Smelting

The refining facilities of Kola MMC in Monchegorsk process converter matte from Smelting Shop and Polar Division, and copper cake from Norilsk Nickel Harjavalta.

Precious metals produced by Kola MMC are refined at Krasnoyarsk Gulidov Non-Ferrous Metals Plant under a tolling agreement.

In 2016, Kola MMC produced more metals as compared to 2015. The main driver behind this growth was the increased converter matte supply from Polar Division owing to reconfiguration of the production facilities.

Smelting facilities:

- Smelting Shop (Nickel)
- Metallurgical Shop (Nickel)
- Refining Shop (Monchegorsk)
- Nickel Electrolysis Shop (Monchegorsk)

Metals recovery in refining, %

Metal	2014	2015	2016
Nickel	97.8	97.8	98.0
Copper	97.2	97.3	97.1
PGM	95.2	97.1	96.3

Metals output

Metal	2014	2015	2016
Nickel, t	106,048	125,100	131,235
including the Company's Russian feedstock	100,834	123,335	126,937
Copper, t	57,392	63,075	70,272
including the Company's Russian feedstock	48,345	60,134	63,542
Palladium, koz	595	671	851
including the Company's Russian feedstock	517	640	815
Platinum, koz	127	134	173
including the Company's Russian feedstock	95	122	159

FINLAND

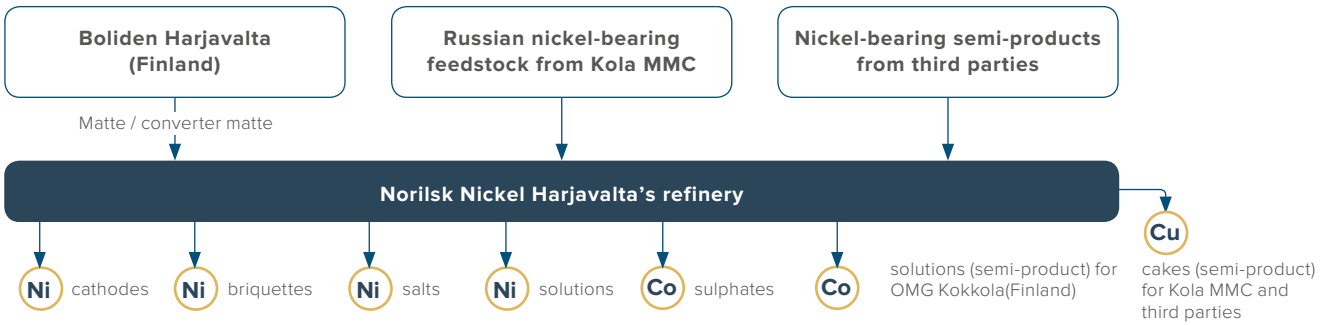
(Norilsk Nickel Harjavalta)

Harjavalta processes the Company's Russian feedstock and nickel-containing raw materials sourced from third-party suppliers.

Norilsk Nickel Harjavalta has a total nickel processing capacity of 66 ktpa. The plant uses sulphuric acid leaching, the best-in-industry solution for nickel semi-products with the metal recovery rates of over 98%.

Norilsk Nickel Harjavalta's commercial products include nickel cathodes, briquettes and salts, and cobalt sulphates. The plant also manufactures semi-products, including PGM-bearing copper cake and cobalt solution for further processing by third parties.

PRODUCTION FLOWCHART OF NORILSK NICKEL HARJAVALTA



From 2H 2016, the refining facilities in Monchegorsk have been gradually increasing their nickel feedstock supplies in line with the Group's nickel production reconfiguration strategy. Feedstock supplies from third parties continued unabated and included converter matte from BHP (Australia), matte and converter matte from Boliden Harjavalta (Finland), converter matte from BCL (Botswana), and nickel sulphide concentrate from Terrafame (Finland).

In 2016, Norilsk Nickel Harjavalta produced 53.7 kt of seleable nickel, up 23% y-o-y, owing to reconfiguration of the Company's refining facilities and, consequently, larger nickel feedstock supplies from Kola MMC.

The third party sales of copper in copper cake totalled 9.6 kt, down 26% y-o-y. This was mainly due to the increased supplies to Kola MMC.

Nickel and copper recovery rates improved on the back of a decrease in losses of nickel and copper with ferrous cakes.

Metals recovery in smelting, *%*

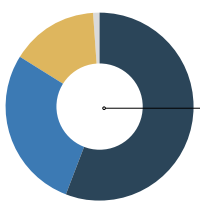
Metal	2014	2015	2016
Nickel	97.1	97.8	98.3
Copper	99.3	99.6	99.7
Palladium	99.3	99.6	99.4
Platinum	99.3	99.6	99.4

Utilisation of refining capacities, *% of max*

Seleable nickel production by Norilsk Nickel Harjavalta.

53.7 kt +23%

Seleable nickel produced by NN Harjavalta, *%*



	%
Briquettes	56
Cathodes	28
Salts and solutions	15
Powders	1

Source: Company data

Metals production by Norilsk Nickel Harjavalta

Metal	2014	2015	2016
Seleable nickel, t	42,603	43,479	53,654
including the Company's Russian feedstock	0	424	19,012
Copper in copper cake, t	10,629	13,048	9,598
including the Company's Russian feedstock	0	0	593
Palladium in copper cake, koz	71	78	64
including the Company's Russian feedstock	0	0	8
Platinum in copper cake, koz	31	33	22
including the Company's Russian feedstock	0	0	2

AFRICA

(Norilsk Nickel Nkomati)

Nkomati is a 50/50 unincorporated joint venture of the Norilsk Nickel Group and African Rainbow Minerals. It is located 300 km east of Johannesburg, Mpumalanga Province, South Africa.

Nkomati is the only nickel concentrate producer in South Africa. Apart from nickel, the concentrate produced by Nkomati contains copper, cobalt, chromium and PGM.

Production facilities:

- open pit and underground mines;
- MMZ Concentrator with installed capacity of 375 ktpm (up to 410 ktpm).
- PCMZ Concentrator with installed capacity of 250 ktpm (up to 300 ktpm).

Production technology

Nkomati has a substantial resource base represented by disseminated copper-nickel sulphide ores with several major ore bodies. The Main Mineral Zone is comprised of a solid sulphide ore body with a relatively high nickel content. The field also contains a Peridotite Chromite Mineralization Zone with a lower metal content vs MMZ and a relatively high chromium content.

The feedstock produced by open-pit and underground mining operations is processed at Concentrators using the method of sulphide floatation. The produced concentrate is then further processed at Boliden and Kola MMC.

Mining

In 2016, total ore mined by Nkomati reached 2.8 mln t (attributable to the Group's 50% shareholding) with an average nickel content of 0.37%. The Group accounted for 8.5 kt of nickel concentrate production, down as compared to 2015 due to lower mining volumes and decreased nickel content in processed ore.

Average metal content in ore, %

Metal	2014	2015	2016
Nickel	0.36	0.34	0.37
Copper	0.13	0.14	0.13

Concentration

Metals recovery in concentration, %

Metal	2014	2015	2016
Nickel	75.9	74.1	70.6
Copper	90.8	86.1	89.5

Smelting

Metals production for Norilsk Nickel's internal processing needs

Metal	2014	2015	2016
Nickel, t	11,359	11,350	8,486
Copper, t	4,958	5,301	4,007
Palladium, koz	48	53	40
Platinum, koz	19	20	15