

OPERATIONAL REVIEW

A COMPREHENSIVE RESPONSE

In 2022, Metinvest navigated the significant challenges brought on by Russia's full-scale invasion of Ukraine. To the extent possible, the Group adapted its logistics and operations both in Ukraine and abroad, demonstrating its fundamental resilience amid a rapidly shifting business environment.

A NEW REALITY

The onset of the Russian Aggression led to material changes in Metinvest's operational environment. The Group responded with a series of strategic shifts in its business processes.

In late February 2022, Metinvest placed Azovstal and Ilyich Steel in hot conservation mode, leading to a halt in their activities. Subsequently, the Group lost operational control over these and other assets in Mariupol as the city has been temporarily occupied. Avdiivka Coke suspended production in late February 2022. Zaporizhia Coke and Zaporizhia Refractories restarted in spring 2022 after a pause resulting from the military invasion.

In mid-October 2022, Russia launched a campaign of illegal aerial bombardment targeting Ukraine's power generation, transmission and distribution facilities. In late November, Metinvest's facilities in Ukraine suffered an emergency stoppage due to the lack of power supply. While most affected facilities were able to resume operations within days of the interruption, Kamet Steel took longer to recover, stabilising gradually throughout December 2022.

The Group's plants in Ukraine, apart from those in Mariupol and Avdiivka, continue to operate at different capacity utilisation levels subject to security, electricity, logistics and economic factors.

All these changes have had a considerable impact on Metinvest's operational performance. The disruption to the business model means that the Group became a vertically integrated long producer only, as it has lost the ability to produce slabs and flat products at the Mariupol steelmakers as internal feedstock for its other assets.

To better reflect this new reality, Metinvest has recalibrated the presentation of this section. Previously, the Group presented its performance based on the production flow. The uneven impact of the Russian Aggression on various production locations has made a geographical representation more logical.

ADAPTING THE LOGISTICS MODEL

For Metinvest, 2022 saw the imposition of material logistical challenges as Russia instituted a naval blockade of key Ukrainian seaports. Since July 2022, seaborne export for agricultural products was reinstated.

To the extent possible, the Group has changed its Ukrainian logistical routes and supply chains to overland connection by rail or via ports on the Danube River, for further seaborne export through Polish or Romanian ports as needed.

This poses a challenge because Ukraine's western railway border crossings lack the throughput volumes of seaborne logistics.

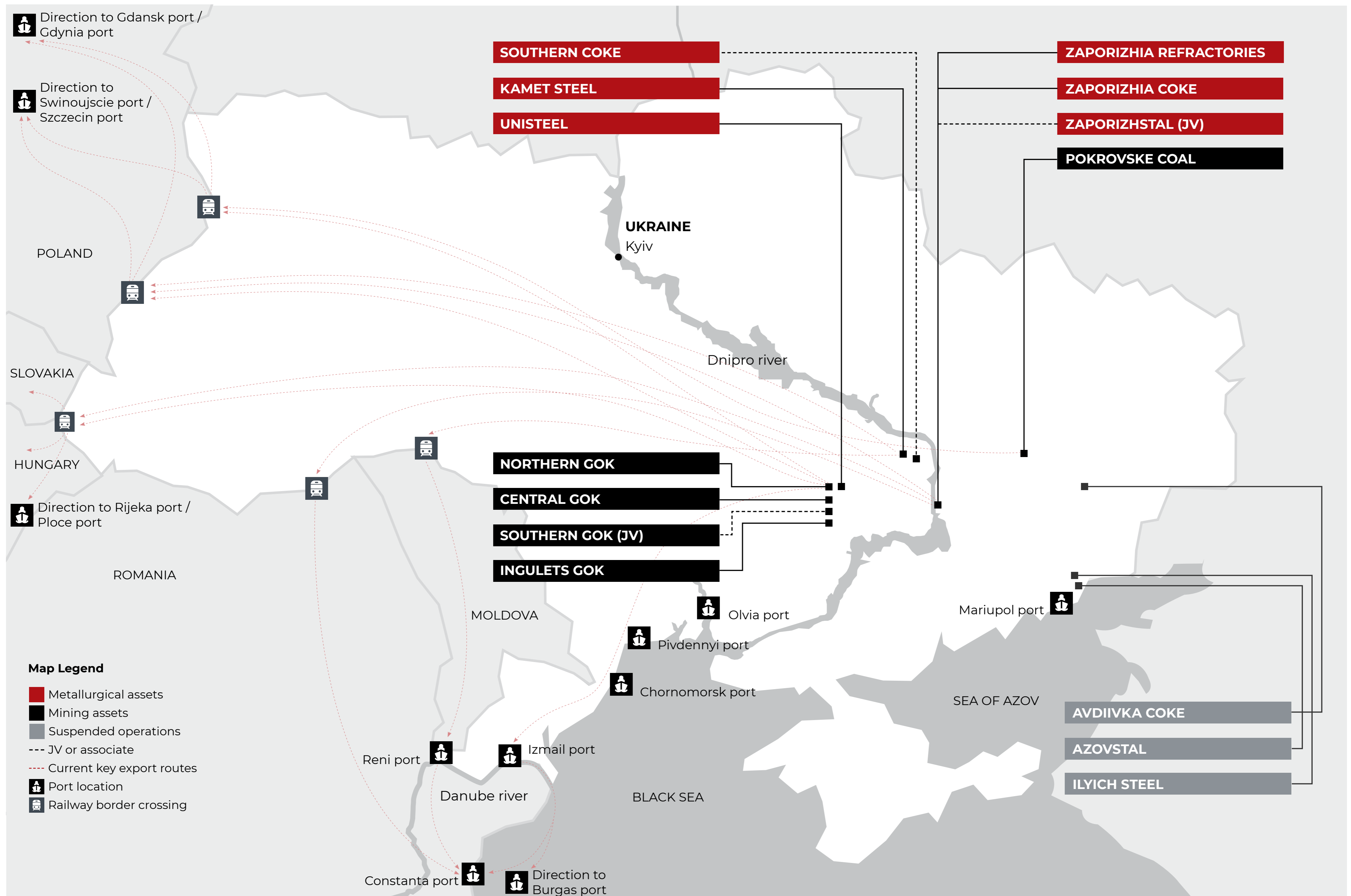
First, railcars designed for the wide-gauge railway in Ukraine are incompatible with the narrow gauge used by countries west of the Ukrainian border, limiting the capacity for such routes.

Second, there is a lack of infrastructure for the increased transshipment of railcars.

These factors made the cost of some of Metinvest's traditional export routes prior to the war prohibitively high.

The sales geography has been impacted as well as Central and Eastern Europe have become primary export markets for Ukrainian goods.

UKRAINIAN OPERATIONS



For a map of the Group's operations outside Ukraine, see page 18.

UKRAINIAN OPERATIONS

GRI 2-6

Mining segment

Iron ore

Metinvest's iron ore extraction and processing assets are Northern GOK, Central GOK and Ingulets GOK. They produce concentrate with an Fe content that ranges from 64.5% to 70.5%. The Group's iron ore assets are all located in the city of Kryvyi Rih.

As of 1 July 2021, the reporting date of the Group's most recent assessment of iron ore resources and reserves in accordance with the JORC Code, it had total Ore Reserves of 2,142 million tonnes grading 33.5% Fe_T (total iron) and 25.0% Fe_M (magnetic iron) and total Mineral Resources of 10,576 million tonnes grading 35.1% Fe_T and 26.0% Fe_M. Both are reported on an aggregated and not attributable basis. For more details, please refer to the respective announcement at [Euronext Dublin](#).

Northern GOK and Central GOK operate pelletising plants that had a combined

annual production capacity of 8.6 million tonnes of pellets in 2022. Their pellets' Fe content range from 63.1% to 67.6%; the higher ones are suitable for use in DRI technology.

In addition, the Group has a 45.9% interest in Southern GOK, which is classified as a joint venture. It produces concentrate with an Fe content from 65.0% to 68.5%. Its products used to be either consumed locally or exported to third parties, primarily through the Group's trading companies¹. Currently, Southern GOK has redirected most of its volumes to the domestic market.

In 2022, the output of the Group's iron ore assets was affected by constraints on export logistics amid the blockade of Ukraine's Black Sea ports. The full-scale hostilities in Ukraine also caused a material decrease in intragroup consumption following the idling of the Mariupol steelmakers and a substantial drop in local demand.

As a result, in 2022 the Group's iron ore extraction dropped by 63% year-on-year to 26,883 thousand tonnes. Meanwhile, total output of iron ore concentrate decreased by 66% to 10,712 thousand tonnes. Output of merchant iron ore products declined by 55% to 7,903 thousand tonnes². The latter figure comprises output of merchant iron ore concentrate, down 60% to 4,718 thousand tonnes, and of merchant pellets, down 45% to 3,185 thousand tonnes.

¹ Under such resale transactions, Metinvest is acting as an agent and not as principal. Income and costs related to them are presented net within revenues.

² Merchant iron ore product output figures exclude intragroup sales and consumption.

Coking coal

In Ukraine, Metinvest produces high-quality coking coal at Pokrovske Coal, whose assets are located on the border of the Dnipropetrovsk and Donetsk regions. Pokrovske Coal comprises several entities, the most significant of which are Pokrovske Colliery and Sviato-Varvarynska Beneficiation Factory.

As of 1 July 2021, the reporting date of the Group's most recent assessment of metallurgical coal resources and reserves in accordance with the JORC Code, it had total Coal Reserves of 181 million tonnes and total Coal Resources of 187 million tonnes. Both are reported on an aggregated and not attributable basis. For more details, please refer to the respective announcement at [Euronext Dublin](#).

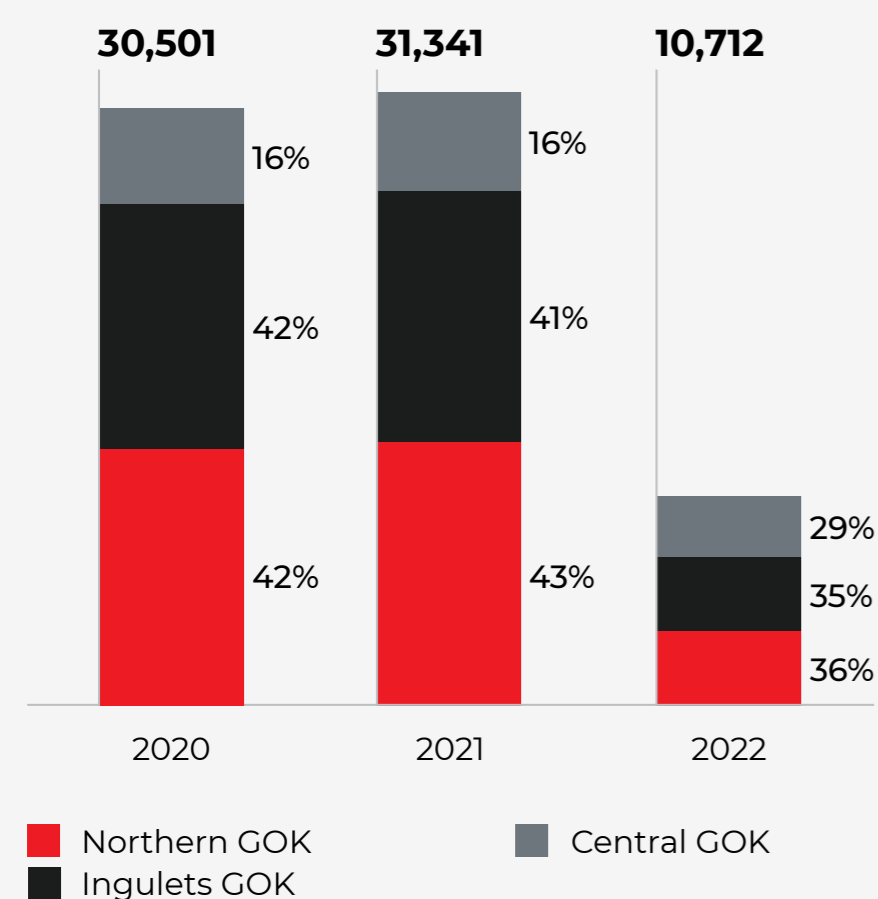
In 2022, the Group's output of coking coal concentrate in Ukraine decreased by 7%

year-on-year to 2,463 thousand tonnes³. This was mainly due to a reduction of headcount at Pokrovske Coal as some employees preferred relocation to areas away from the front lines of the war. Comparing the asset's full-year production of 3,207 thousand tonnes in 2021, which covers some of the period before its consolidation within the Group, the year-on-year reduction in production was 23%.

The acquisition of Pokrovske Coal and its consolidation in March 2021 provided a strong internal source of stability amid the challenges of 2022, when the asset accounted for roughly 50% of the Group's coking coal concentrate production.

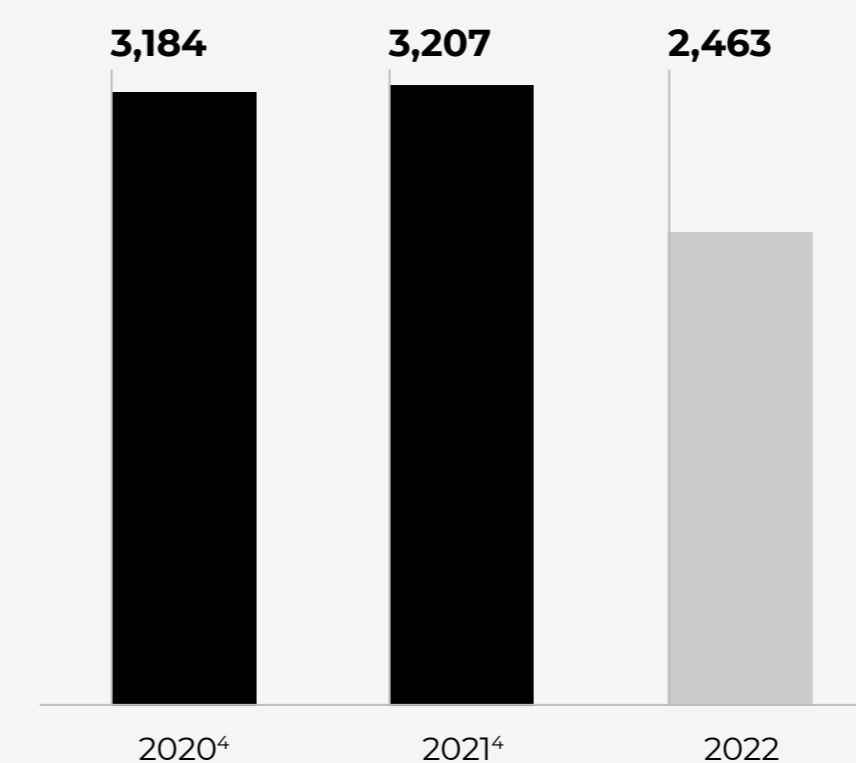
Iron ore concentrate production

10,712 kt

66%[▼]

Coking coal output in Ukraine

2,463 kt

23%[▼]

³ Coal concentrate (total) production figures show coal production converted to coal concentrate and exclude the processing of coal purchased from third parties.

⁴ Full year production, covering periods prior to consolidation.

Metallurgical segment

Coke

The Group's coke output⁵ decreased by 64% year-on-year to 1,653 thousand tonnes as the hostilities in Ukraine affected the operations of its coke-making assets. Following the start of the Russian Aggression, metallurgical coke production continued at Zaporizhia Coke and the coke facilities of Kamet Steel, while Azovstal and Avdiivka Coke stopped operations.

The Group also has a 23.71% stake in Ukrainian metallurgical coke producer Southern Coke (classified as an associated company). In 2022, its annual dry blast furnace coke production was 573 thousand tonnes, down 6% year-on-year.

⁵ Dry blast furnace coke output.

⁶ Kamet Steel's coke production data for 2020 covers the period starting from Dnipro Coke's consolidation in April 2020.

Steel

Following the outbreak of the full-scale war, the lack of production from the Mariupol plants was partly compensated by output at Kamet Steel, which acquired steelmaking facilities in Kamianske in August 2021. The timely acquisition of these assets enabled Metinvest to manufacture billets (for both external sales and feedstock for the Bulgarian re-rolling operations) and diversify long product output mix, as well as ensure additional consumption of the Group's materials.

In 2022, the Group's hot metal and crude steel output were 2,743 thousand tonnes and 2,918 thousand tonnes, respectively, down 72% and 69% year-on-year. Throughout the year, Kamet Steel had to gradually reduce its blast furnace operations: it switched from three blast furnaces at the beginning of the year to one or two blast furnaces, subject to demand, operational requirements and

logistical constraints. Details about its operations in the fourth quarter of 2022 are presented at the beginning of this section, under the heading "A new reality".

In addition, Metinvest holds a 49.997% interest in Zaporizhstal, an integrated steelmaker located in Zaporizhzhia, which is classified as a joint venture. It is one of the Group's largest purchasers of iron ore and coke and has a product mix that diversifies Metinvest's sales portfolio. In the reporting period, Zaporizhstal produced 1,491 thousand tonnes of crude steel, down 62% year-on-year. The plant's operations were also impacted by the full-scale war. On 2 March 2022, Zaporizhstal put its blast furnaces in hot conservation mode. In early April 2022, the plant started blowing in two of its four blast furnaces and partly restarted the sinter plant. By the year-end, the plant was operating two blast furnaces.

Also located in Zaporizhzhia, Ukraine, is Zaporizhia Refractories, which produces refractory products and materials for the Group. In 2022, it manufactured 64 thousand tonnes of those products (down 46% year-on-year), excluding unmoulded refractories. Product totals were 29 thousand tonnes of chamotte (down 45% year-on-year), 20 thousand tonnes of magnesia products (down 53% year-on-year), and 15 thousand tonnes of high-alumina products (down 35% year-on-year).

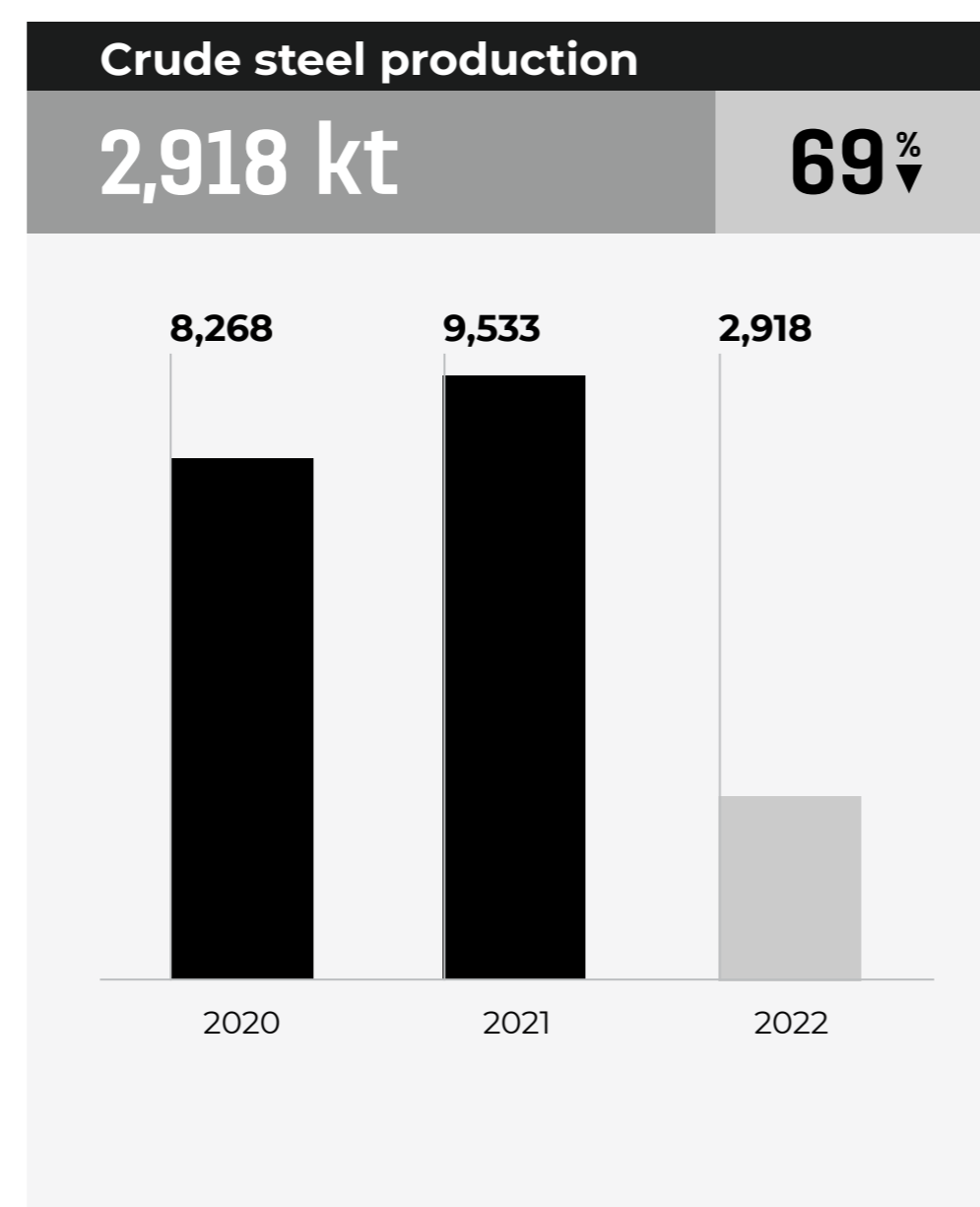
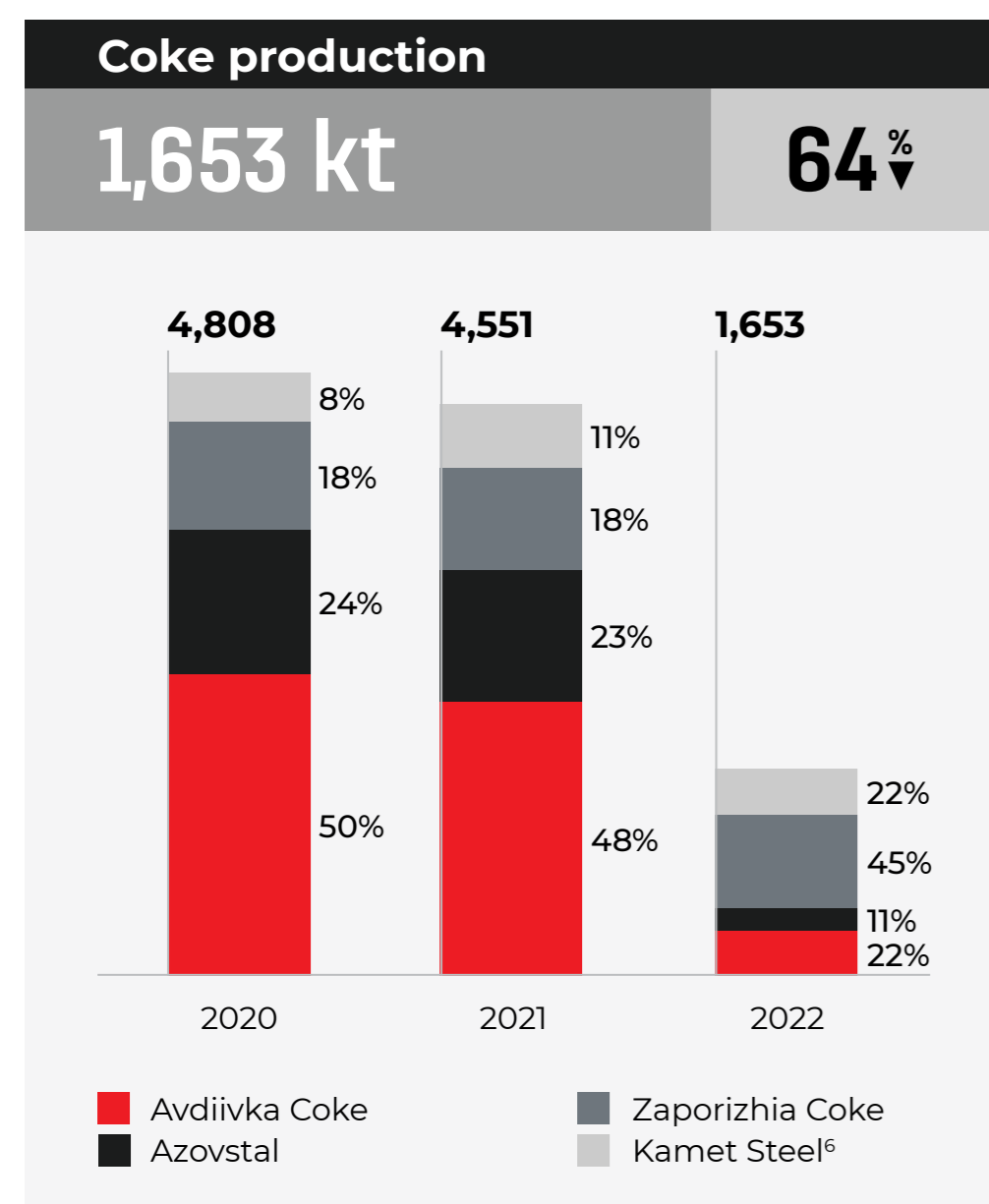
In addition, Metinvest has a subsidiary called Unisteel that operates a galvanising line. Located in Kryvyi Rih, it can produce up to 100 thousand tonnes of galvanised coils a year. While the plant operated at 100% of its pre-war capacity throughout most of the year, it suspended operations in December 2022 due to electricity supply constraints.

NEW PRODUCTS

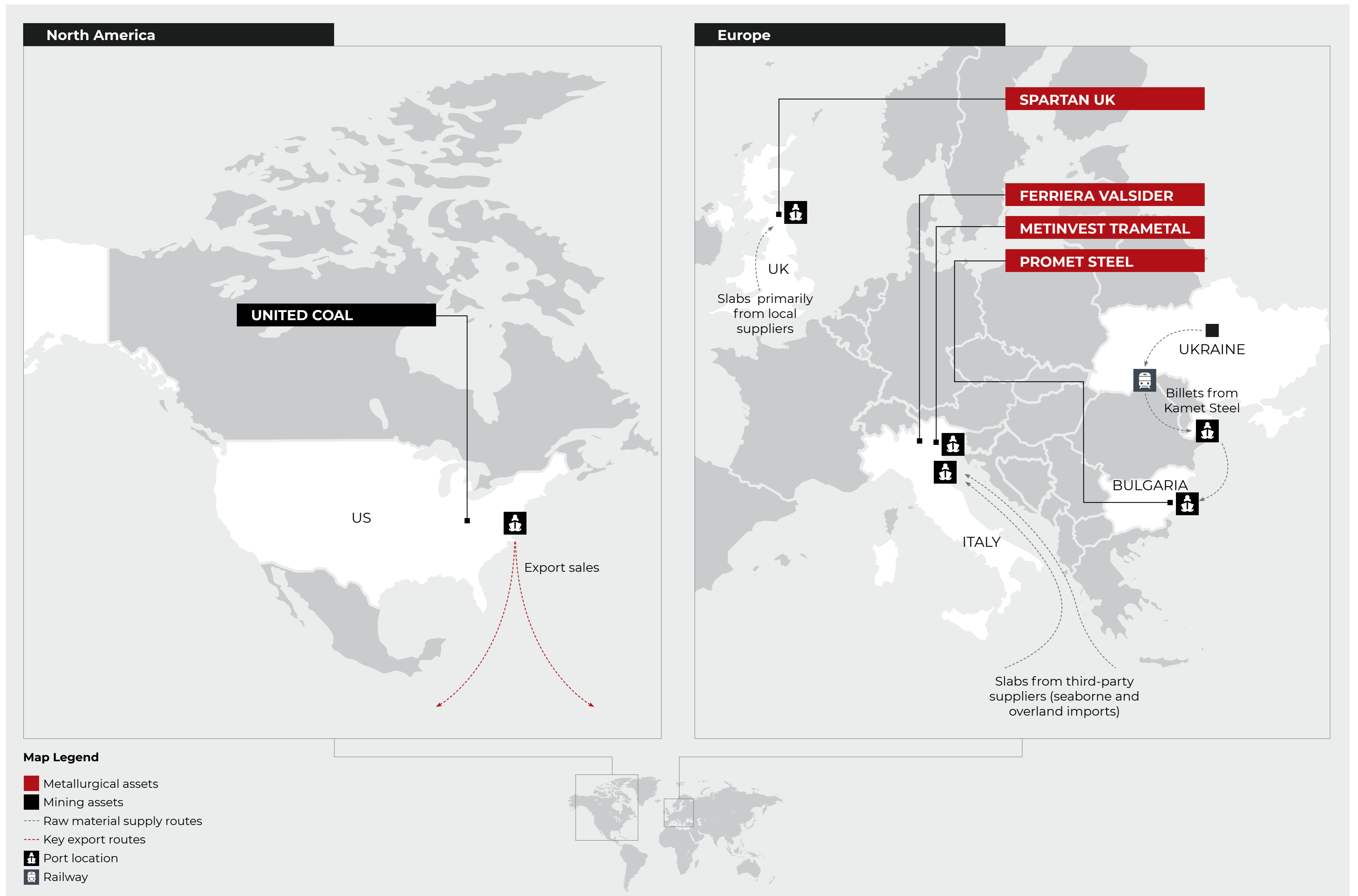
The Russian Aggression fundamentally changed Metinvest's plans and priorities for expanding its product line. In 2022, the Group identified the following key priorities for the development of its steel product mix: rolled steel products and goods for Ukraine's defence needs; products to rebuild Ukraine's infrastructure; and semi-finished products for its assets in the EU and UK, as well as for the Ukrainian re-rolling business.

One of the most research-intensive initiatives involved determining the correct chemical composition, steelmaking process and rolling technology to make steel for hard armour elements. The rapid production launch made it possible to supply bulletproof vests for the defence forces quickly. Metinvest also started to produce special mobile shelters to protect defenders on sectors of the front line where the fiercest battles are taking place.

Overall, Metinvest launched 16 new steel products during the year: six semi-finished products, eight sections and two heavy plates.



OPERATIONS IN THE EU, UK AND US



For a map of the Group's operations in Ukraine, see page 15.

OPERATIONS OUTSIDE UKRAINE

GRI 2-6

Since February 2022, Metinvest's non-Ukrainian assets have adjusted their business models to function on a standalone basis, while the Group has continued to support them with operational, financial and transactional expertise.

Mining segment

Coking coal

Metinvest produces coking coal at United Coal, in the central Appalachian region of the US.

United Coal is a metallurgical coal producer supplying its products to a diversified customer base across North America and seaborne markets. Its operating complexes include Carter Roag (three mines; operations suspended since June 2023), Affinity (three mines), Wellmore (ten mines) and three preparation plants. United Coal's large and contiguous coal seams ensure production over the long lifespan of its permitted reserve base.

As of 1 July 2021, the reporting date of the Group's most recent assessment of metallurgical coal resources and reserves in accordance with the JORC Code, it had total Coal Reserves of 126 million tonnes and total Coal Resources of 224 million tonnes. Both are reported on an aggregated and not attributable basis. For more details, please refer to the respective announcement at [Euronext Dublin](#).

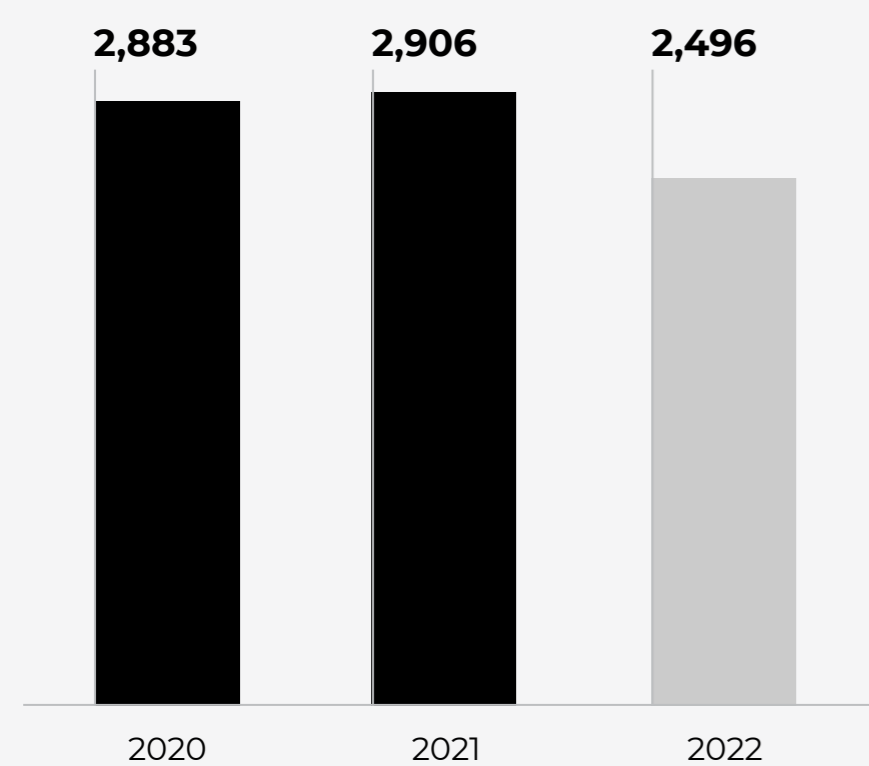
In 2022, Metinvest's output of coking coal concentrate in the US decreased by 14% year-on-year to 2,496 thousand tonnes, mainly because of a lack of skilled personnel and adverse geological conditions at the mines.

United Coal has redirected the coal volumes that it used to supply to the Group's Ukrainian coke facilities prior to February 2022 to third-party export customers and the US market.

The favourable price environment in the reporting period supported the expansion of United Coal's shipments in 2022.

Coking coal output in the US

2,496 kt 14% ↓



Metallurgical segment

Re-rolling

Outside Ukraine, Metinvest has four rolling mills in other European countries, which are Ferriera Valsider and Metinvest Trametel in Italy, Promet Steel in Bulgaria, and Spartan in the UK.

The Group's total re-rolling capacity in these countries is around 2.1 million tonnes a year.

Metinvest Trametel and Ferriera Valsider have a combined annual capacity of 1.2 million tonnes of flat products. They used to source slabs from the Group's steelmakers in Ukraine. Since 2022, these plants have arranged feedstock from EU and seaborne suppliers.

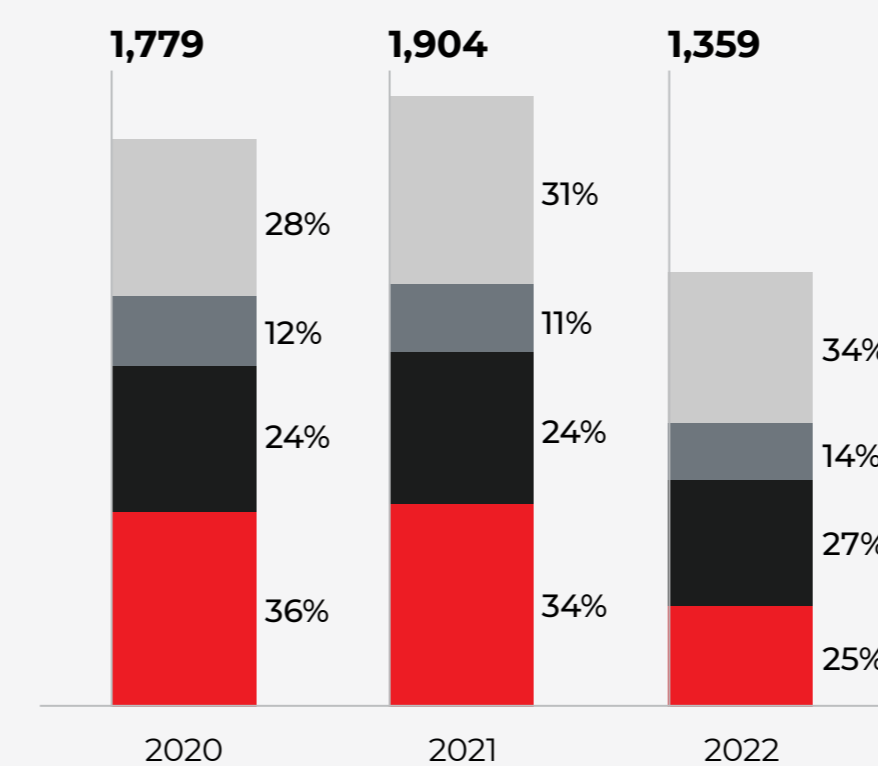
Spartan UK is a plate manufacturer in the UK with an annual capacity of 0.2 million tonnes. It used to source slabs from the Mariupol steelmakers prior to the full-scale war. Since 2022, the plant has continued production using feedstock from third-party suppliers.

Promet Steel is a long product manufacturer with an annual capacity of 0.7 million tonnes. It has continued production using feedstock from Kamet Steel and third-party supplies after the outbreak of the Russian Aggression.

In 2022, the cumulative output of key products at Metinvest's re-rolling plants outside Ukraine was 1,359 thousand tonnes (down 20% year-on-year). In particular, the production of flat products was 371 thousand tonnes at Trametel (down 19% year-on-year), 334 thousand tonnes at Ferriera Valsider (down 48% year-on-year) and 187 thousand tonnes at Spartan (down 13% year-on-year). The output of long products was 467 thousand tonnes at Promet Steel (down 20% year-on-year).

Re-rollers output in the UK and EU

1,359 kt 29% ↓



OVERALL OUTPUT OF SEMI-FINISHED AND FINISHED PRODUCTS

In 2022, the total output of merchant semi-finished products at Metinvest's production facilities fell by 70% year-on-year to 1,022 thousand tonnes because of the slump in hot metal output.

The production suspension at the Mariupol steelmakers led to decreases in overall pig iron and slab output of 84% and 90% year-on-year, respectively. This was partly compensated by the consolidation of merchant billet production at Kamet Steel, the effect of which was an increase of 234 thousand tonnes in 2022.

The Group's output of finished products decreased by 62% year-on-year to 2,777 thousand tonnes.

Output of flat products declined by 4,247 thousand tonnes to 1,731 thousand tonnes as a result of the absence of production from the Mariupol steelmakers, as well as the unstable supply of slabs for the Italian re-rolling plants in the first half of the reporting year.

Long product output decreased by 71 thousand tonnes to 1,018 thousand tonnes. The reduction in output was partly compensated by the consolidation of production volumes at Kamet Steel's facilities.

Output of rail and tubular products respectively decreased by 38 thousand tonnes and 100 thousand tonnes to 10 thousand tonnes and 18 thousand tonnes as they used to be produced at the Mariupol plants.

The total output of merchant pig iron and steel products was 3,799 thousand tonnes, compared with 10,644 thousand tonnes a year ago.

DEVELOPMENTS AFTER THE REPORTING PERIOD

In early 2023, the Ukrainian government allowed imports of electricity from the EU to be exempted from power rationing restrictions to ease local shortages. The Group decided to use this opportunity to arrange imported electricity purchases for its own production needs, which enables power supply quotas to be increased (in the absence of emergency shutdowns).

This decision relieved a bottleneck impacting Metinvest's performance since the fourth quarter of 2022. In particular, the iron ore assets managed to increase output to around a third of pre-war levels and keep the focus mainly on pellet production.

It has also enabled more stable operations and product mix flexibility at Kamet Steel and Zaporizhstal. As at July 2023, two blast furnaces were operating at Kamet Steel and three at Zaporizhstal.

As of the cut-off date for this report's preparation, Pokrovske Coal was operating at approximately its pre-war capacity.

In early June 2023, Russia destroyed the Kakhovka hydroelectric power plant and its dam in the Kherson region. Although this event will impose severe environmental issues in Ukraine, it did not have a direct material effect on the operation of the Group's iron ore assets.

The full extent of the impact of the Russian Aggression on Metinvest's business generally remains unknown. It will be largely dependent on the duration and extent of the war, as well as its impact on key production assets.

⁶ Central GOK, Ferriera Valsider, Ingulets GOK, Kamet Steel, Kryvyi Rih Machining and Repair Plant, Metinvest Trametel, Northern GOK, Promet Steel, Spartan UK, Unisteel, Zaporizhia Coke and Zaporizhia Refractories.

PRODUCT QUALITY MANAGEMENT

GRI 3-3; 416-1; 417-1

Metinvest strives to meet international quality standards and applies strict requirements to the entire production process and final products. The Regulation on Product Quality Management is the core corporate standard defining the internal processes and procedures that the Group's enterprises follow.

In addition, Metinvest has introduced the ISO 9001 standard at its facilities to help improve its quality management system. At the end of 2022, 12 production sites in operation⁶ had ISO 9001 certification. The Group's Technology and Quality Directorate and subordinate units at each production facility oversee product quality management. Production sites also have separate regulations in place. During the year, new asset-level regulations were put in place at Zaporizhzhia Coke, Northern GOK, Ingulets GOK and Kamet Steel covering a variety of matters.

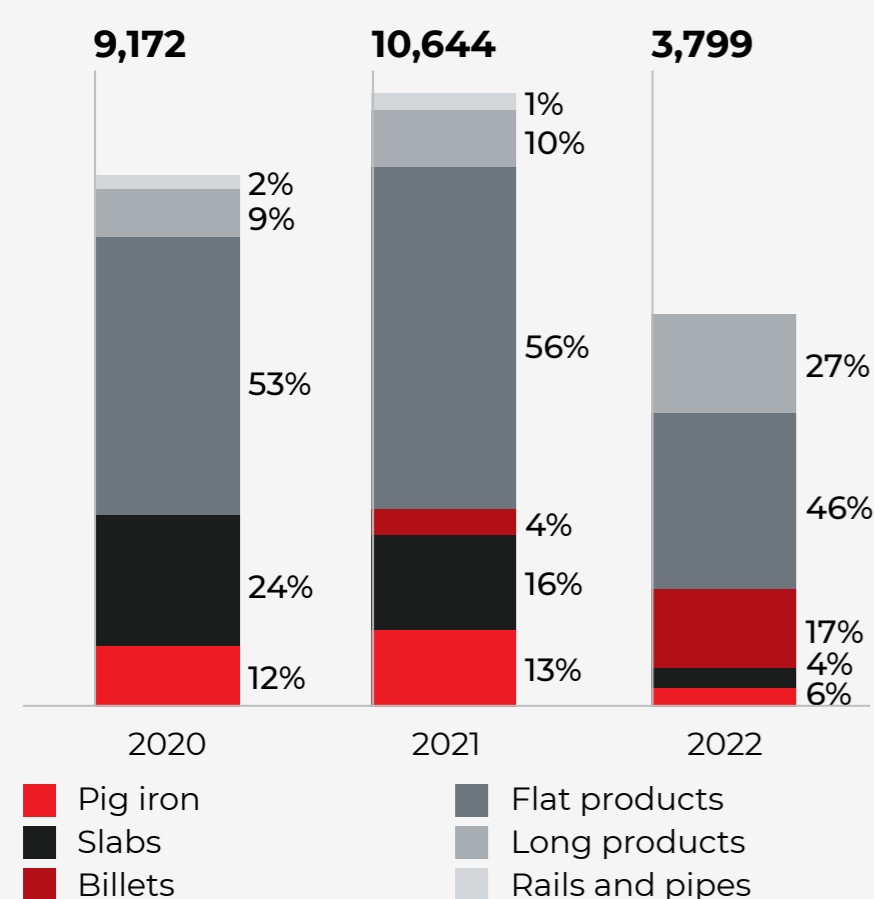
Metinvest conducts regular and periodic training for relevant staff on its quality management system. In 2022, a total of 2,717 specialists underwent this training, compared with 3,499 in 2021.

Throughout the year, the Group's steel assets employed equipment that automatically monitors radiation levels of vehicles as they enter and exit its facilities, as required by internal procedures. Metinvest does not permit railcars or other vehicles containing materials with elevated radiation levels to enter or depart its facilities. The procedure in place for vehicles with increased radiation levels is to isolate them, halt the shipment, and inform regulators and relevant local public authorities. In 2022, no cases of contaminated scrap were detected.

Pig iron and steel product output⁵

3,799 kt

64%
↓



⁵ Merchant

AZOVSTAL – THE STEEL HEART OF UKRAINE

BEFORE FEBRUARY 2022

Located in Mariupol, Azovstal was founded in 1933. Occupying around ten square kilometres along the port city's waterfront, it played a dominant role in the local economy, serving as an engine of industry. With around 11,000 employees as of the start of 2022, it was a significant source of employment for local residents.

Prior to the war, the plant produced more than four million tonnes of crude steel annually, providing livelihoods to tens of thousands of people. It also served as the primary supplier of slabs for Metinvest's re-rollers in the EU and the UK. Notably, the plant was the sole producer of rails in Ukraine.

In recent decades, the Group has supplied Azovstal's steel products to be used in various landmark projects worldwide. For example, in Kyiv, around 5,500 tonnes of the plant's products were used to construct the Darnytsia Bridge. The tallest building in the UK, the iconic Shard designed by renowned Italian architect Renzo Piano, was built using steel produced at Azovstal. In addition, its steel was used to construct the New Safe Confinement over the Chernobyl nuclear power plant. Steel from the plant was also used to build a glass pedestrian and bicycle bridge in Kyiv. In Genova, Italy, the San Giorgio Bridge was built using steel from Azovstal, replacing the collapsed Morandi Bridge.

SYMBOL OF RESISTANCE

Azovstal's identity underwent a profound transformation with the onset of the full-scale Russian invasion. It metamorphosed from a prominent industrial powerhouse into an emblem of national resistance: the "Steel Heart of Ukraine". Once a beacon of Mariupol's economy, this plant that transformed into a fortress became the city's last stronghold for the Ukrainian defence forces.

Throughout the early stages of the war, Azovstal stood defiantly against the enemy. For 80 gruelling days, the besieged mill was at the heart of the struggle for Mariupol, its endurance epitomising the tenacity of Ukraine's independent spirit and inherent resilience.

Within Azovstal's labyrinth of underground rooms and passages, thousands of Ukrainian soldiers found refuge. These sprawling, hidden spaces provided a tactical advantage, allowing the defenders to hold out against the protracted siege. Simultaneously, the mill also served as a critical sanctuary for hundreds of civilians caught in the crossfire.

Azovstal's relentless stand became a testament to the nation's indomitable spirit, marking it as a unique symbol of Ukraine's unyielding resolve in the face of overwhelming odds.

3 More information about the illustration is on page 96.

