15 July 2008

We visited the world's largest open pit copper mine at Chuquicamata, Chile today.

While we were there we had the chance to see the trucks referenced in the post "Fuso Units" at work.

The mine uses 94 of these trucks. 60 are Komatsu and 34 are Liebherr.

The trucks are loaded with crawler excavators matched to the trucks' capacity.

The trucks cost around $4,000,000 USD to purchase. I do not know if the trucks working at the mine were leased or what the typical residual value is.

The trucks have a service life of 10 years, although the dump beds last less time than that.

I also got an update on the truck tire information. According to our tour guide, the tires for these trucks weigh three tons each and cost $30,000. Their service life is about nine months.

The trucks are remarkably quiet in operation. While climbing uphill past us on the viewing stand at maximum load we did not have to change our voice levels to be heard over them.

The Liebherr trucks working at the mine are model T 282 and T 282 B. The T 282 B has a maximum payload of 400 tons (800,000 lbs) / 360 metric tons and a maximum operating total weight of 652.5 tons (1,305,000 lbs) / 592 metric tons.

Liebherr T 282 B info is at:
http://www.liebherr.com/me/en/products_mc.asp?menuID=106220!2044-0&metric=1

I do not know what specific model of the Komatsu trucks are used at the mine. Komatsu truck info is at:
730: http://www.komatsuamerica.com/?p=equipment&f1=view&prdt_id=628
830E: http://www.komatsuamerica.com/?p=equipment&f1=view&prdt_id=514
830E-AC: http://www.komatsuamerica.com/?p=equipment&f1=view&prdt_id=843
930E-4: http://www.komatsuamerica.com/?p=equipment&f1=view&prdt_id=920

I think the Komatsu trucks working at the mine were the 830E, but may have been the 830E-AC. Every truck I saw had the diagonal ladder across the front, which the 730 lacks.

The Komatsu 930 is a brand new truck, so I know they were not in the mine, but thought you might be interested in it. Maximum total weight (payload and chassis) for the 930E-4 is 1,106,670 lb / 501,974 kg.

This is an overview panorama of the mine taken from the viewing platform. The pit is 2.67 miles / 4.3 km long, 1.86 miles / 3 km wide and over 2,789 feet / 850 meters deep.

The pit employs 900 workers in three 300 person shifts, working 24 hours a day. The entire site, including the processing plants and support functions, employs 8,000 workers.

The pit produces 550,000 tons of ore annually. There are three pits at the site and annual ore production from all three is 933,000 tons. The raw ore is about 1% copper.

When we arrived at the pit they had just finished blasting, resulting in a tremendous amount of dust, making for very challenging shooting conditions.

Partial view of the pit.

Side view of loaded truck.

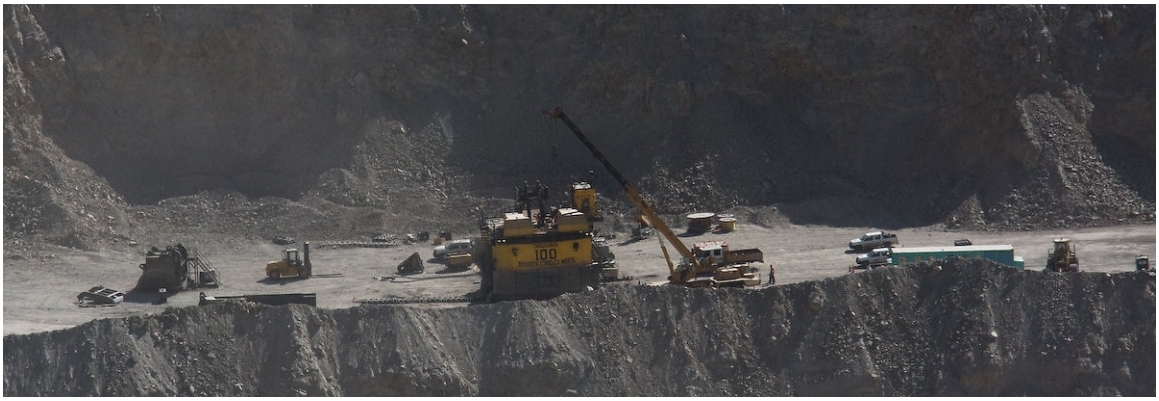
Truck operator position.

Rear view of loaded trucks.

Trucks on the far side of the mine.

Trucks passing on the far side of the mine. Note straight tanker truck for scale.

Excavator used to load the trucks. Note men and pickup for scale.



Excavator being assembled / disassembled (I don't know which) on far side of the mine. The bucket is on the left. Note trucks and man for scale.

Truck being filled by an excavator.

$8,000,000 drag race uphill out of the mine. 453 won easily.

Truck dumping mine tailings (the material left after separating out the valuable components). There are entire mountains of tailings at the mine site.

Liebherr Chile service area. Note boom truck and man in hard hat servicing T 282 B for scale.

Liebherr T 282 B electric drive motor. Note boom truck for scale. Note size of brake rotor and calipers.

Fuso Units at Work

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All photos by Douglas Hackney

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Photo by Jorge Valdes

Douglas and Stephanie Hackney are on a two to three year global overland expedition.

You can learn more about their travels at: http://www.hackneys.com/travel

