



KRB EQUIPMENT

PROJECT STORY .06



The expansion of the Panama Canal will allow super tankers to pass through the third lane locks.

KRB Reinforces the largest construction project in the world the Panama Canal

KRB Equipment has been selected for the largest construction project in the world. the Expansion of the Panama canal.

The project consists of the construction of a third wider lane, with two new sets of locks - one on the Pacific and one on the Atlantic side of the Canal. Each lock will have three chambers and each chamber will have three water reutilization basins. **The locks and water basins are expected to contain 250,000 tons of reinforcing steel.**

The steel fabrication and placement will be done by Armacentro of Madrid, Spain. They are involved in major projects throughout the World. www.armacentro.com

After considering proposals from the leading equipment suppliers KRB Machinery was selected because of its ability to meet the intense requirements of this project.



KRB
1058 Cool Creek Road
Wrightsville, PA 17368
Phone: 717-252-3667
Fax: 717-252-9247
info@krbmachinery.com



"We are delighted to be a part of this major project, and especially because it involves improving the Panama Canal, which as we near its 100th birthday remains one of the engineering marvels of the World, Bob Brandt, President and CEO, explains to employees.

Leon Leber, Vice President of Sales and Service for KRB interjects, "KRB's equipment is noted for its high performance and durability which makes it a perfect choice for projects like the Panama Canal. It is also why we have placed equipment all over the world on other very large projects like the 2014 Sochi Olympics, bridge and dam projects in Venezuela, nuclear reactors in China, and airports in northern Africa."

One of the largest and most difficult engineering projects ever undertaken, the canal has had an enormous impact on shipping between the two oceans, replacing the long and treacherous route via Cape Horn at the southernmost tip of South America. A ship sailing from New York to San Francisco via the canal travels 9,500 km (5,900 mi), well under half the 22,500 km (14,000 mi) route around Cape Horn. ¹

America and Panama have long been in cooperation with each other. In 1903 Philippe Bunau-Varilla, chief engineer of the French canal company responsible for the project at the time, told Teddy Roosevelt of a possible revolt and hoped that the U.S. would support it with troops and money. Roosevelt, eyeing a vital strategic interest, promised support for Panama's separatist movement from Columbia. On November 2, 1903, U.S. warships blocked sea lanes preventing Colombian troops from putting down the revolt. Panama achieved independence the very next day and the U.S. achieved a shorter passage for its military and trade vessels. ²

The first attempt to construct a canal began in 1880 under French leadership, but was abandoned after 21,900 workers died from malaria,

yellow fever and landslides. After supporting Panama's independence, Roosevelt launched a second effort, incurring a further 5,600 deaths but the U.S. finally succeeded in opening the canal in 1914 under President Woodrow Wilson with little fanfare due to U.S. involvement in WWI. The U.S. controlled the Canal Zone until 1977 when President Carter signed the Torrijos-Carter treaty which slowly transitioned authority, finally giving full command of the waterway to the Panama Canal Authority in December of 1999.

As the demand for more shipping is rising, the canal is positioned to be a significant feature for the foreseeable future. It is anticipated that by 2011, 37% of the world's container ships will be too large for the present canal, thus a failure to expand would result in a significant loss of market share. ³

The Canal today has two lanes each with its own set of locks. The expansion consists of adding a third lane through the construction of lock complexes at each end of the Canal. One lock complex will be located on the Pacific side to the southwest of the existing Miraflores Locks. The other complex will be located to the east of the existing Gatun Locks. Each of these new lock complexes will have three consecutive chambers designed to move vessels from sea level to the level of Gatun Lake and back down again.

Each chamber will have three lateral water-saving basins, for a total of nine basins per lock and 18 basins total. Just like the existing locks, the new locks and their basins will be filled and emptied by gravity, without the use of pumps. The location of the new locks uses a significant portion of the area excavated by the United States in 1939 and suspended in 1942 because of the start of World War II. The new locks will be connected to the existing channel system through new navigational channels. ⁴

The timing of the expansion is no coincidence either. The expansion project is scheduled to be completed in 2014 for the 100th anniversary of the canal's opening in 1914. The cost to construct the third set of locks is estimated to be \$5.25 billion USD.

Since 1986, KRB has been building the best reinforcing steel cutting systems in the world. The quality construction and long life of KRB cutting, bending and material handling machines has been proven in 55 countries at over 1500 installations around the globe. And now KRB equipment will be reinforcing the biggest construction project on earth, the expansion of the Panama Canal.

1.Scott, William R. (1913). The Americans in Panama. New York, NY: Statler Publishing Company. <http://www.czbrats.com/AmPan/index.htm>.

2.Wikipedia, Panama Canal. http://en.wikipedia.org/wiki/Panama_Canal#cite_note-0

3."Relevant Information on the Third Set of Locks Project" (PDF). Panama Canal Authority. 2006-04-24. <http://www.pancanal.com/esp/plan/documentos/propuesta/acp-propos-la-relevant-information.pdf>. Retrieved 2006-04-25.

4.Proposal for the Expansion of the Panama Canal by the Panama Canal Authority (English)



KRB Standard Shearlines and benders will be used to cut and bend the 250,000 tons of steel required for the project.