



## TANK-HOUSE REFURBISHMENT



Severonickel Plant, Monchegorsk, Murmansk Region  
(Kola MMC)



Tank-House 1 saw refurbishment of buildings, equipment, and utility and ventilation systems. The project was completed in 2016. Tank-House 2 is to be transformed into an advanced, cost-efficient cathode nickel facility by introducing the technology of nickel electrowinning from chlorine dissolved tube furnace nickel powder.

### Highlights

#### Tank-House 1

Capacity commissioning of 45 ktpa

CAPEX of ca. RUB 0.8 bn

Project completed in 2016.

#### Tank-House 2

Increasing the capacity from 120 ktpa to 145 ktpa of nickel

Increasing the nickel recovery rate for converter matte by more than 1%

2017 CAPEX of ca. RUB 7 bn  
(ca. USD 120 mln)

CAPEX outstanding of ca. RUB 14 bn  
(ca. USD 236 mln)

Progress: ~40%

### PROJECT SCHEDULE

#### 2017

42 electrolysis cells upgraded at Tank-House 2 to support chlorine leaching

#### 2018

Gradual capacity commissioning

#### 2019

Reaching the design capacity and performance targets



## CONSTRUCTION OF A COPPER-NICKEL ORE CONCENTRATE SHIPMENT FACILITY



Zapolyarny, Murmansk Region  
(Kola MMC)

The new facility will enable the Company to split its copper-nickel concentrate into low-grade and high-grade.

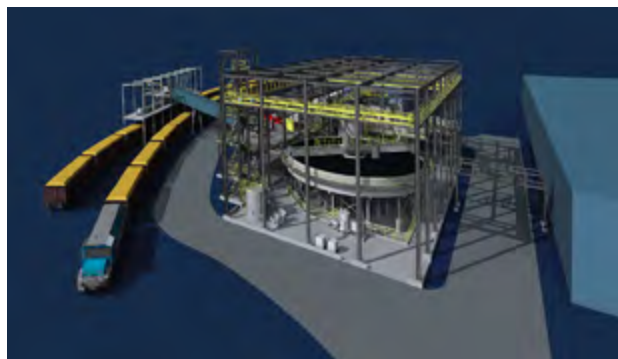
No low-grade concentrate processing will lead to significant cuts in sulphur dioxide emissions in Nickel. By re-arranging shipments of low-grade concentrate from Kola MMC to a third-party processor, the Company will be able to decommission ore-thermal furnace No 3 in the smelting shop and cut the operating costs.

### Highlights

Dried high-grade concentrate unit with a capacity of 150 ktpa

2017 CAPEX of RUB 0.8 bn  
(ca. USD 14 mln)

Outstanding CAPEX of RUB 4 bn  
(ca. USD 71 mln)



### PROJECT STATUS

#### September 2017

- Contract for engineering and equipment supplies signed with Outotec;
- Check-ups and surveys completed, preparation for utility systems dismantling and relocation in progress.

#### Q4 2018

Construction works of the project to be completed

#### Q2 2019

Output of key equipment