve A-105 Material Cut Valves from line for shop repair, air arc valves, apart, disassemble, clean, inspect, polish plug, disc valve body seat, lap plug to valve body, seal weld, and weld valves back in line.



3. DCS

Work accomplished during the visit (including calibration / correlation / control docs): Punch List:

1. Well Water Pump sequence logic – Created start and stop sequence for both pumps
2. Bottom ash logic – changed permissive from MFT to ID Fan running
3. Fuel Density calculation – changed number from 22.0 to 23.15
4. Sodium Bicarbonate logic – Speed will go to 0% when associated pumps are off/flow is less than 100 GPM
5. Created chemical analysis trends on the sampling page
6. Alarm cleanup – Ran Pareto chart from Jan 1st through April 6th. Worked on cleaning up alarms. Also discussed with operations some alarm masking that can be added
7. Fly Ash sequence – Modified order of collection, downloaded and tested

4. Zero Liquid Discharge System

The ZDS system was in good condition from first site after opening up for inspection. Hydro blast and chemical clean the brine concentrator and BC tube filter. Hydro blasts the chevron vanes and distillate heat exchanger. Hydro blast the FCHX crystallizer heat exchanger and two heat exchanger super changer. Hydro blast the hydro cyclone and crystallizer feed tank. Worked on the filter press system, hydro blast the filter press return line to feed tank. Hydro two drains lines and flash tank over flow lines. And hydro blasted the stainless steel 90 from the distillate heat exchanger to flash tank. The pre-



heater heat exchanger was contracted out and found to be clean. Change oil in all process pumps and site glasses

CWS-1116-4BBA4 (LOCATED BY CWS PUMPS) REMOVE 90 DEGREE / THEY WILL INSTALL A CONNECTION TO THE BOTTOM 4" LINE FROM PUMP TO WASTE WATER TANK.

REMOVE SPOOL FROM STEAM LINE, AND THEN INSTALL NEW SPOOL TO HOOK UP TO MOBILE BOILER.

INSTALL 4" BLANK IN STEAM LINE ZDS-1655-6.00BBA40S

CONNECT DIMIN WATER FROM DISCHARGE OF PUMP TO FEED THE MOBILE BOILER.

REMOVE THREE ACCESS DOORS TO THE BC, REMOVE THE SS TRAYS.

REMOVE THE DOOR TO THE CHEVERON VANES, REMOVE VANES OUT TO PLATFORM DECK.

REMOVE THE SPOOL INSERT TO THE BC OUTLET. (LARGE SPOOL)

INSTALL 8" PLUG TO THE SUMP TO BLOCK OFF OIL/WATER SEPERATOR

REPLACE THE LOOP END TO THE HEAT EXCHANGER, BOTH 90 DEGREE STAINLESS T FITTINGS TO FLASH TANK, AND REPLACED THE 90 DEGREE PIPE FROM FLASH TANK TO HEAT EXCHANGER.

CRYSTALLIZER FLASH TANK, OPEN THE DOOR, INSPECT MIST ELIMINATOR.

REMOVE THE SUCTION SIDE EXPANSION JOINT OF THE CRYSTALLIZER FLASH TANK PUMP TO CLEAN.

SEED TANK, OPEN THE DOOR, and REMOVE THE 90 DEGREE FROM THE BOTTOM OF THE TANK TO THE PUMP.

REMOVE THE HYDROCYCLONE TO BE CLEANED. (THIS WILL BE CLEANED AND ISOLATED)

REMOVE ACCESS DOORS TO THE EVAPORATOR COMPRESSOR TO BE CLEANED. (EAST SIDE)

INSTALL CHECK VALVES ON BOTH RO CAUSTIC INJECTION LINES.WELDED

A DESIGN CHANGE TO THE FILTER PRESS FEED LINE DRAIN (RUBEN). WELDED

REMOVE THE INSULATION ON THE VAPOR COMPRESSOR, TO TROUBLE SHOOT OIL LEAK

REPLACE THE SPOOL PIECE TO THE VAPOR COMPRESSOR.

INSTALLED DOUBLE BLOCK VALVES IN THE STEAM SUPPLY LINE, WELDED

FIX THE COUPLING LEAKING TO THE STEAM DRAIN OF THE HEAT EXCHANGER, WELDED NEW COUPLING IN.

INSTALLED NEW PILLOW BLOCK BEARINGS TO THE FILTER PRESS DRIVE SIDE, REPLACED THE DRIVE SPROCKETS, DUE TO CORROSION.

WELDED IN A FITTING TO THE SOUTH WASTE WATER PUMP DISCHARGE LINE.

FOUND THE RUBBER LINING TO THE FLASH TANK COMING APART, HAD RUBBER SEAL REPAIRED BY CONTRACTOR.

FOUND A STAINLESS STEEL SPOOL PIECE TO THE HEAT EXCHANGER LINE WITH CORROSION, HAD RUBBER SEAL LINE BY THE CONTRACTOR.

REMOVED THE STAINLESS PIPING TO THE DISTALLATE HEAT TRANSFER EXCHANGERS, CONTRACTORS CLEANED THE EAST SIDE FIRST , FOUND VERY CLEAN INSTALLED BACK

TOGETHER, THE DECISION WAS MADE NOT TO GO INTO THE WEST HEAT TRASFER EXCHANGER.

INSTALLED A NEW EXPANSION JOINT 10" TO THE HEAT EXCHANGER JUST ABOVE THE PUMP ZDS-PP-1019 ON THE DISCHARGE SIDE.

REMOVED THE SCAFFOLDING

REINSTALLED PIPE INSULLATION

A LEAK FOUND IN THE UNDER GROUND PIPE TO THE MILLION GALLON TANK, INSTALLED A NEW 4" LINE IN.

ZDS PUMPS CHANGED OIL INSTALLED SIGHT GLASS AND CHECKED COUPLINGS

OIL TYPE HEAVY MEDIUM 68

1.	ZDS PP 1024	CRYSTALIZER CONDENSATE
2.	ZDS PP 1033	CRYTALIZER DISTILLATE
3.	ZDS CR 1010	VAPOR COMPRESSOR LUBE/BEARING CASE
4.	ZDS PP 1012	HYDROCYCLONE
5.	ZDS PP 1013	CRYSTALIZER FEED
6.	ZDS PP 1003	BC FEED
7.	ZDS PP 1006	BC DISTILLATE
8.	WWC PP 1005A	WASTE WATER
9.	WWC PP 1005B	WASTE WATER
10.	ZDS PP 1019	CRYSTALIZER FLASH RECUIRCULATION
11.	ZDS PP 1011	BC RECUIRCULATION (HAS SIGHT GLASS)

VENDOR CLEANING

1.	BC TOWER	hydro, chemical clean,
	PRESSURE	
2.	BC TOWER FILTER TUBE	
	PRESSURE	
3.	BC CHEVERON VANES	hydro, chemical clean,
	PRESSURE	
4.	DISTILLATE HEAT EXCHANGER	
	PRESSURE	
5.	FCHX CRYSTALIZER HEAT EXCHANGER	hydro, chemical clean,
	PRESSURE (2 HEAT EXCHANGERS SUPER CHANGER)	
6.	HYDROCYCLONE	chemical clean,
	PRESSURE	
7.	CRYSTALIZER FEED TANK	
	PRESSURE	
8.	FILTER PRESS RETURN LINE TO FEED TANK	PRESSURE
9.	TWO FILTER PRESS DRAIN LINES	PRESSURE
10.	FLASH TANK OVER FLOW LINE	
	PRESSURE	
11.	STAINLESS STEEL 90 FROM DIST HEAT EXCHANGER TO FLASH TANK	
	PRESSURE	

12. PRE HEATER HEAT EXCHANGER IS CONTRACTED OUT (BOTH)

ZDS Flash tank



ZDS work



ZDS U-bend piping



Corrosionwear

ZDS work

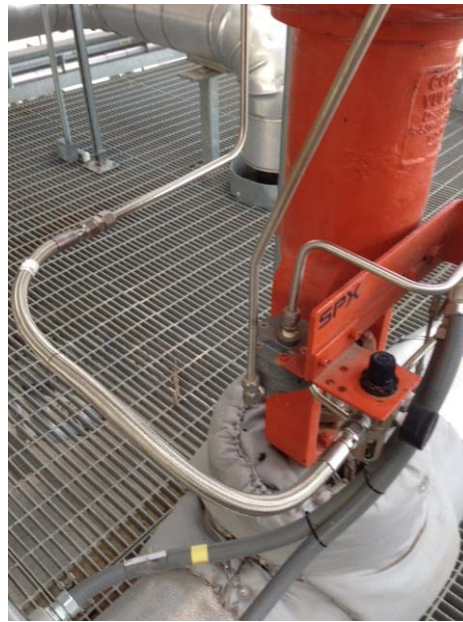


5. Fan Wheel Inspections

Inspection done by Valmet (see attachment A boiler)

6. Compressed Air Systems

Removed blue rubber hoses and installed stainless steel braided hose on most all air actuators in the boiler island that time constraints allowed. (119 of 126)

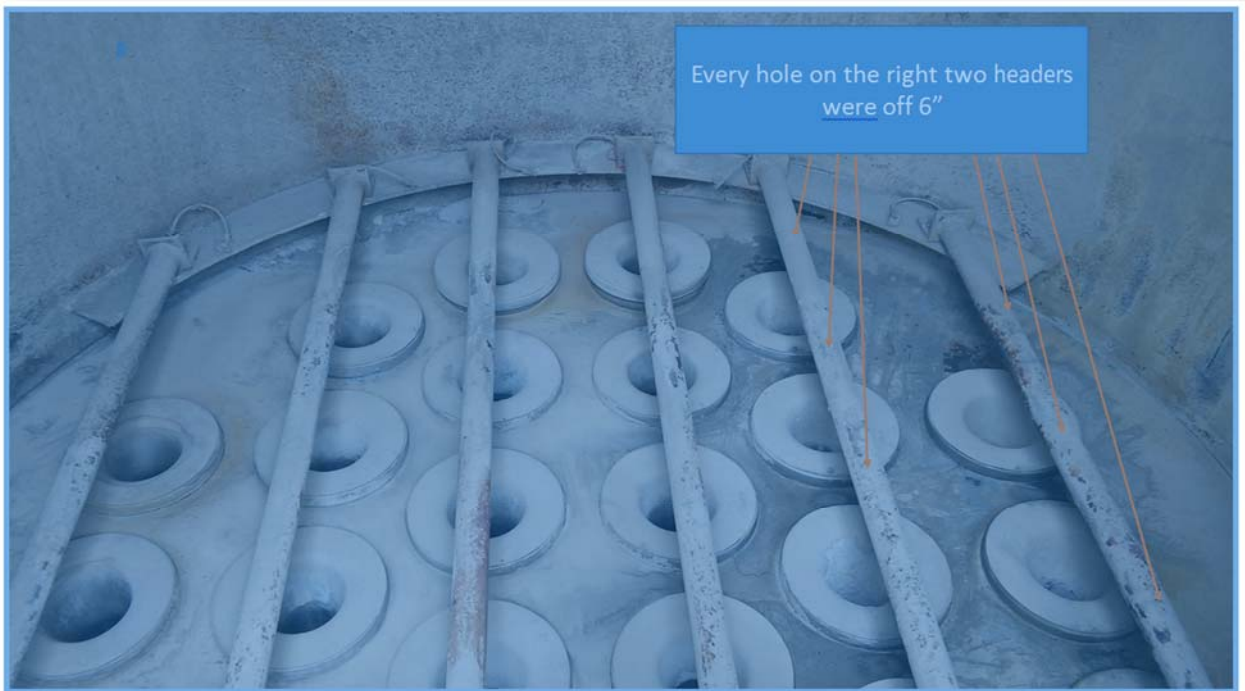


7. Ash Silo System

↗

Equalizer Valve

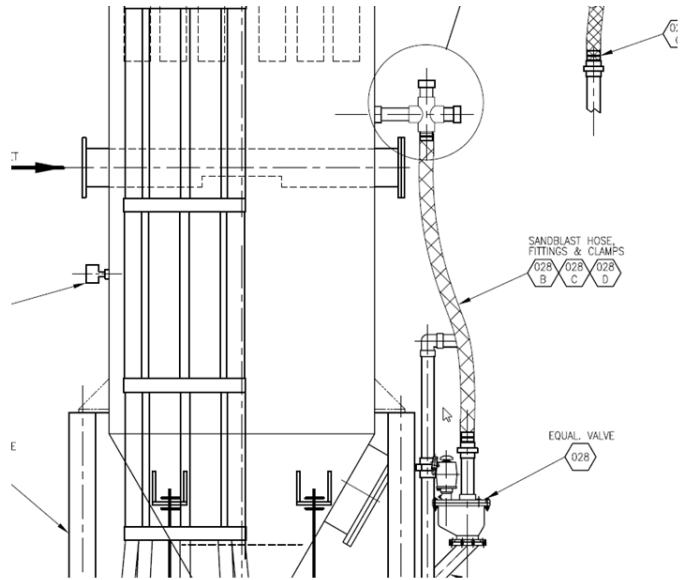
- Replaced sandblast hose and fittings from equalizer valve to tank.
- Greased equalizer valve actuator.
- Opened, inspected and greased slide gates at transition from bag house to silo.
- Opened up ash silo bag house and repaired the two right side headers.
- Bag house was in good condition.



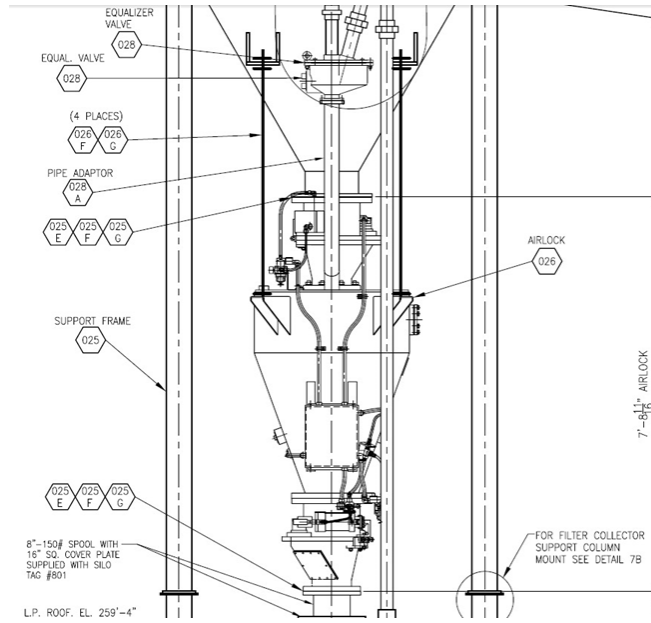




Equalizer valve and hose



Both slide gates at air lock



8. Pictures of day to day activities MISC





Vapor Compressor Expansion
Joint



Water / Chemical / Steam Injection Point



Repair Steam Tram line



Spool repair with new liner



Robbin screw shift



Wear on robbing screw shift



New flights and chain on fuel system



ZDS COOLING WATER HEAT EXCHANGER



ZDS FLASH TANK



BOTTOM OF ZDS FLASH TANK AND
EXPANSION JOINT



NEW SUPPLY LINE



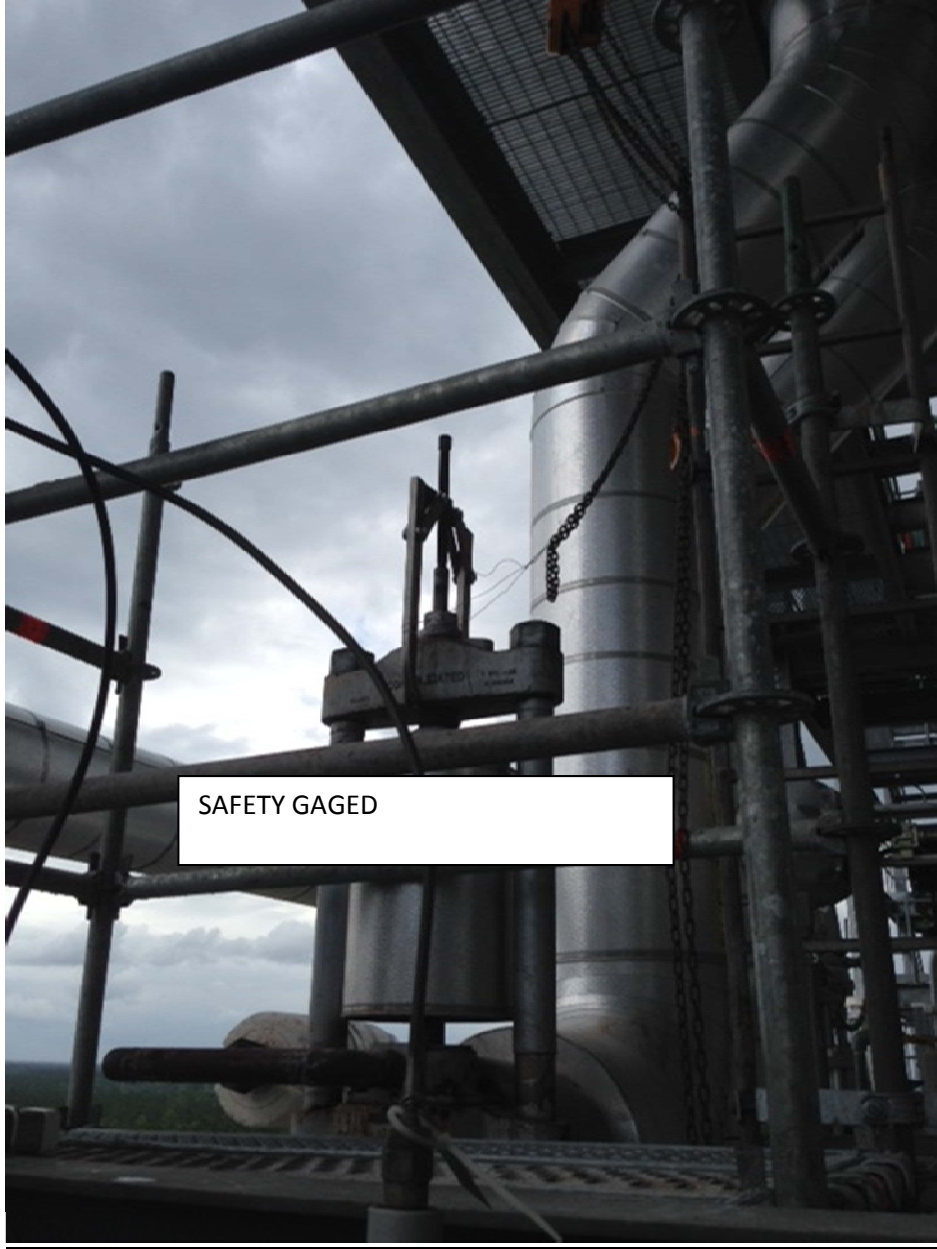
NEW SUPPLY LINE



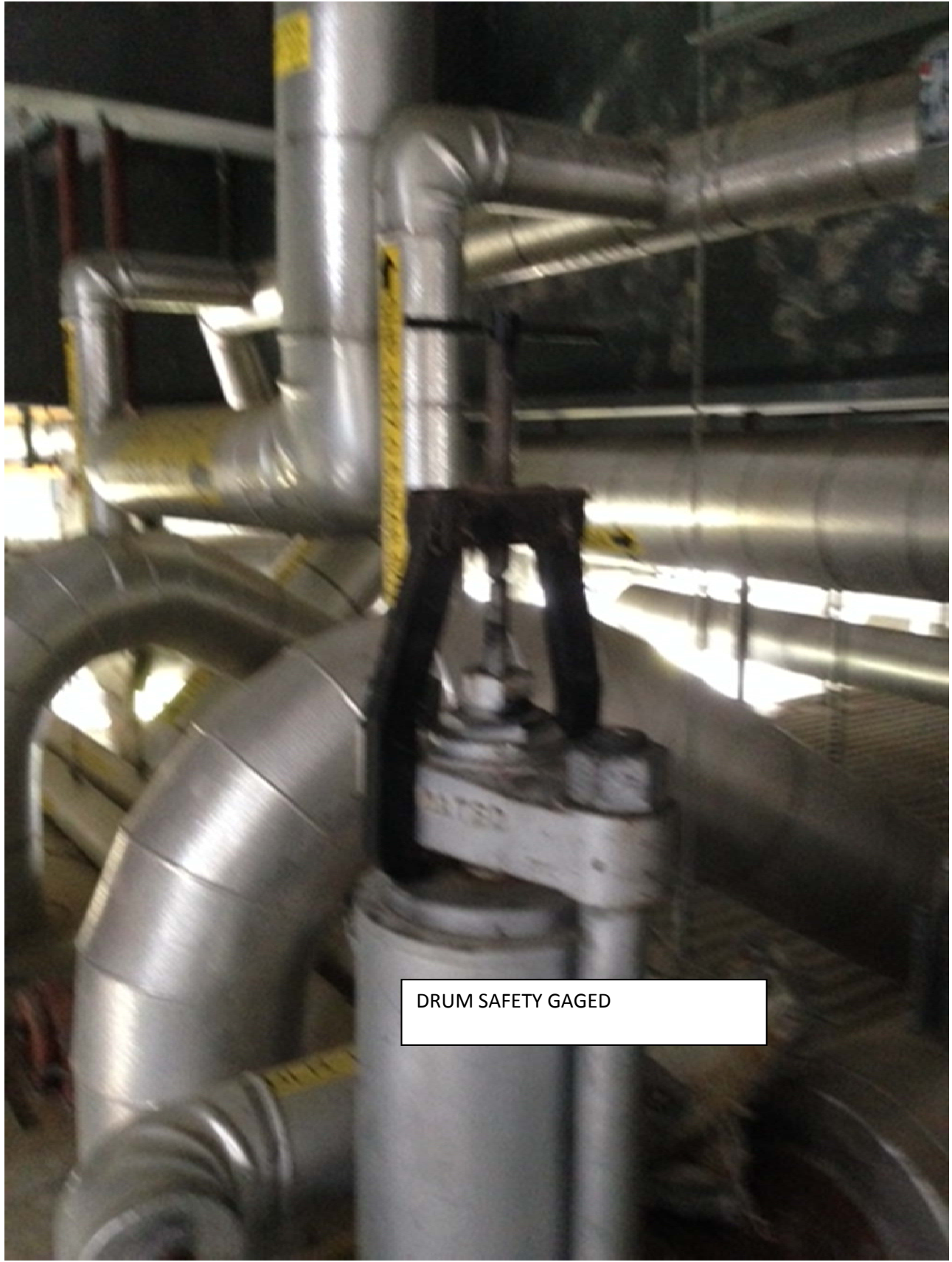
CAPPED OFF OLD SUPPLY LINE



AJUSTMENT FOR CHAINS



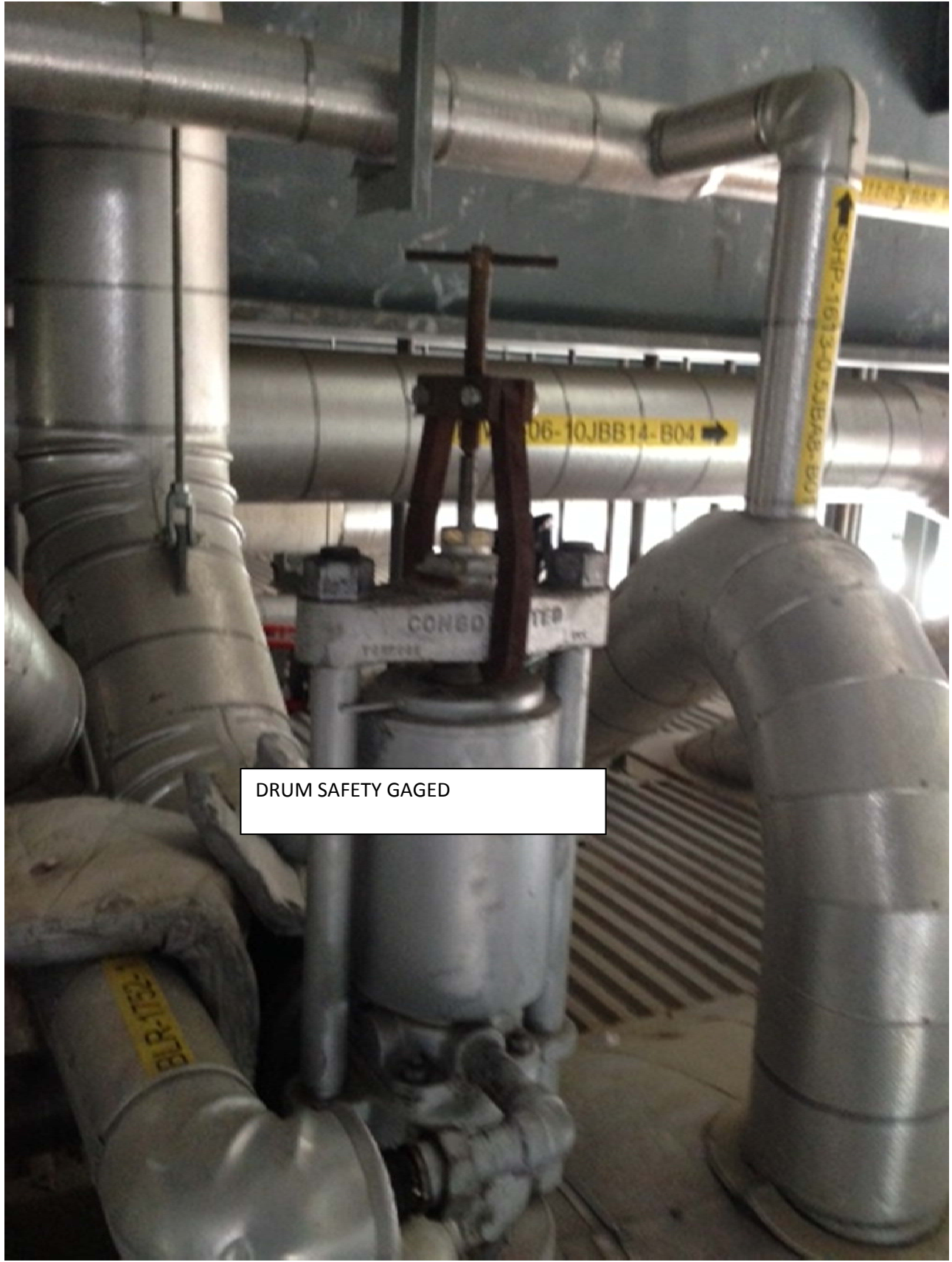
SAFETY GAGED



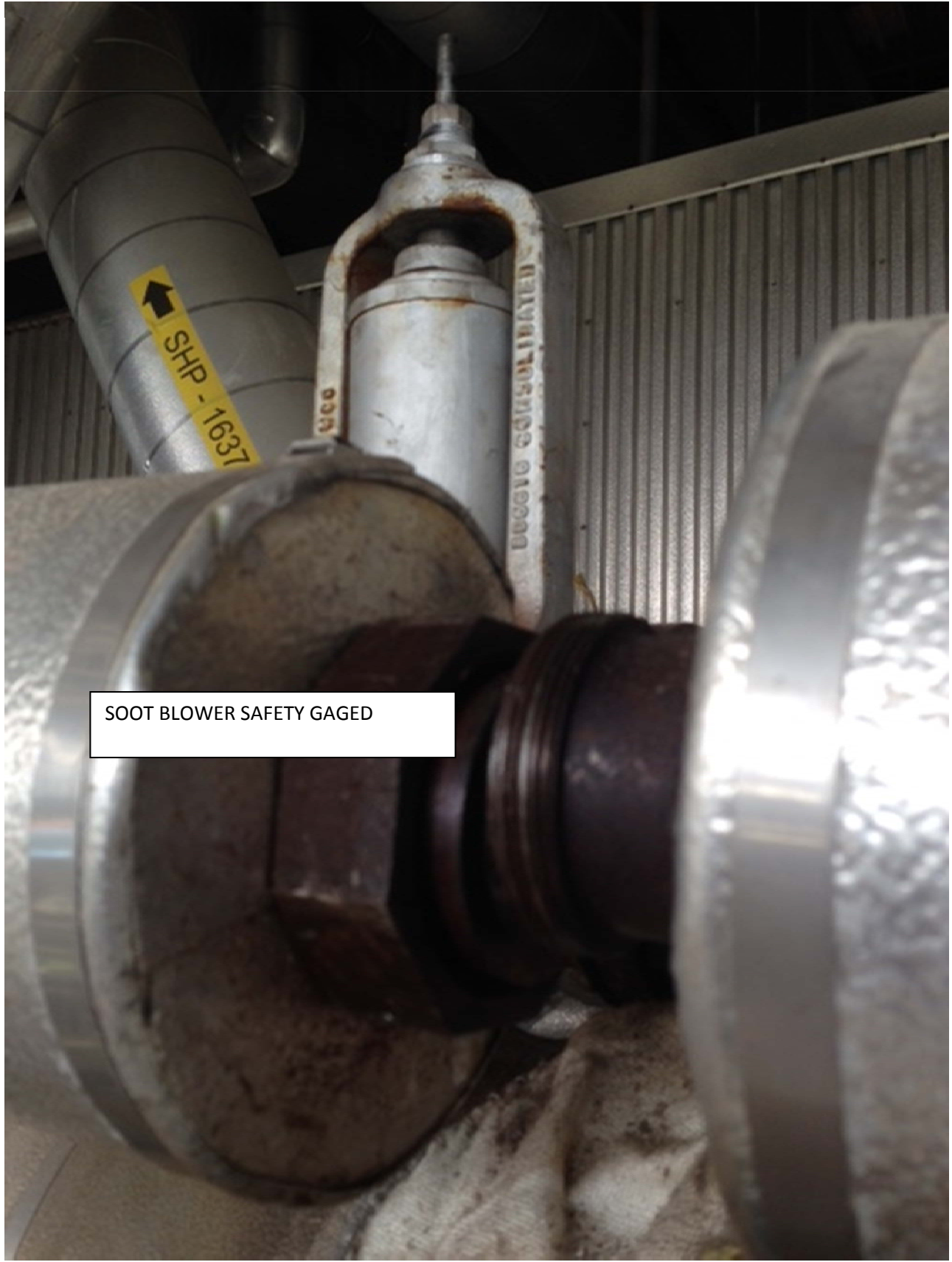
DRUM SAFETY GAGED



PRESSURE GAUGE FOR BOILER
HYDRO



DRUM SAFETY GAGED



SOOT BLOWER SAFETY GAGED



3 DUST COLLECTOR BAD BAGS



NEW ACCESS DOORS TO FUEL CHUTES





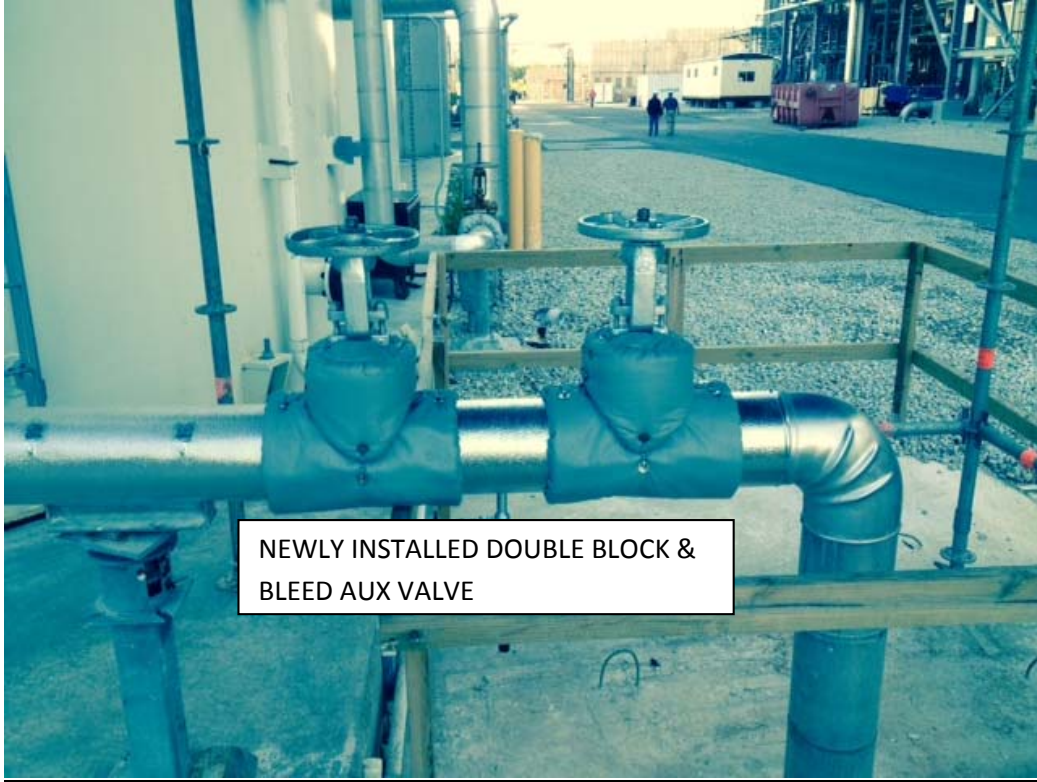
ZDS FLASH TANK INSPECTION

BAD LINER FOUND DURING FLASH
TANK INSPECTION





BAD LINER FOUND DURING FLASH
TANK INSPECTION



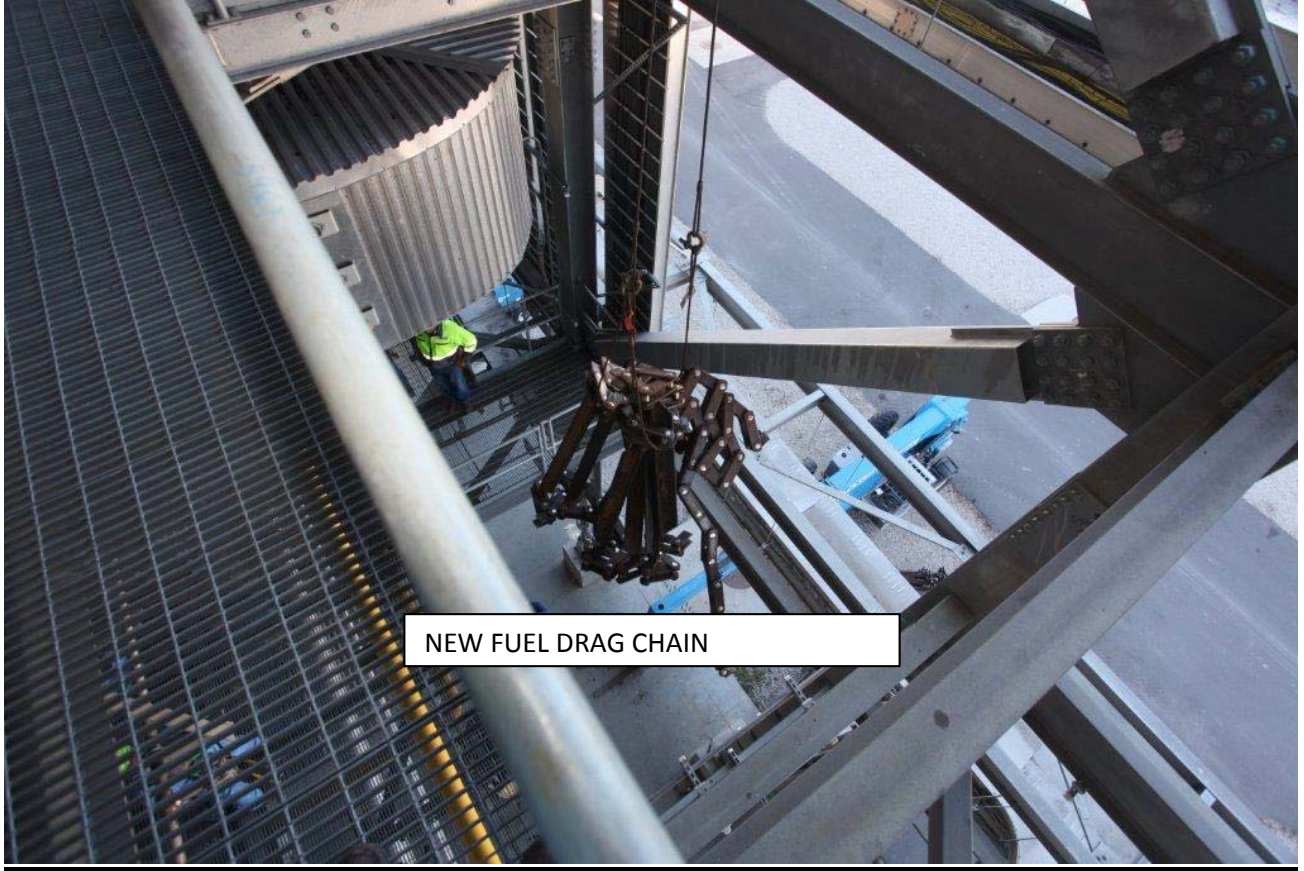
NEWLY INSTALLED DOUBLE BLOCK & BLEED AUX VALVE



ROTARY FEEDER SIDE BARS



ROTARY FEEDER CHANGE OUT



NEW FUEL DRAG CHAIN



REPAIRED SAND FEED LINE



ROTARY FEEDER CHANGE OUT



NEW CHAIN LINNERS



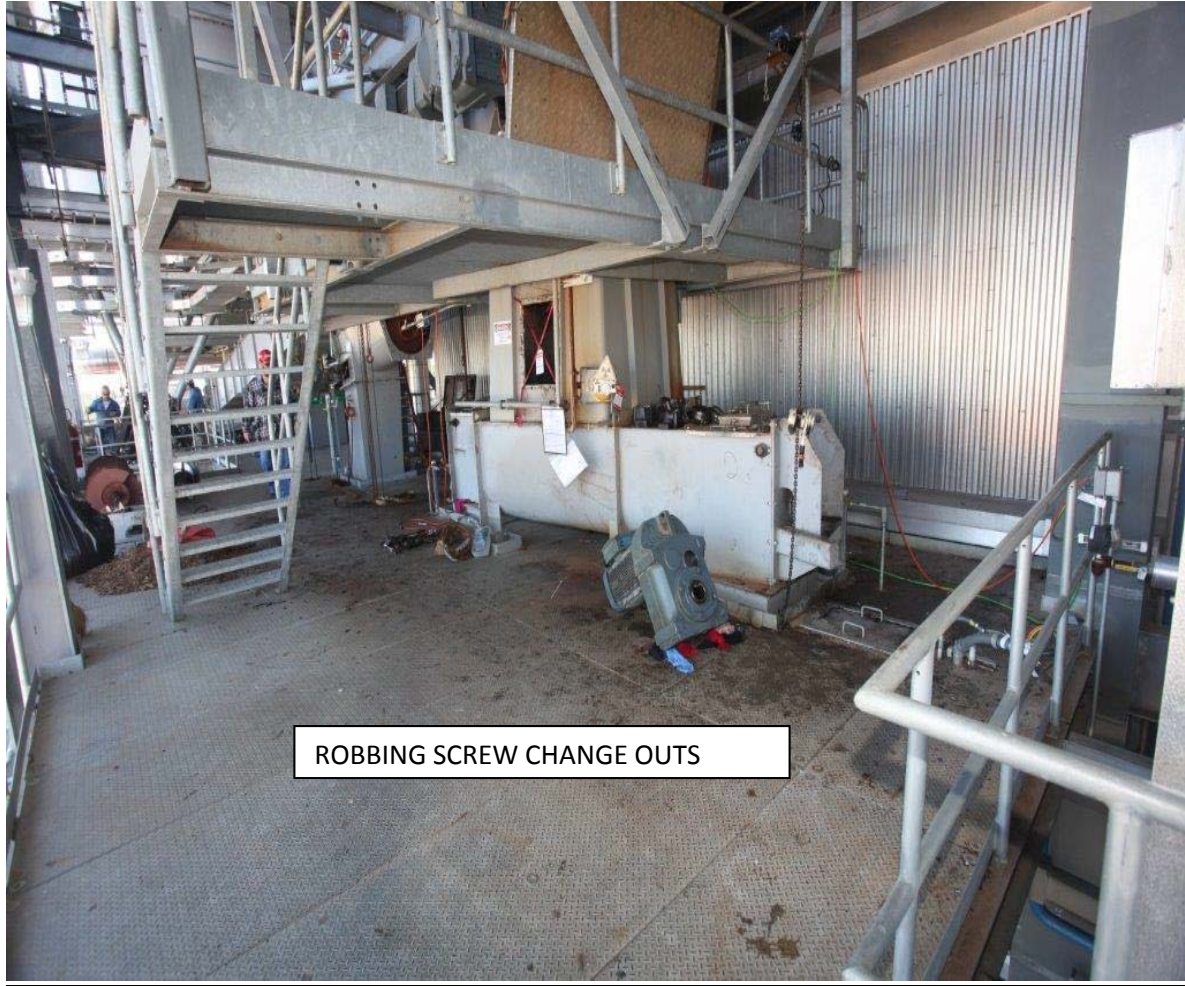
NEW CHAIN LINERS



CHANGE OUT ROBBING SCREW



WEAR IN ROBBING SCREW BIN



ROBBING SCREW CHANGE OUTS



SILO FEED SCREW WITH NEW TOP



OLD SILO FEED SCREW TOP



SILO FEED SCREW BEFORE CLEANING



NEWLY BUILD TRANSITION CHUTE ON
10 BELT



NEWLY BUILD TRANSITION CHUTE ON # 10 BELT AND IMPACT IDLERS



9 GEAR BOX ALIGNMENTS AND INSPECTION



9 GEAR BOX ALIGNMENTS AND INSPECTION



9 GEAR BOX ALIGNMENTS AND INSPECTION

PLANT VIEW DURING SHUTDOWN



PLANT VIEW DURING SHUTDOWN



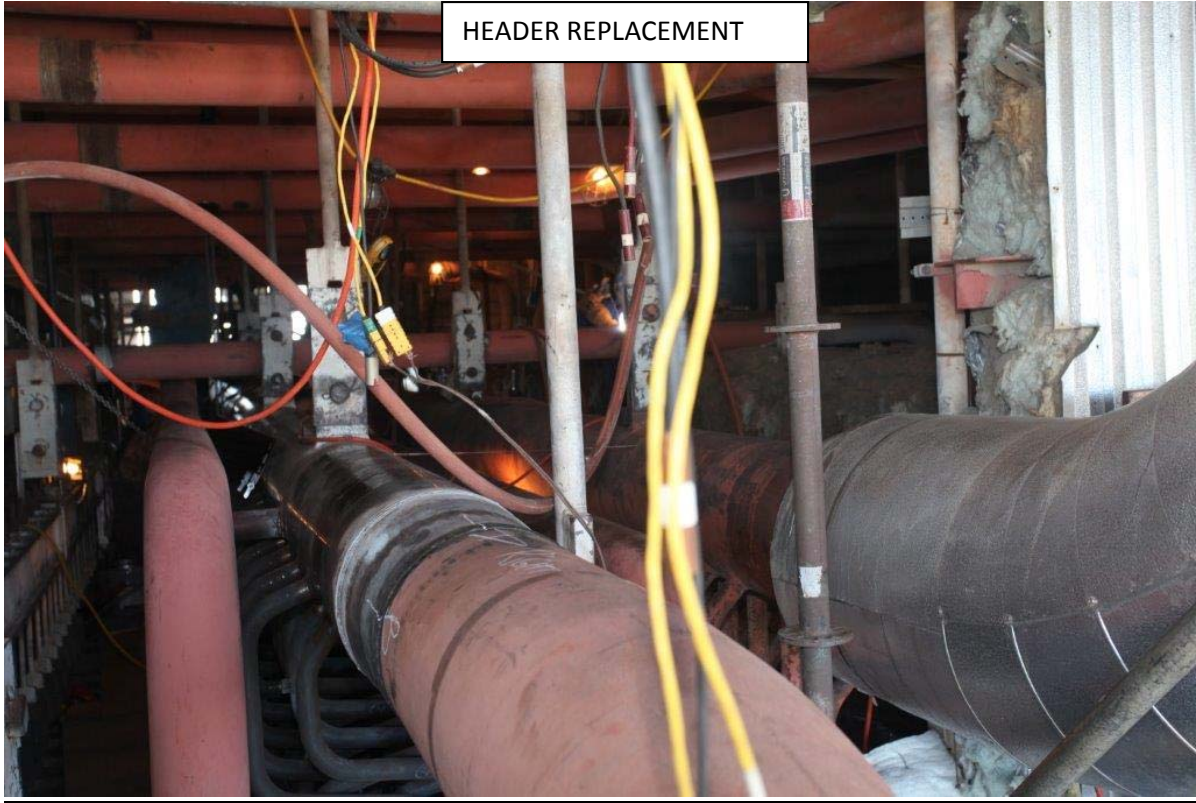
VIEW OF FUEL YARD

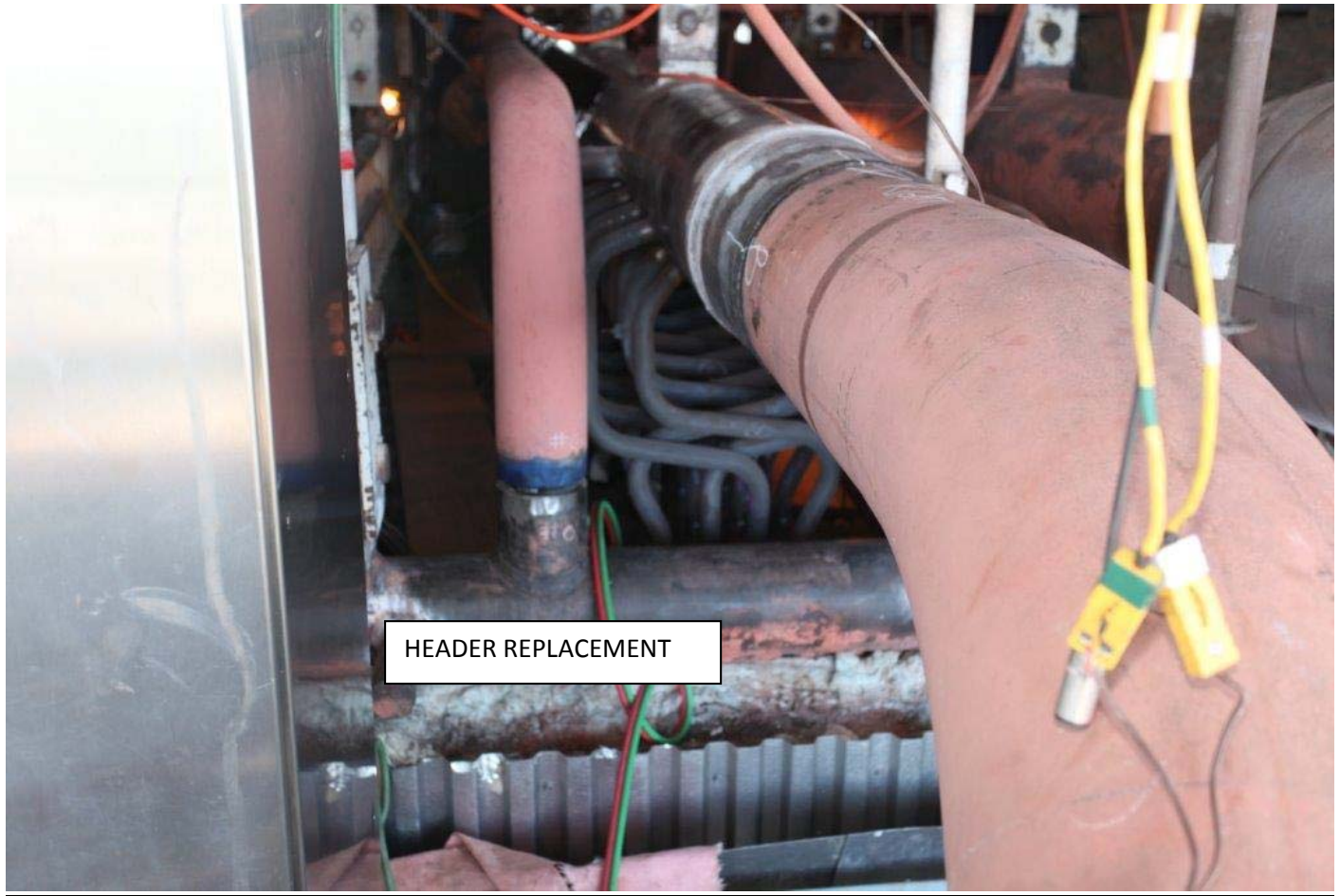




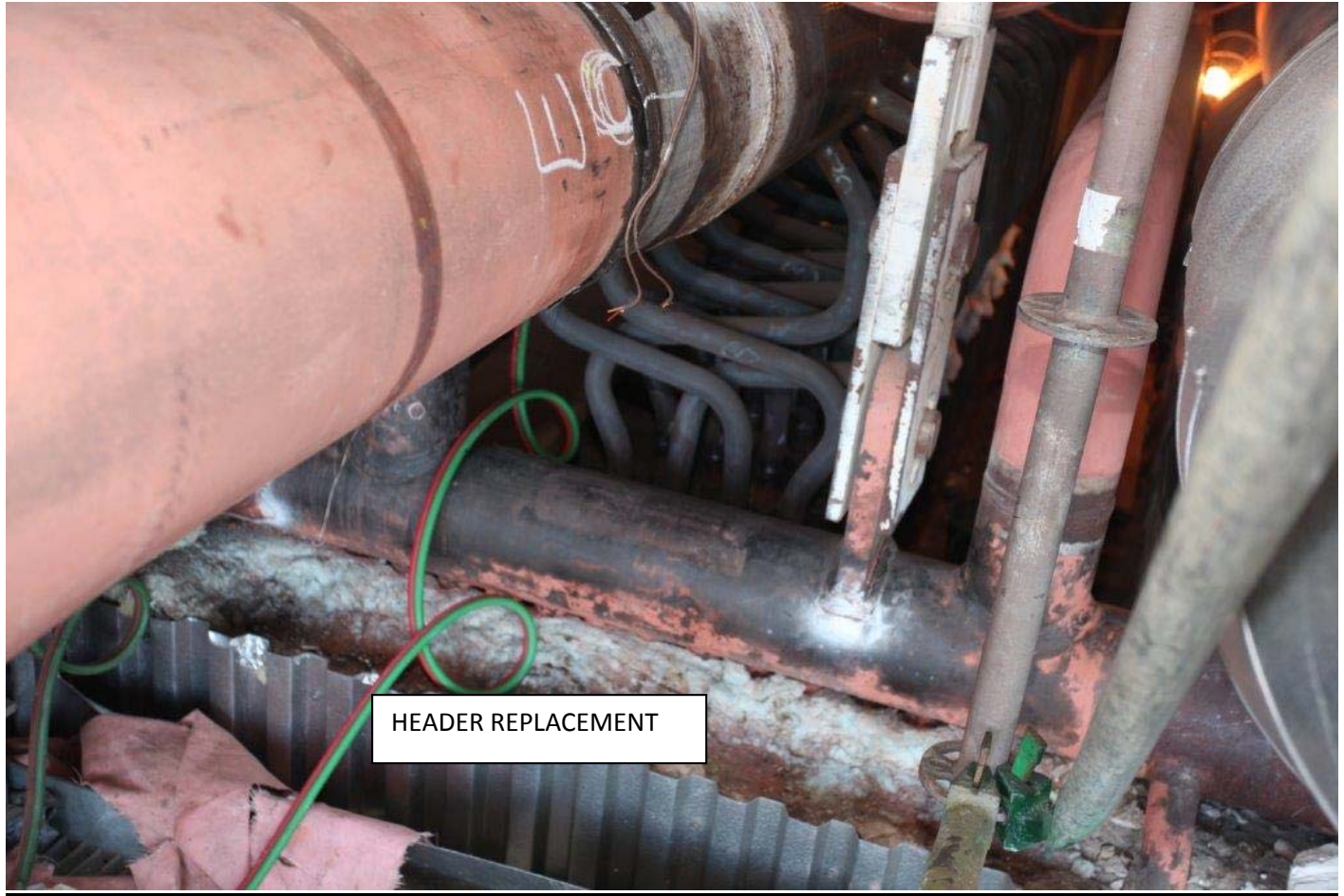
HEADER REPLACEMENT

HEADER REPLACEMENT





HEADER REPLACEMENT



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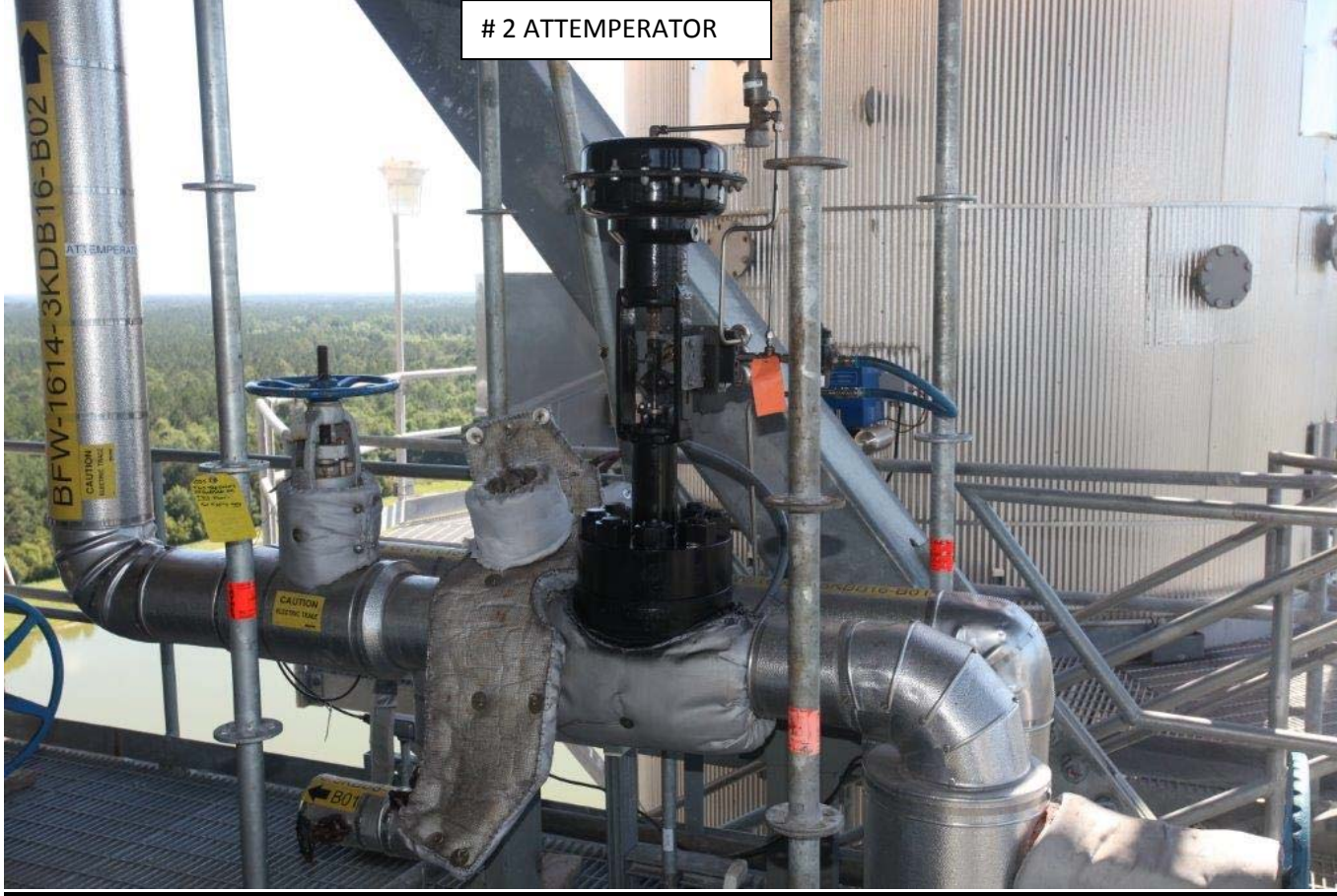
VIEW OF ZDS SYSTEM





VIEW OF PENTHOUSE

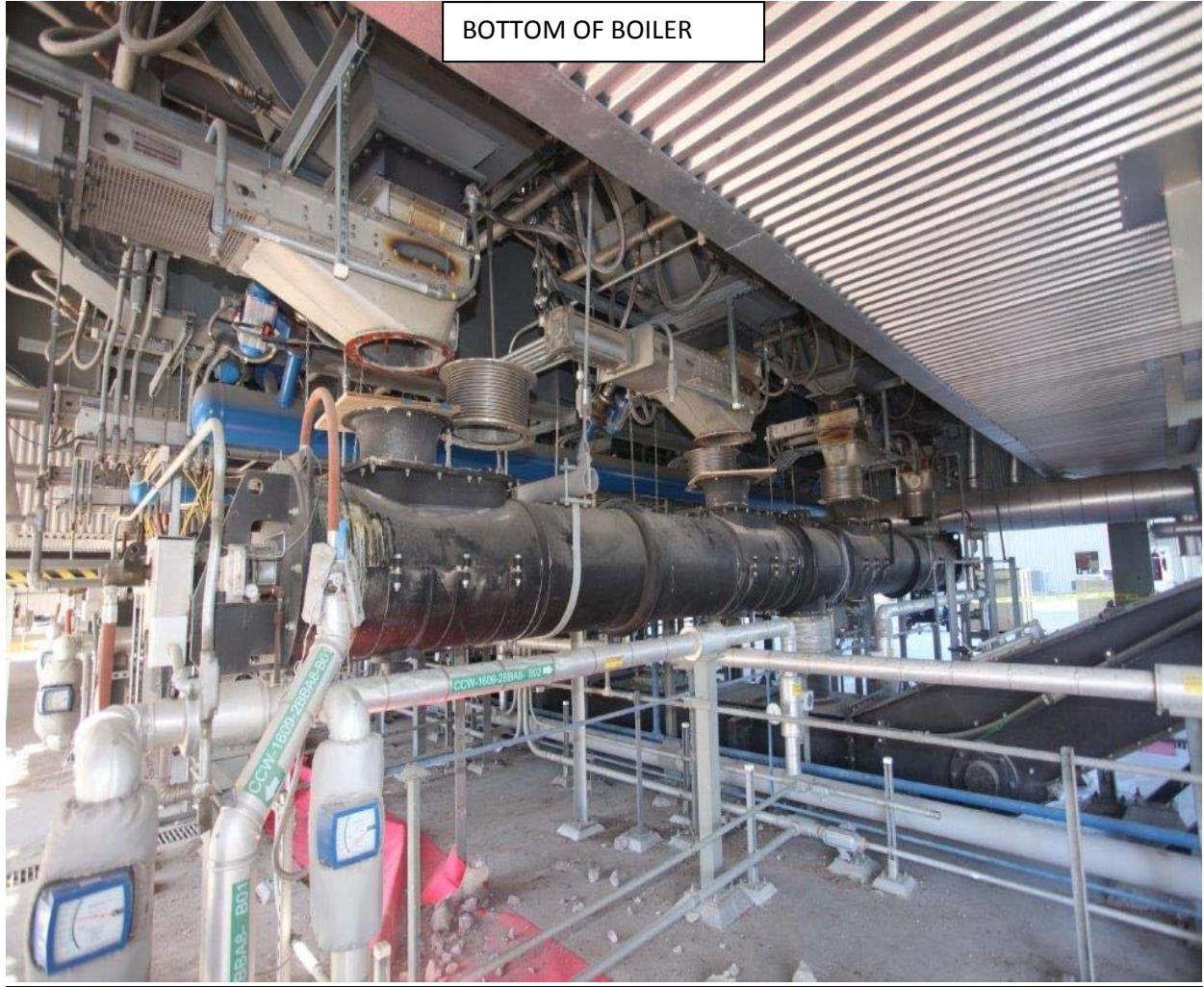
2 ATTEMPERATOR



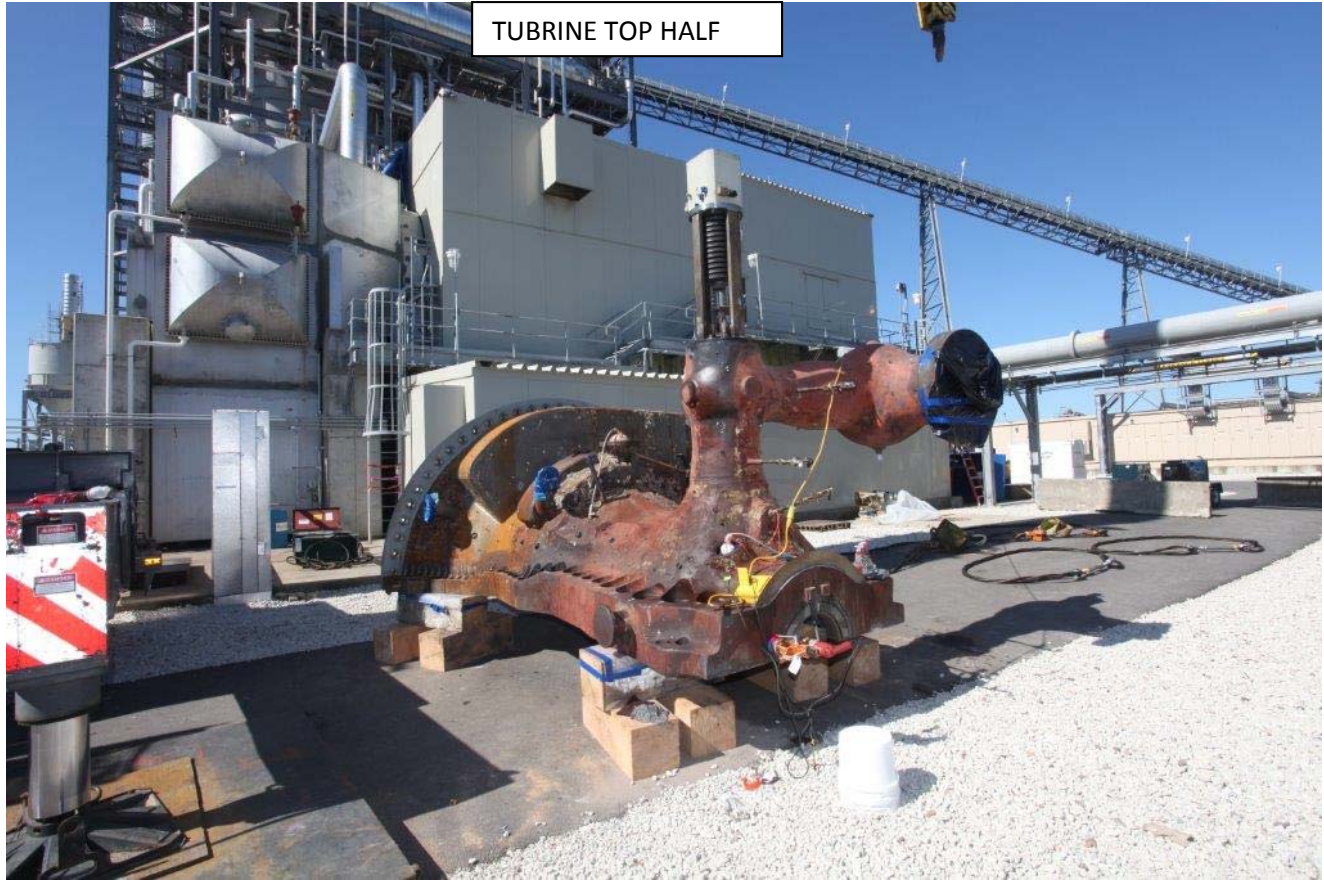
VIEW OF BOILER WORK ON 9 TH FLOOR



BOTTOM OF BOILER

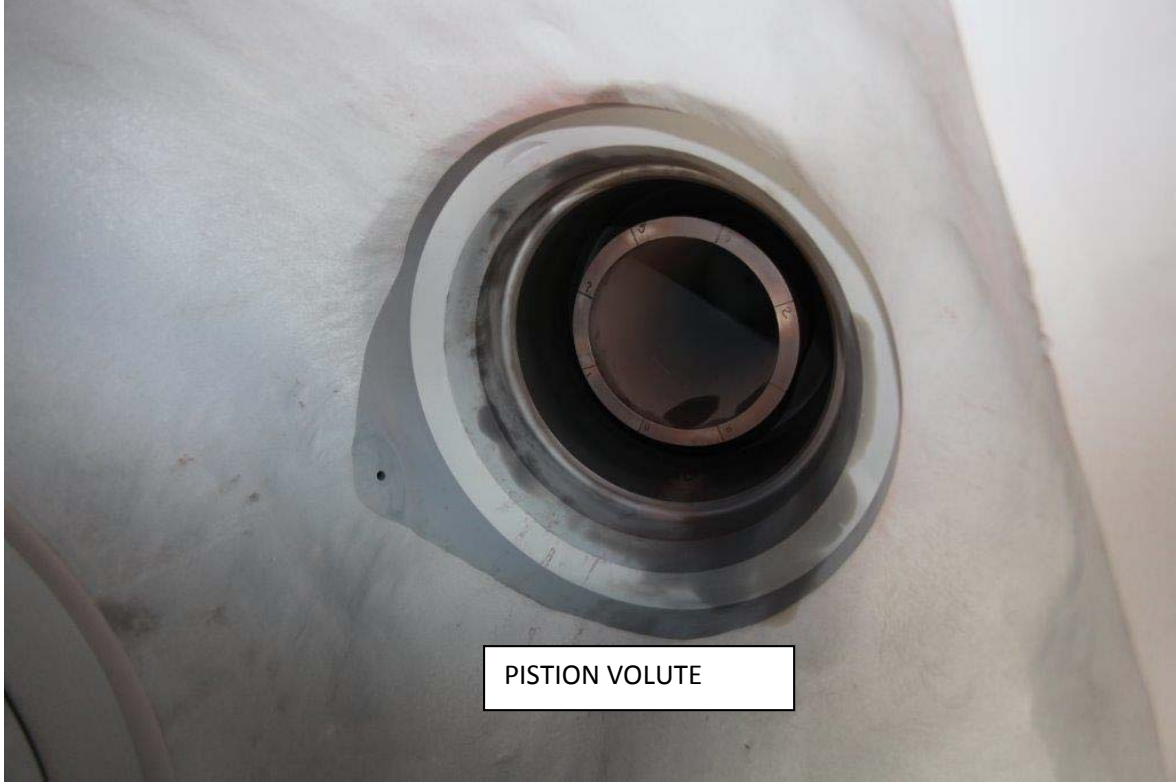


TUBRINE TOP HALF

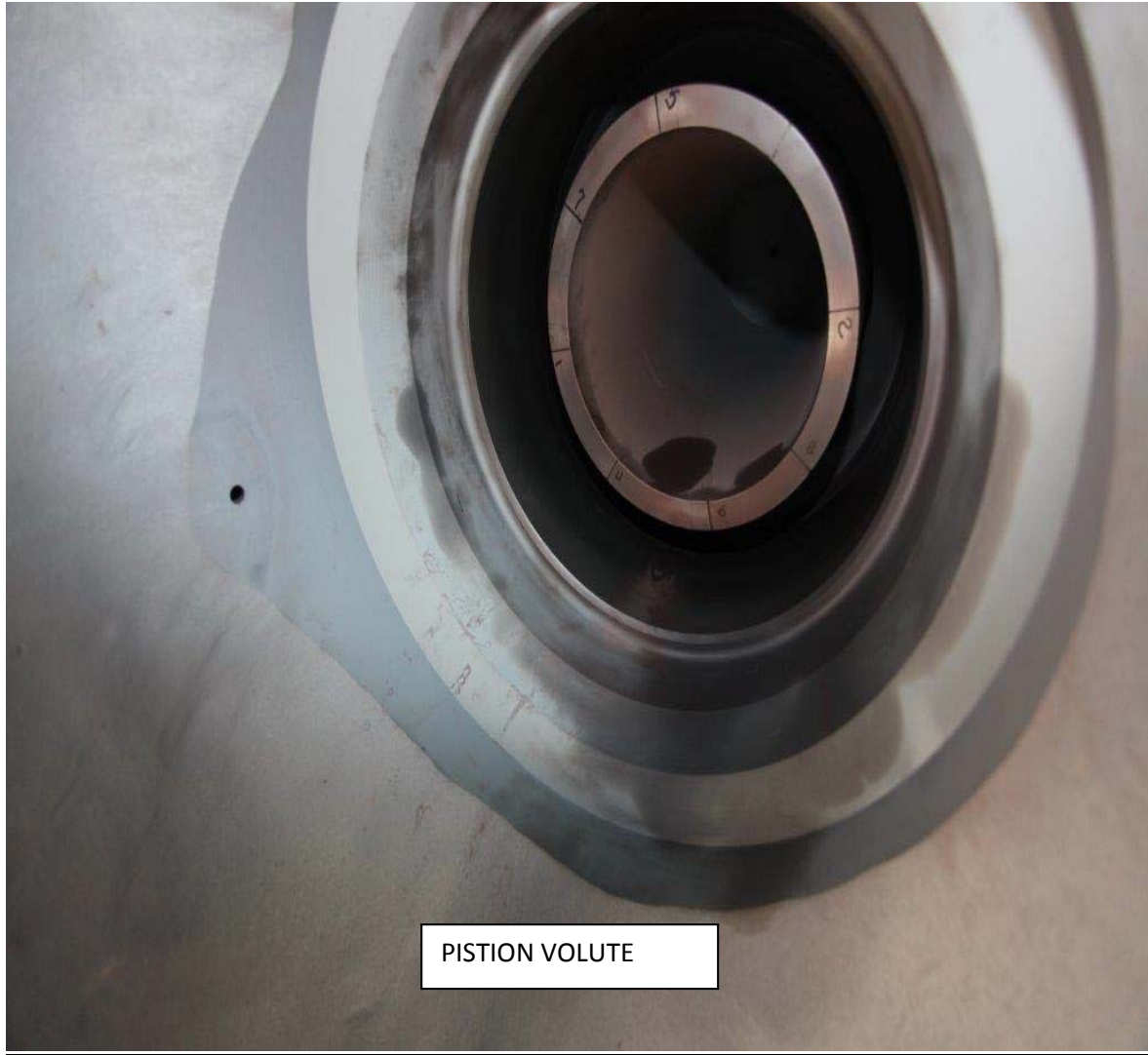


TUBRINE TOP HALF





PISTION VOLUTE



PISTION VOLUTE

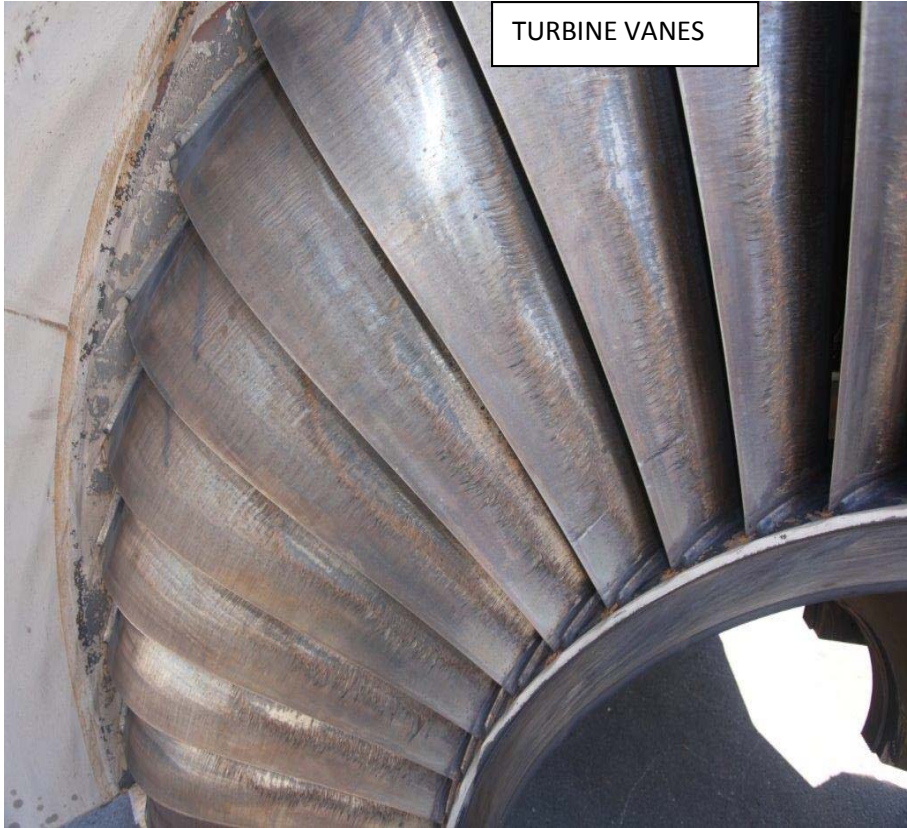


TURBINE VANES

TURBINE VANES



TURBINE VANES



TOP HALF OF TURBINE CAP





BAD BAGS PULLED FROM # 3 DUST COLLECTOR