

# Construction Equipment Guide

Published  
Nationally

\$3.00

Midwest  
Edition

December 11  
2010  
Vol. XVII • No. 25

"The Nation's Best Read Construction Newspaper... Founded 1957."

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The excessive heat and dust proved to be a challenge at all times.

## Screen Machine Delivers Equipment to Afghanistan

Screen Machine Industries Inc., a manufacturer of portable crushing and screening equipment, recently completed a contract to supply a complete system to the U.S. Air Force at Kandahar Air Field in Afghanistan.

As with many military contracts this journey took months to complete and saw both equipment and personnel travel more than 7,000 mi. away into hostile territory. The equipment will be used at multiple locations in Afghanistan within U.S./NATO military installations.

Kandahar Air Field lies about 10 mi. outside of the provincial capital of Kandahar City. An \$850 million expansion was begun in 2009 in order to accommodate President Obama's announced troop surge that would nearly double the size of the base. The 2009 surge in NATO operations in southern Afghanistan pushed the number of aircraft operations at the base from 1,700 to 5,000 flights per week.

These numbers meant that Kandahar had become the busiest one-runway airport in the world. The expansion also would make it the largest NATO base anywhere in the world.

Nearly 30,000 personnel from 40 different nations now live and work within this sprawling compound. The new crushing and screening equipment would be used to further this expansion in advance of the latest troop surge which was scheduled for late summer 2010.

Receiving the purchase order was the first and most important step in the process. However, getting four very large pieces of construction machinery from Columbus, Ohio, all the way to a war zone in Afghanistan had the potential to be a logistical nightmare.

The models JXT jaw crusher, 4043T impact crusher, and Spyder 516T screening plant were all shipped via truck from the factory to a port in Savannah, Ga.

A CH40 radial stacking conveyor with its

own diesel power module was loaded into a 40 ft. container and headed to the port in Norfolk, Va. All equipment would then be loaded aboard ships for the long trek across the ocean through waters often patrolled by Somali pirates to Port Qasim in Karachi, Pakistan, where it would eventually be reloaded onto trucks for the last leg of the journey to its final destination of Kandahar Air Field.

This included travel through the mountainous border region between Pakistan and Afghanistan and the treacherous stretch from the border into the heart of the Taliban in Kandahar province.

Due to very stringent measures put in place to regulate any materials or equipment coming into the country, completing the contract was at times quite tedious and time consuming. This process involved multiple steps including clearance by the U.S. Embassy in Afghanistan, the Afghan Ministry of Foreign Affairs, and the Afghan Ministry of Finance.

In total, it was a five-month process from the time of arrival at the port in Karachi until the equipment reached the final destination in Kandahar.

Screen Machine Industries contractors were required to perform setup and training on the equipment as part of the contract. This involved passing a federal criminal background check and securing a visa through the Embassy of Afghanistan in Washington, D.C. Upon entering Kandahar Air Field personnel were required to surrender their passports in order to obtain a contractors badge. An armed police escort was assigned to the contractors at all times for safety.

Accommodations were a bit primitive by

civilian standards yet quite adequate considering the circumstances. Sleeping quarters consisted of a large 8-person military tent. The Screen Machine contractors shared a tent with six U.S. airmen. Old shipping containers were converted into restroom and shower facilities. The compound was not

usable products while also sorting out the trash. The fine material would be mixed back into new concrete mixes while the mid sized product could be used for road base.

The two most obvious issues to be confronted in the field would be excessive heat and dust. The heat created a couple of problems. For the workers it was difficult to remain hydrated. Often it was only possible to work 20 to 30 minute intervals and intake of fluids had to be near constant.

Several airmen had to be treated with intravenous fluids for dehydration during the week that the Screen Machine personnel were there.

The other problem created by the heat was keeping the machines, which usually operated for periods of 4 to 5 hours at a time with one hour shut downs in between, cool. Engine temperatures and coolant levels were regularly monitored.

The dust was another major issue. When you couple the dust of the desert with the additional dust being generated by the crushing of the concrete these levels were tremendously high. This created a concern for such items as bearings, filters, belts, fans and radiators.

The periodic maintenance intervals had to be shortened, especially on cleaning and changing of the engine filters. Sandstorms would occasionally push across the base virtually bringing dusk in the middle of the afternoon.

This only helped to compound the dust concerns.

Occasional rocket attacks were even more commonplace than the sandstorms. Though usually poorly aimed and fairly harmless, they nevertheless served to keep everyone grounded and alert. After all, this is a war zone.



Timm Miller (L) and Brian Williams of Screen Machine Inc. take a break at Kandahar Air Field.

without some creature comforts of home, though, including warm running water, air conditioning, satellite television and wireless internet access.

On site, the equipment would be used for making new quarries, generating base course, coarse aggregate for concrete, and drainage rock.

However, its initial use would be for recycling concrete to be reused in building helipads, runways and roads.

Both the JXT jaw crusher and 4043T impact crusher were utilized inline as a primary and secondary crusher with the 4043T discharging directly into the hopper of the Spyder 516T screening plant. The Spyder 516T was set up with 3 in. (7.6 cm) wire mesh top deck screens and .75 in. (1.9 cm) wire mesh bottom deck screens. This allowed the airmen to generate two separate