

## TALNAKH CONCENTRATOR



The upgrade has been rolled out in three stages. Stage 1 was completed in 2015, and included the reconstruction of existing flotation capacity and the replacement of flotation cells that were beyond their useful lives, in order to maintain the concentration capacity at 7.5 Mtpa. Stage 2 involved the expansion of the main building, the reconstruction of the reagent preparation building, and the construction of additional ball mills and vertical mills, as well as the 1st Stage of the tailing dump, all of which helped to boost capacity to 10 Mtpa. This stage was completed in 2018. Plans for the 3rd Stage of the Talnakh Concentrator Upgrade include a capacity ramp-up to 18 Mtpa and construction of the tailing dump's 2nd Stage. The new concentration technology will increase recovery by 4%–7% for all key metals. The project's completion is slated for 2023, reaching design capacity by 2024+. CAPEX for the 3rd Stage of Talnakh Concentrator in 2020–2024 is estimated at RUB 40 bn (about USD 0.6 bn).

## Location

Norilsk Industrial District, Krasnoyarsk Region

## Project overview

The Talnakh Concentrator (Polar Division) processes rich, cuprous, and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits to produce nickel-pyrrhotite and copper concentrates. In 2019, the plant processed 10.7 mln t of ore, with nickel recovery in bulk concentrate reaching 85.9% (+2.7% y-o-y).

**The new concentration technology will increase recovery by 4%-7% for all key metals.**

## 3rd Stage project timeline

'19

- CAPEX – RUB 424 mln (USD 7 mln)
- Inspection of the construction site and completion of preparatory work
- Development of design documentation completed
- Approval from the Main Department of State Expertise received and construction permit secured
- Completion of preparatory work in the main building of Talnakh Concentrator

'20-'22

- Development of engineering documents
- Construction and installation works
- Equipment delivery
- Pre-commissioning

'23-'24

- Commissioning
- Ramping up to design capacity

## PROCESSING PROJECTS

### NICKEL TANKHOUSE UPGRADE

#### Location

Monchegorsk, Murmansk Region

#### Project overview

The tankhouse 2 upgrade will create a highly effective nickel cathode production unit, harnessing the technology of nickel electrowinning from chlorine dissolved tube furnace nickel powder, which will help increase output of nickel cathodes from 120 ktpa to 145 ktpa. The new technology will help achieve the highest purity of metal and reduce air emissions. In 2020–2021, the project's CAPEX will total RUB 2.9 bn (USD 43.4 mln).



Tankhouse 2 is part of Kola MMC, which produces nickel cathodes using electrowinning technology.

#### Project timeline

'19

- CAPEX – RUB 4.8 bn (USD 74.5 mln)
- Refurbishment of electrowinning cells – the project reaches 98% completion

'20

- Pre-commissioning and ramping up to design capacity