



SUCCESS STORIES

GEMMA POWER SYSTEMS, LLC

NEW BIOMASS BOILER WITH AQCS

LOCATION WOODVILLE, TX, U.S.A.

CAPACITY 49.9 MWG

UNIT DESCRIPTION

Biomass Fired Boiler and Hydrograte Stoker

Unit output	49.9 MWG
Steam flow	431.4 kpph
Superheater Steam Pressure	1550 psi
Superheater Steam Temperature	955°F

PROJECT RESULT SUMMARY

Design and Fabrication

- + Sequenced deliveries to site within 18 months after receipt of order
- + Global resourcing
- + No significant quality or fit up issues during installation

Installation and Operation

- + Project completed & accepted two months ahead of schedule
- + Commercial operation 33 months after receipt of order

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BABCOCK POWER SOLUTION

- + Use ACAD 3-D model for design, demonstrating an understanding of the scope, showing complexity of the components, creating an interference free design amongst multiple parties' work scope, and ensuring a constructible design facilitating installation
- + Designed for constructability by involving EPC Contractor (Gemma) early and often during the design
- + Utilize high capacity global resourcing for material procurement and fabrication

PERFORMANCE RESULTS

- + All performance guarantees were met
- + All material was delivered ahead of schedule
- + No significant quality or fit up issues during construction.
- + Installation was complete ahead of schedule



PROJECT OVERVIEW

Riley Power Inc. provided a complete biomass (wood) fired boiler with associated auxiliary equipment and AQCS Systems under contract with Gemma Power Systems, LLC for the end user, East Texas Electric Cooperative, Inc.

Scope:

- + Engineering
- + Boiler
 - » Drum
 - » Waterwalls
 - » Gen bank modules
 - » Superheater
 - » Economizer
 - » Air heater
- + Intimate and suspension level steel design
- + Ductwork
- + Boiler piping
- + Fuel equipment
 - » Bins
 - » Distributors
 - » Grate
- + Aux equipment
 - » Blowers & fans
 - » Dust collection
 - » Steam coils
- + Instruments
- + Pulse filter baghouse
- + Dry sorbent injection system
- + Multi pollutant catalytic reactor
- + Aqueous ammonia system
- + Services
 - » O&M manuals
 - » Training manuals
 - » Construction rep
 - » Startup / comm. reps incl. suppliers' reps

