

# NEW CBEX ELITE BOILER INCREASES CAPACITY AND EFFICIENCY FOR THIS PAPER PLANT

## BOILER CASE STUDY

### Longview Fibre Paper & Packaging Inc.

Oakland, California

CBEX Elite Boiler Installation

## CUSTOMER APPLICATION AND KEY CHALLENGES

Longview is a major producer of Kraft paper packaging. Their facilities include one of the highest-capacity and most diverse paper mills in North America and a network of well-equipped corrugated container plants in four Western states. Manufacturing more than 70 grades of Kraft paper and containerboard, Longview supplies a broad range of corrugated packaging and solid fibre slip sheets to 35 countries worldwide.

To provide steam for their paper corrugation and cardboard sheeting processes, Longview was utilizing an outdated 300 HP boiler. After coming under new ownership, Longview decided to upgrade their boiler system to meet the stricter Bay Area Air Quality Management District requirements, as well as to increase the capacity and efficiency of their plant.



Longview Fibre in Oakland is a leading manufacturer of Kraft paper packaging

## THE R.F. MACDONALD CO. ANALYSIS & SOLUTION

For several years, R.F. MacDonald Co. had been in contact with Longview about upgrading their existing 300 HP boiler to increase the capacity and efficiency. When Longview's ownership changed hands, they decided it was time to make the upgrade. R.F. MacDonald Co. collaborated with Longview to design a boiler system and plant layout that was the best fit for their production needs, while also meeting the local air district requirements.

R.F. MacDonald Co. recommended the new CBEX Elite Firetube boiler, designed, manufactured, and packaged by Cleaver-Brooks. The unit was fire tested at the factory and shipped as a package, ready for quick connection to utilities. In addition to the features provided on all Cleaver-Brooks Firetube boilers, the CBEX Elite model has a Two Pass design, which offers high efficiency, reliability, safety, and ease of operation. Not only does the CBEX boiler produce steam pressures of 175 psi, but it operates with less than 9 ppm NOx emissions.

To capture the full benefits the CBEX Elite has to offer, R.F. MacDonald Co. also replaced Longview's feedwater pumps



The new CBEX Elite waits on the truck bed (foreground) as the old boiler is removed

BOILERS

PUMPS

SYSTEMS

SERVICE

PARTS

#### CORPORATE

25920 Eden Landing Road  
Hayward, CA 94545  
510.784.0110

#### BAKERSFIELD

P.O. Box 71528  
Bakersfield, CA 93387  
661.363.6225

#### FRESNO

88 N. Hughes Avenue  
Fresno, CA 93706  
559.498.6949

#### LAS VEGAS

3111 S. Valley View Blvd., Ste. E120  
Las Vegas, NV 89102  
702.220.6680

#### LOS ANGELES

10261 Matern Place  
Santa Fe Springs, CA 90670  
714.257.0900

#### MODESTO

1549 Cummins Drive  
Modesto, CA 95358  
209.576.0726

#### RENO

8565 White Fir Street, Unit B2  
Reno, NV 89523  
775.356.0300

#### SONOMA/NAPA

642 Martin Avenue, Suite B  
Rohnert Park, CA 94928  
707.586.9234

#### SAN DIEGO

P.O. Box 1867  
Poway, CA 92064  
858.538.5877

[www.rfmacdonald.com](http://www.rfmacdonald.com)



**R.F. MacDonald Co.**

*your boiler & pump solutions team  
~ since 1956*



Final installation required an array of equipment to maneuver the boiler into the existing space

with Grundfos CR Cool-Top pumps to supply sufficient water for the larger capacity boiler. The Grundfos Cool-Top is specially designed to handle liquids up to 356°F at pressures up to 580 psi, and the industrial grade seals provide a long life under extreme operating conditions.

### PROJECT RESULTS

Longview needed the installation completed quickly and accurately. The existing boiler was removed on a Friday morning, and the new CBEX Elite boiler was up and running and fully tested in time for Longview to continue production by Tuesday morning.

Longview is now operating more efficiently at a higher capacity, which is saving them time and money. The NOx emissions source test came in under 8 ppm, below their 9 ppm target, and the boiler is still capable of even lower levels down to 5 ppm for any regulations that may come into place in the future. Longview was so impressed with the results of their new boiler that they have asked R.F. MacDonald Co. to upgrade the heat recovery controls on their flash tank, as well.

**"R.F. MacDonald Co. designed the layout and completed all of the preliminary fabrication long before the major equipment was shipped to the site.**

**This precision planning was critical for the project to flow quickly and smoothly, and comes only from the seasoned experience of R.F. MacDonald Co. and their staff."**