



In 2019, the Company will invest RUB 7.1 bn in new mining machinery and equipment for Polar Division and Kola MMC, up 54% year-on-year.



The mining assets of Polar Division will receive 105 units of mining machinery of various type and purpose for a total of RUB 4.3 bn, including 38 units of core equipment for RUB 2.6 bn and 67 units of auxiliary equipment for RUB 1.7 bn. Last year, Norilsk received 55 units of self-propelled equipment worth RUB 1.6 bn.

In 2019, slated for refresh are the fleets of self-propelled diesel vehicles at all of Polar Division's mining facilities without exception. Most of the new machinery will go to the Oktyabrsky mine (36 units), followed by Taimyrsky (31 units), Komsomolsky (21 units), Skalistsy (9 units), Mayak (7 units), and Kayerkansky (1 unit) mines.

All the equipment was constructed in line with the design and technical specifications developed by the engineers of Polar Division with due account for the local mining requirements based on their extensive hands-on experience of operating similar machines. The equipment is supplied by Atlas Copco (Sweden), Caterpillar (USA), Sandvik and Normet (Finland), renowned for quality and reliability.

The equipment for Norilsk will include load-haul dumpers, scaling equipment, underground trucks, and auxiliary equipment. Among them are also Sandvik DD422i, the new generation self-propelled drilling rigs. It is an intelligent control system based electro-hydraulic unit for underground development drilling and small scale tunnelling, with top-level performance combined with accuracy and reliability.

The advanced control system of the self-propelled rig has the widest range of automatic drilling functions to give increased productivity at reduced costs. Smart design and field-tested components ensure operator's workplace safety and stability.

Another large-scale upgrade is taking place at Kola MMC. This year the project will require RUB 2.8 bn of capex, which is comparable with the last year. The planned upgrade includes a total of 1,467 units of machinery and equipment, which will partly go to the core structural divisions of Kola MMC.

A considerable part of the upgrade will take place at the Severny mine. The MMC's mining assets will receive new underground dump trucks, load-haul dumpers, self-propelling deep-hole and blast-hole drilling rigs, self-propelled raise borer, underground motor grader, etc.

The nickel tank-house will undergo major upgrade and receive polymer concrete cells, reactor vessels, and pneumatic manipulators. The MMC's refining shop will get three cartridge filters, and three heat exchangers to cool down sulphuric acid. The Control and Analysis Centre will receive an x-ray fluorescence spectrometer.

The consistent upgrade of the production facilities is among Nornickel's top priorities as it boosts the Company's productivity and the safety of operations.

*13 February 2019*