

# Natural Gas Conversions for Recovery Boilers

## *A fuel cost savings opportunity for the pulp and paper industry*

The decreasing cost and positive outlook for supply of natural gas makes fuel switching an increasingly attractive option for recovery boiler owners and operators.

With the largest installed recovery boiler base in the world and as a leading provider of combustion systems for a wide variety of fuels, Babcock & Wilcox (B&W) has the expertise and experience to convert your recovery boiler to natural gas firing, regardless of the manufacturer.

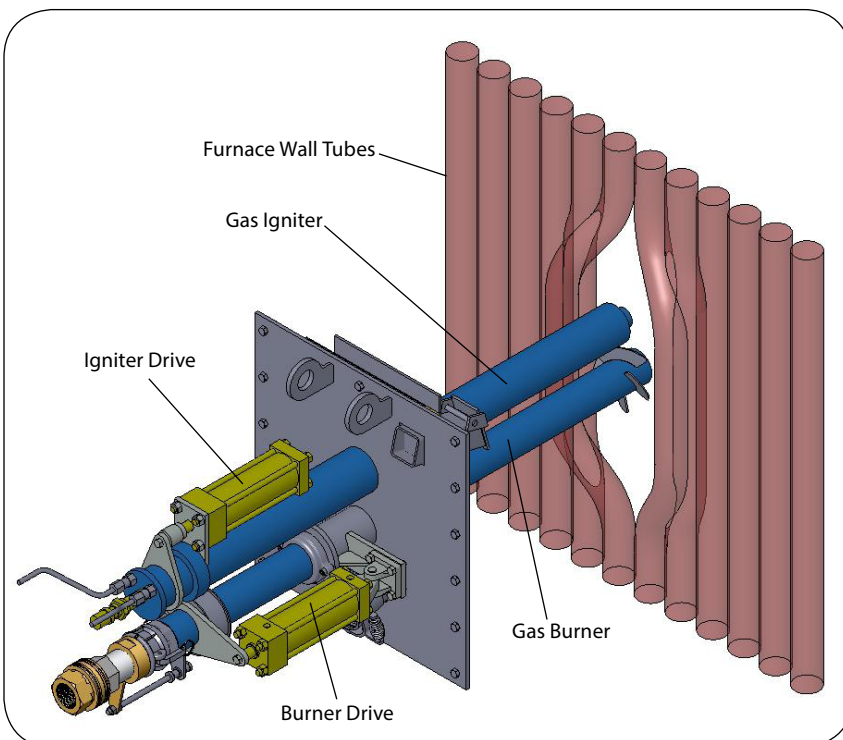
### **Fuel switching considerations**

Currently, a significant advantage to natural gas conversions is the low cost of fuel when compared with oil, a common alternative recovery boiler start-up and operational support fuel.

B&W's natural gas conversion experience is proven: many recovery boiler owners and operators have successfully converted their existing units to 100% natural gas firing systems, significantly reducing annual fuel and plant operating costs. In some instances, capital investment payback periods are less than one year. In addition, recovery boiler owners and operators who are already considering equipment improvements can capitalize on the major benefit of reduced fuel costs by incorporating a gas conversion into their upgrade plans.



*Recovery boiler natural gas conversions are currently an attractive and economical option.*



*B&W's plug-in type LM2100™ burner for superior combustion.*



*Wall-fired natural gas igniter.*



*Duplex cooling air blower assembly.*

## **Natural gas conversion technology**

Through our integrated systems approach, we can deliver the results you need with increased reliability and reduced maintenance. We integrate your fuel train, burner and burner management system for optimal operation, with minimal changes to existing equipment.

Conversion modifications include:

- B&W's plug-in type, retractable LM2100™ natural gas or dual fuel burner
- State-of-the-art FPS™ class 1 gas igniter with integral flame detection
- Easily accessible local igniter, burner controls and valve trains
- Pre-assembled main gas header

valve assembly for igniter and burner supply

- Complete burner management system and operator interface graphics

Because our conversion system components are fully shop assembled and wired, we perform factory acceptance testing prior to installation. We encourage customer participation in this testing, enabling us to optimize the operator interface to suit your specific needs, improve the reliability of your overall system and reduce commissioning time.



*Shop-assembled main gas header valve train.*



## **B&W full-scope capabilities**

In addition to equipment supply, we provide a complete range of services including design engineering, manufacturing, project management, start-up and commissioning, and training.

Conversion project capabilities include:

- Engineering and feasibility studies
- Complete natural gas conversion systems and components
- Shop assembly modularization and factory acceptance testing
- Project management
- Aftermarket onsite support
- Start-up and commissioning
- Operator, electrical and instrumentation group training

- National Fire Protection Association, FM Global and Black Liquor Recovery Boiler Advisory Committee compliant

Our full-scope project approach allows us to fully integrate your recovery boiler with its new natural gas combustion system. We minimize project cost, schedule and unit downtime through

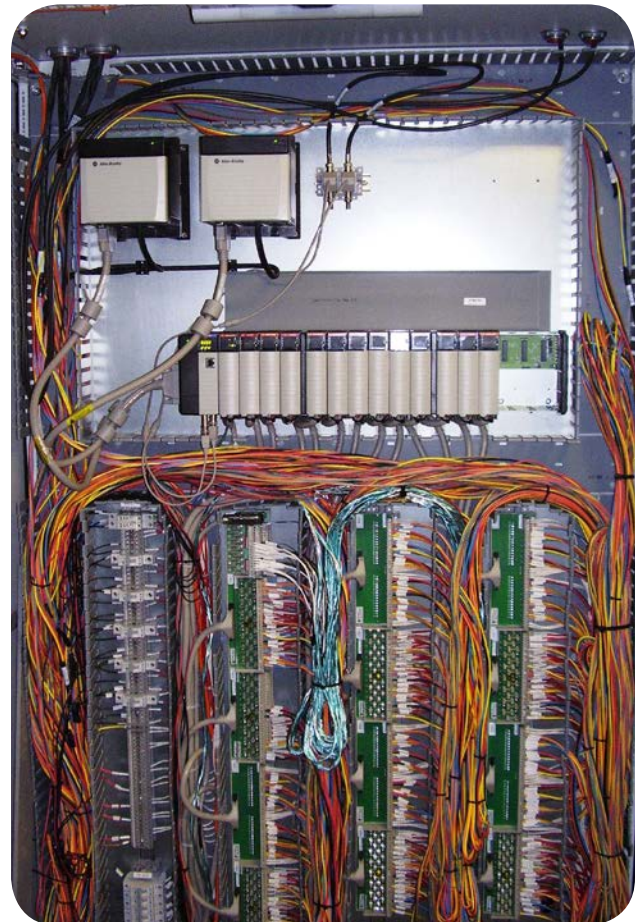
pre-assembled modular components, plug-in type burners, staged equipment delivery for pre-outage installation and overall streamlined project management execution.



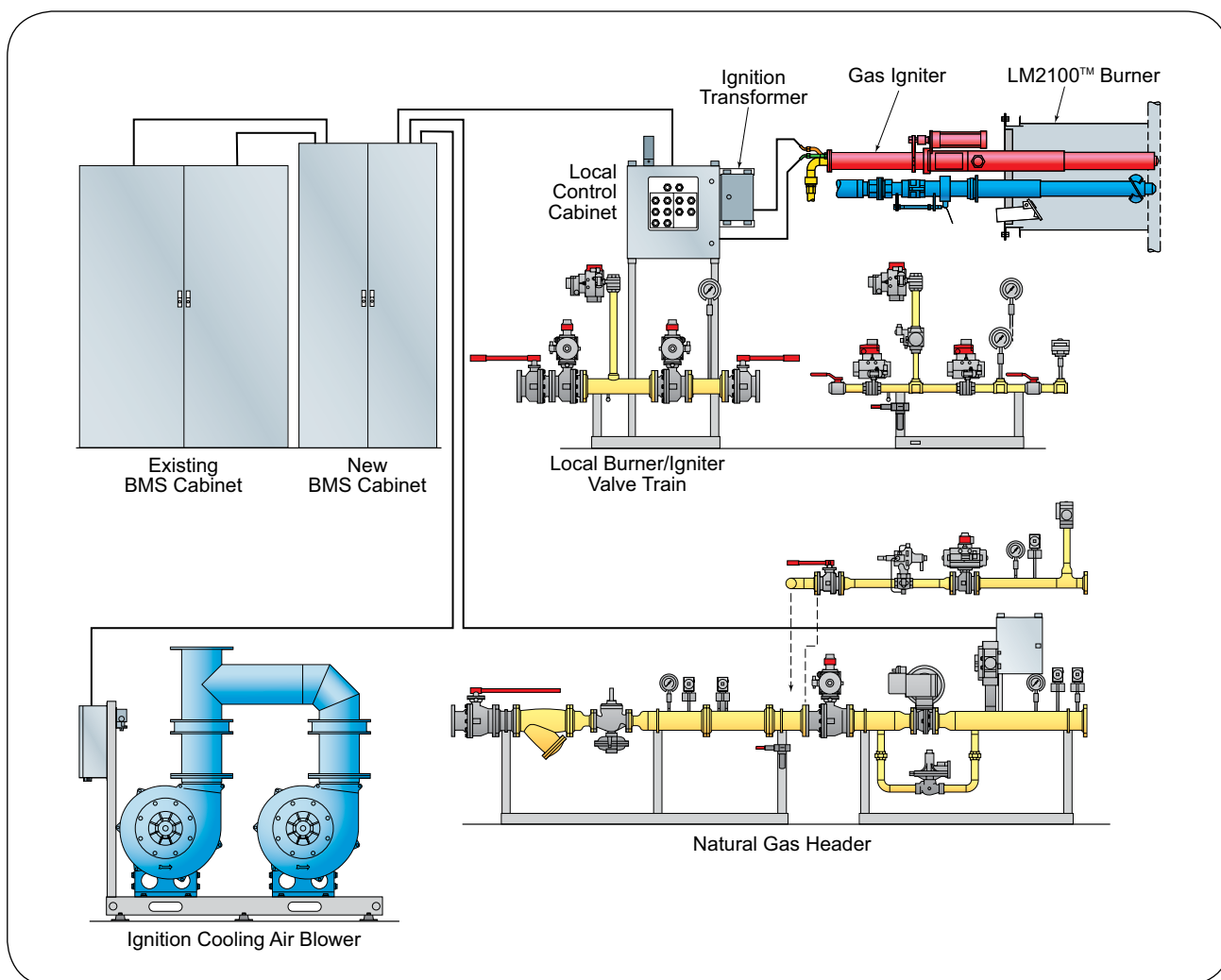
*Cooling air blower and igniter burner controls.*



*Burner/igniter valve train with local control panel.*



*Burner management system control cabinet wiring.*



*Offering integrated, quality technology and services, B&W can be your single-source supplier for recovery boiler natural gas combustion systems and fuel conversion projects.*

**Energy | Environmental**

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