



## Briefing

# The Northern Plant's first metal tappings

April, 2013

The dream about processing Nickel in the North has been passed on from generation to generation. The first metal tapping symbolizes the achievement of this expectation, as it is the first step into the operational launching process. The dream becomes reality...

*"Day after day, I contribute to realize the ancestors', my grandfather's and father's dream. This is a great privilege and honor! "*

*A KNS employee to Victorin Lurel, the French Minister of Overseas Territories*

For women and men working at Koniambo Nickel, for communities who have been with us for many years, for each and for all those individuals who, through their vision, their courage and their choices, have made this moment happened, these first metal tappings are an intensive and very emotional moment!

For the record, the Northern Plant is fitted with two production lines. These first metal tappings are related to the first one and 2013's production target is 17,000 tons of nickel metal contained in ferronickel.

The electrical furnace, pre-loaded with 230 tons of steel, has been gradually heated to approximately 1,000 degrees Celsius temperature. This temperature has been particularly obtained through fuel burners which will be removed later on. At this stage, the material has not yet melted.

Then, the fulfillment of the first melting process arcs has enabled the casting of the carbonized steel into the formation of a liquid bath. Previously, 14 clamping systems have been tested to ensure the perfect tightness of the furnace, a prerequisite for the constitution of the liquid bath.

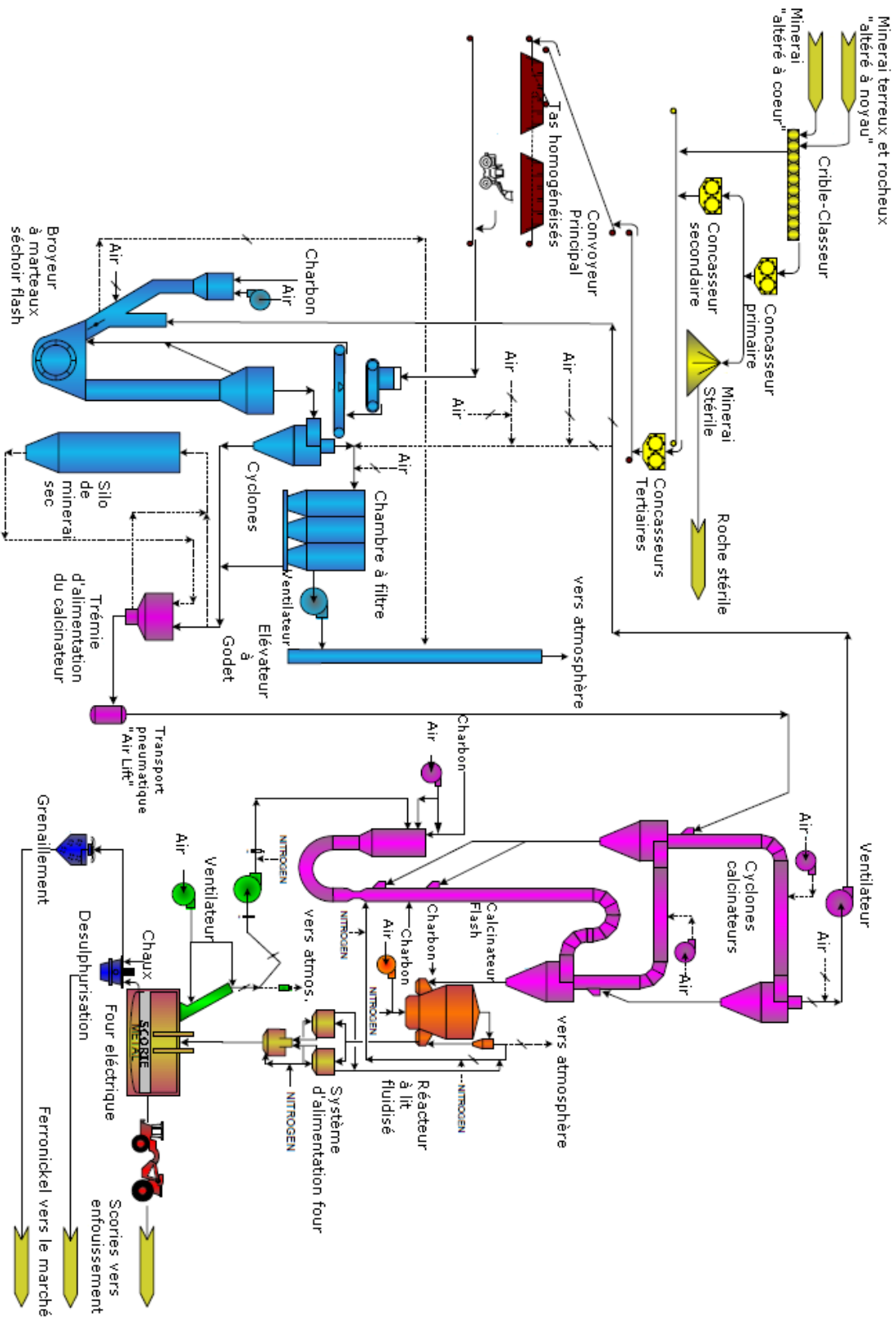
1,000 tons of iron and ferronickel mixture were subsequently added to reach a total charge of about 1,200 tons. Ferronickel cone used at this phase were provided by Falcondo Plant, located in the Dominican Republic.

The level of the metal bath surface is measured regularly throughout the processing cycle. As soon as the tap hole's location is reached, then the first nickel's casting is taking place releasing several tons of ferronickel.

The first metal tapping is the culmination of several tests on upstream processing facilities. The power plant has been tested to ensure both the constitution of melting process arcs and the furnace power supply. The connection to ENERCAL public network has been also part of these various phases' tests.

Such as all industrial sites in the world, the electrical furnace starting charge is made up of imported materials. This charge is essential for the constitution of the liquid bath as described above. The processing of Koniambo ore deposit by NST process, depends entirely on the success of the first metal bath tapping.

# Nickel Smelting Technology (NST) process diagram



# The Northern Plant Location Map

