

# BERMINGHAM

## FOUNDATION SOLUTIONS

### SINCE 1897

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MARCH 2009

## PARTNERING WITH LEDUC AND SPIE ON TWO PROJECTS IN AFRICA

Birmingham's fast manufacturing ability and quick delivery was the key to obtaining equipment orders for two projects in Africa during 2008.

### ALUMINA REFINERY IN BOKE-GUINEA

Leduc of Vernon, France purchased two B5505 hammers to drive piles for the Global Alumina-Sangaredi Alumina refinery in Boke-Guinea. The B5505 was first rented in November 2007 to drive test piles and then purchased to drive approximately 500 trial production piles. The second hammer -- complete with a VTL system used on a 70-ton Kobelco crane from Birmingham's construction fleet -- was ordered in January 2008 to tool up for a subsequent 6000 piles consisting of HP360 x 133 x 36 m long steel piles in 24 m and 12m sections. A 10 m pre-drilled hole through the ironstone cap was necessary before driving of the pile.

Monitoring of hammer energy was a requirement and the pile driving monitor (PDM) fitted the specification perfectly. Neils Christensen was on-site for the delivery and rig up.

#### Equipment Supplied – Guinea Project

Two B5505 hammers  
Pile driving monitor (PDM)  
One 108-ft. long L18VTL system  
A Kobelco BM700 crane from Birmingham's construction fleet.



### LNG TERMINAL IN SKIKDA, ALGERIA

Birmingham was approached in late March 2008 to supply equipment for the reconstruction of a damaged LNG terminal in Skikda, Algeria -- a joint venture between two French companies Leduc of Vernon and Spie Foundations of Cergy-Pontoise. Two months later, Birmingham delivered hammers, pile driving monitors, L18 VTL complete systems and a CK-800 80-ton crane to the site and the equipment was up and running by mid-June. A hydraulic retrofit of the clients' existing cranes was performed in record time at the job site to minimize interruptions. The equipment met the high production capacity goal and the PDM provided the stable monitoring system required for the job. The project is still in full swing driving 14" and 12" H piles in 24m long sections.



#### Equipment Supplied – Algeria project

##### To Leduc

One B32 hammer  
Two B5505 hammers  
Two pile driving monitors (PDM)  
Two 98-ft L18 VTL complete systems  
One Kobelco CK-800 80-ton crane from Birmingham's construction fleet

##### To Spie

Two B5505 hammers  
Two pile driving monitors (PDM)  
Two 98-ft L18 VTL complete systems



I would like to personally thank all of our customers and employees who have helped to make 2008 our most successful endeavor yet. The year ended

## CEO'S MESSAGE – Threat or Opportunity?

with global financial markets in turmoil; yet our key business sector, infrastructure, remains strong and governments worldwide are pledging increased spending for public works.

Looking forward, we see many challenges and opportunities in our industry. Innovation and ingenuity, the elements of basic engineering, will be combined to produce several new technologies, such as our Jetty

Builder. A very cost competitive alternative to traditional marine construction, the Jetty Builder transforms on site work into a systematic "Industrial Process" which minimizes weather delays and enables a higher degree of quality and uniformity.

In addition, the company will be focusing our research and development efforts on new ways to increase both the load carrying capacity and the geothermal capacity of

foundations that are designed to be used for the heating and cooling of buildings.

We look forward to the many challenges that you, our clients, will bring and welcome the opportunity to work with you to provide competitive solutions to all of them.

  
Patrick Bermingham, CEO

# HAYWARD BAKER

## L-18 VTL LEAD SYSTEM

Hayward Baker's Rosell, Illinois office near Chicago reports that they have realized a significant production gain since acquiring a new 118-ft set of Bermingham L-18 VTL Leads. Bermingham supplied the leads painted in Hayward Baker's corporate blue colour. The leads are being used on a Liebherr 855HD crane with various hammers for general production work.



# STATNAMIC ACHIEVES ASTM STANDARD

STATNAMIC - Bermingham's patented load testing technology -- has been recognized with an ASTM Specification! After a rigorous approval process within the deep foundation community, ASTM D-7383 became an official document on October 31, 2008. This is a major endorsement for this innovative Bermingham technology. STATNAMIC has been in widespread use throughout the world since the mid-1990s and this new ASTM Specification should encourage even more growth in the future. The standard will appear in the 2009 ASTM Book of Standards and is available for purchase on the ASTM website [www.ASTM.org](http://www.ASTM.org).



# COMBI WALL FOR THOROLD COGENERATION PLANT

Bermingham employees received high accolades for the quick and successful installation of a combi wall, part of the outfall structure, on the construction project to build a Cogeneration Station in Thorold, Ontario. The cogeneration facility, which sits next to the Abitibi-Consolidated Company of Canada Thorold Recycled Paper Mill, is being built for Northland Power Inc. who contracted engineering, procurement and construction to

VK Mason Construction Co., a subsidiary of Kiewit Construction of Nebraska.

The combi wall consists of 30" diameter pipe piles interlocking with sheet piles to shore up roadway water from the Power Station and act as an interface between the pipeline returning water from the cogeneration facility and the Welland Canal. The pipe piles serve as the soldier piles in the wall and the steel sheets retain the soil. Because the sheets are flexible they can take up any variance in verticality between the pipe piles. This shoring wall is a permanent fixture and was designed to withstand normal service loads, such as lateral earth pressure and vehicle traffic on the adjacent roadway, along with earthquake loading and the possibility of the Welland Canal ever being completely drained.

Bermingham Project Manager Andrew Weltz, explains the purpose of the combi wall is "to provide a longer unsupported distance -- in this case, over 30 ft. vertically -- between restraints on the shoring wall. This is necessary because the bottom of the pipe piles are pinned in the rock via a structural steel member located in a drilled rock socket, and a level of tiebacks located just above the water elevation, thus leaving the distance from bedrock to the tieback elevation of over 30 ft in the Welland Canal."

Construction on the combi wall started in mid-October 2008 and at peak construction



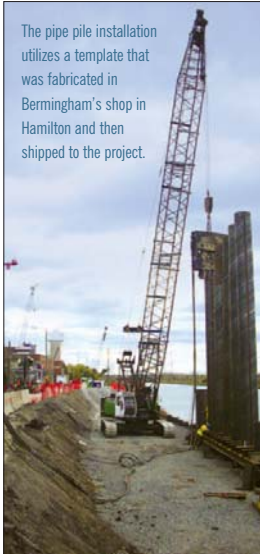
The Berminghammer 30-30 drill on a Berminghammer lead system is mounted on the Kobelco BM700 Crane to drill 26" diameter rock sockets at the bottom of the 30" diameter pipe piles on the right. The Foster 4200 Vibratory hammer is hanging from the Kobelco CK1000 Crane which is vibrating the 30" diameter pipe piles down to bedrock to ensure an adequate seal between the pipe pile and the bedrock.

employed ten Bermingham employees, under Superintendent Dave Christensen, who accomplished the majority of the work by the third week of January. The shoring project wrapped up at the end of February with a reduced crew of welders. Noting that the client was impressed with the speed at which the project was completed and the ability of the Bermingham crew, Weltz emphasized, "This project was a good demonstration of

Bermingham Construction's capabilities, the wide range of foundation equipment that Berminghammer has to offer and the ability of the manufacturing shop facility."

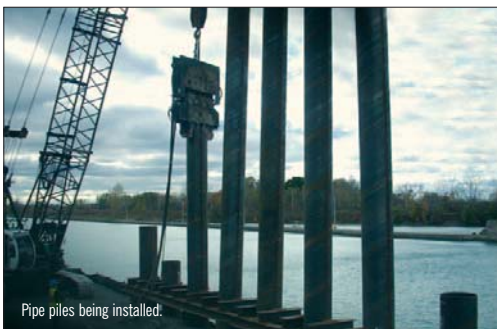
When completed in second quarter 2010, The Thorold Cogeneration Plant will be one of the largest cogeneration facilities in Ontario and will supply enough electricity to power the equivalent of 100,000 homes in Ontario.

The pipe pile installation utilizes a template that was fabricated in Bermingham's shop in Hamilton and then shipped to the project.

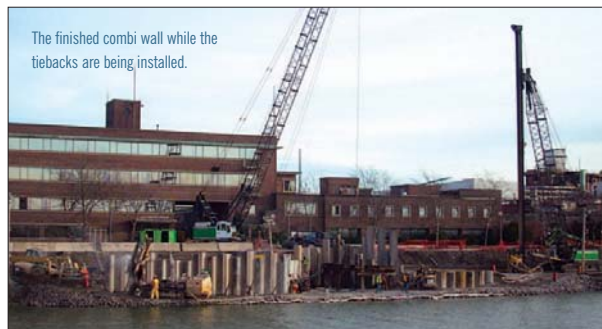


Equipment used to construct the combi wall:

- A Kobelco BM700 70-ton crane utilized as a service crane and a drilling crane when rigged up with a Berminghammer lead system and a Berminghammer 30-30 drill and a 26" down the hole hammer to drill rock sockets
- Two Atlas Copco 1000 cfm Compressors to provide pressure for the down the hole hammer
- A Kobelco CK1000, 100-ton crane which utilized both Foster and HPSI Vibratory Hammers to install the pipe piles and sheet piles
- A Berminghammer B4505 diesel hammer mounted on a Berminghammer lead system used to drive the sheet piles to bedrock
- A Klemm 806 tieback drill to install rock anchors



Pipe piles being installed.



The finished combi wall while the tiebacks are being installed.

# WASHINGTON BYPASS BRIDGE UPDATE

Great results are being achieved with the bridge builder being used in construction of the \$192-million U.S. Route 17 Washington Bypass in Beaufort county North Carolina. The automated tilting lead pile driving system and associated beam launching girder – a collaborative effort between Birmingham and Deal of Rizzani de Eccher designed specifically for this project – is performing a number of operations in the construction of the 4.5 km (2.8 miles) bridge portion of the three-part project. This innovative bridge builder drives piles, sets pre-cast bent caps 40 meters apart, erects girder beams and pours the deck, while crossing a river, a railway and two roads without any interruption to the traffic below. Equally important, this self-

launcher, which spans about 120 feet, is protecting the surrounding environmentally-sensitive wetlands. Design-Builder Flatiron/United reports the project is progressing well and is currently ahead of schedule, due in a large part to the speed that the bridge spans are being erected without ground support trestles.

Two machines are being used simultaneously from the north and south to build the 128-span long bridge. To-date, LG1 which moves from south to north is currently working on span 63 and LG2 is completing span 96.



“We continue to use Birmingham equipment and hammers in a fast-paced bridge construction environment and they're proving to work out well for the project.”

- Mark Mallett, Project Manager, Flatiron.



Building a bridge without interrupting traffic below.

## DESTINY PROJECT

Retail giant DestiNY joined forces with leading construction manager Cianbro of Maine for the Carousel Center shopping mall expansion in Syracuse, New York. Birmingham supplied a variety of equipment to be used on the project, including a set of 166-ft long fixed L-23 leads to install 140-ft H-piles for the shopping mall foundations. Over 300,000 lf of H-piles were driven full-length for maximum daily production. Birmingham made a sled for Cianbro's vibratory hammer

that they mounted on the L-23 lead, as well as supplying swinging box leads and a new B-64 Clean Diesel Hammer driving the piles to final set. The B-64 was run in both the swinging leads and was later moved to the L-23 leads once the work with the vibratory hammer was complete. The project had a strict environmental mandate -- only bio-fuel, oil and grease were used -- and embraced several green initiatives, including a paperless office.



## F. MILLER CONSTRUCTION REALIZES INCREASED PRODUCTION WITH CUSTOM BUILT BOX LEADS

Birmingham custom built a 140 ft. set 37" box leads for driving 1:1 battered piles from a barge on a project for Citgo Refinery in Lake Charles, Louisiana. The custom lead set included floating pile

guides, special rigging and hydraulic winch assembly. F. Miller Construction planned to drive one pile per day, but the new system allowed them to drive up to four W33X118 piles in one day.

# BERMINGHAM ATTRACTS A LOT OF ATTENTION AT CON EXPO

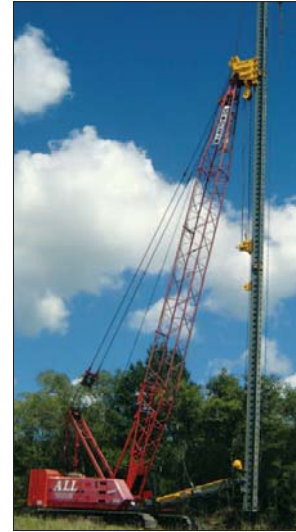
Birmingham attracted a lot of attention at their outdoor booth, which they shared with HPSI of Kansas City, at ConExpo in Las Vegas March 2008.

A free-standing B-9 hammer was on display, along with an L-15 VTL Lead System which was mounted on a 40-tonne Casagrande lattice-boom crane in collaboration with Casagrande of Italy/USA. A B-21 Clean Diesel hammer was also displayed on the lead system.

## OCCI PURCHASES LEADS

OCCI of Missouri took great interest in the system and subsequently purchased a 117 ft. set of L-18 VTL's for their Manitowoc 222 crane. Using the system on a project for Kansas City Southern

Railroad to install bridges over an old and abandoned right of way stretching from Victoria, Texas to Richmond, Texas. OCCI realized a significant gain in production over previous equipment used. With the swinging leads and the same crane they were able to drive shorter pile lengths -- 20" pipe piles up to 90-ft. long -- and splice the add-ons.



# ENTREPRENEUR OF THE YEAR

Upon accepting Ernst & Young's Ontario "Entrepreneur of the Year" in the manufacturing category in October 2008, Patrick Bermingham, CEO, credited employees and the company's team-based management for its success. When Bermingham exceeded \$60 million in sales it was a dream come true, but Patrick emphasized, "For entrepreneurs, it's not about the money; it's about realizing the potential of the company. The biggest achievement is breathing new life

into an old company. I want to thank my employees, therefore, for helping me realize my dreams."

Ernst and Young Entrepreneur of the Year is recognized globally as the most prestigious business award honoring the spirit and contribution of individuals in Canada and around the world who inspire others with their vision, leadership and achievement. Dan Cornacchia, National and Ontario Director of the Awards

program, commented that since The Entrepreneur of the Year annual awards program was established in Canada fifteen years ago, "individuals have been finding exciting, new ways of doing business and meeting market needs. These entrepreneurs are propelling the Canadian economy forward. Their ideas and contributions make a real difference to their customers, employees and communities."



# COMMITTED TO THE COMMUNITY

In their first campaign with the United Way of Burlington and Greater Hamilton in 2008, Birmingham employees beat their \$10,000 fundraising goal.

Through a variety of events that included a paintball tournament, a barbecue, office lunch donations and a raffle for prizes such as a refrigerator full of meat, beer, wine and Toronto Maple Leaf tickets, Birmingham employees were able to present a cheque for \$10,952 to the United Way. The company matched the employee contribution and offered employees a paid day off and the use of equipment when they volunteered to work on maintenance and renovation projects at The Eva Rothwell Resource Centre in east Hamilton. Birmingham's United Way Chair Dwayne Praught emphasized, "I'm proud of the efforts everyone put in during our first year of participation. We hope to increase our goal for the 2009 campaign by ten percent."



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