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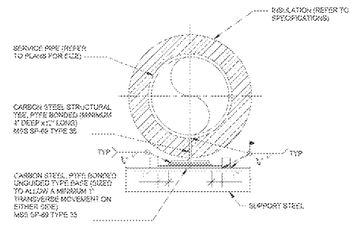
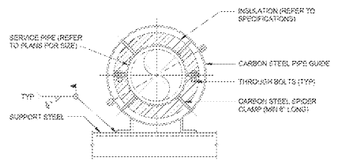


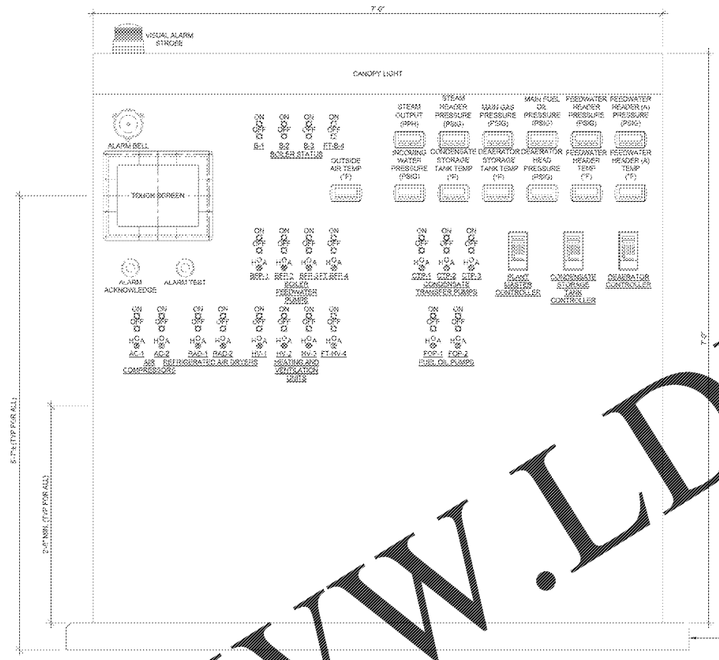
DETAIL - PTFE SLIDE PLATE
SCALE: NONE

NOTES:
1. THIS DETAIL SHALL BE USED AS A GUIDE. ALL SUPPORTS SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
2. INSTALL PTFE SLIDE PLATE PARALLEL WITH PIPE.



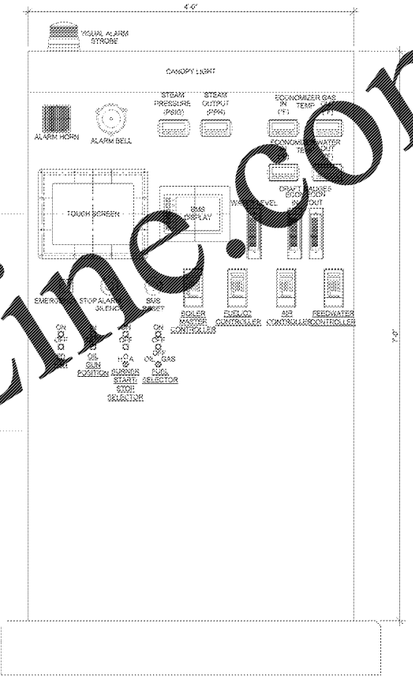
DETAIL - PIPE ALIGNMENT GUIDE
SCALE: NONE

NOTES:
1. THIS DETAIL SHALL BE USED AS A GUIDE. ALL SUPPORTS SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
2. INSTALL PIPE GUIDE PARALLEL WITH PIPE.
3. UTILIZE SPACERS WHEN INSTALLING PIPE GUIDE AND SPIDER CLAMP TO CENTER SPIDER CLAMP INSIDE PIPE GUIDE.
4. OFFSET SPIDER CLAMP SO THAT UNDER BOTH HOT AND COLD CONDITIONS THE SPIDER IS WITHIN THE PIPE GUIDE.



BOILER PLANT MASTER CONTROL PANEL
SCALE: NONE

NOTES:
1. ITEMS NOTED AS "SPARE" SHALL BE PROVIDED. NO CONNECTION TO FIELD DEVICE IS REQUIRED.
2. PANEL SHALL BE THIRTY-FOUR INCHES (34") DEEP WITH FRONT HINGED ENTRY DOORS.
3. REFER TO SPECIFICATION SECTION 23 09 11 FOR ADDITIONAL REQUIREMENTS.
4. ALL ALARM, CONTROL AND MONITORING POINTS SHALL BE COMMUNICATED TO THE SCADA CPU LOCATED IN THE CONTROL ROOM VIA MODBUS.



TYPICAL BOILER CONTROL PANEL
SCALE: NONE

NOTES:
1. ITEMS NOTED AS "SPARE" SHALL BE PROVIDED. NO CONNECTION TO FIELD DEVICE IS REQUIRED.
2. PANELS SHALL BE EIGHT-TEEN INCHES (18") DEEP WITH FRONT HINGED ENTRY DOORS.
3. CONTRACTOR SHALL INTERLOCK H-O-A SWITCH WITH MOTOR CONTROL CENTER.
4. ALL DRAFT GAUGES SHALL BE ELECTRONIC FLUSH PANEL MOUNTED.
5. ALL ALARM, CONTROL AND MONITORING POINTS SHALL BE COMMUNICATED TO THE SCADA CPU LOCATED IN THE CONTROL ROOM VIA MODBUS.

MAXIMUM ALLOWABLE LOAD ON STEAM NOZZLE (ANY DIRECTION)

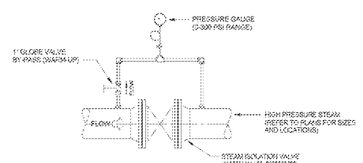
BOILER	Fy LB	Fx LB	Fz LB	Mx IN LB	My IN LB	Mz IN LB
670 HP	4,000	4,000	4,000	4,000	4,000	4,000

ALLOWABLE FORCE AND MOMENT DUE TO THE EXPANSION AND WEIGHT OF PIPING AND ATTACHED VALVES

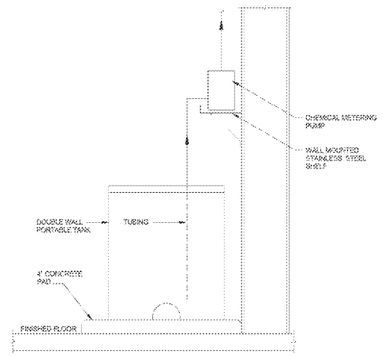
BOILER	Fx LB	Fy LB	Fz LB	Mx IN LB	My IN LB	Mz IN LB
B-1 (1)	-40.80	-4,422.23	-21.02	-1,994.29	-7.04	1,492.47
B-2 (1)	-40.80	-209.53	-5.16	-2,837.95	276.92	1,576.29
B-3 (1)	-40.80	-387.17	21.53	-1,442.35	98.93	-725.50

NOTES:
1. BOILERS SHALL BE DESIGNED TO WITHSTAND THE FORCES AND MOMENTS SHOWN ABOVE.
2. ADD ANY F_y FORCE (600 LB (300 kg) MINIMUM) AS AN ESTIMATION OF THE WEIGHT EFFECT OF THE STEAM LEAD AND VALVE ON THE BOILER. BOILER AND PIPE HANGER SUPPLIERS SHALL COORDINATE TO DETERMINE THE EXACT F_y FORCE WHICH WILL BE IMPOSED ON THE STEAM NOZZLES.

FORCES AND MOMENTS ON BOILER STEAM NOZZLES
SCALE: NONE



DETAIL - TYPICAL STEAM VALVE INSTALLATION
SCALE: NONE



CHEMICAL FEED TANK ELEVATION
SCALE: NONE

FINAL DESIGN
APPROVED FOR CONSTRUCTION

Revisions:	Date

CONSULTANTS:

Affiliated Engineers

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Gainesville, Florida 32686
Tel 352.376.6690 Fax 352.375.9478
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Jack S Neale, State of Florida, Professional Engineer, License No. 43676

This item has been electronically signed and sealed by Jack S Neale, PE on 3/9/2018 using a Digital Signature.

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ARCHITECT/ENGINEERS:

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Gainesville, FL 32606
Phone: (352) 474-8124
Fax: (352) 663-8437
CGA: FL #26690
AKEA Project No. 083-14

Drawing Title	MECHANICAL DETAILS
Approved: Project Director	
Project Title	REPLACE BOILERS - FCA D, ENERGY AT THE MALCOM RANDALL VAMC
Location	GAINESVILLE, FLORIDA
Date	MARCH 9, 2018
Checked	JSN
Drawn	RWD
Project Number	573-14-600
Building Number	
Drawing Number	MP505
	76 OF 127

Office of Construction and Facilities Management

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