



BULGARIAN ASSOCIATION OF THE METALLURGICAL INDUSTRY

METALLURGY IN BULGARIA 2025

September 2026

The Bulgarian Association of Metallurgical Industry (BAMI) presents the latest edition of its specialized annual publication, providing an overview of the current state and achievements of the Bulgarian metallurgical industry, developments in European and global metal production and consumption, and the future prospects for the sector. This edition also includes data on production volumes and value, investments in the modernization and renewal of production capacities and technologies, sales performance and the foreign trade of metals and metallurgical products.

The publication “Metallurgy in Bulgaria” is intended for a broad audience, including managers and specialists from metallurgical companies, academic staff, students at technical secondary schools and universities, partners in Bulgaria and abroad, external experts, and anyone with an interest in the metallurgical industry.

The primary sources of information on the Bulgarian metallurgical industry are companies producing metals, metal products and articles thereof, whose combined output represents more than 10% of the total value of the manufacturing industry in the country. The collected information has been consolidated, processed and organized into thematic sections by the BAMI team, providing a comprehensive overview of the sector and its achievements. The Management Board of BAMI expresses its appreciation to the editorial team and to all companies that contributed to the preparation of the publication “**Metallurgy in Bulgaria 2025**”.

BAMI also gratefully acknowledges the support provided by the Ministry of Economy and Industry through the provision of data on annual Bulgarian exports and imports of metals and metal products by countries and regions.

Additional information about the activities of the Bulgarian Association of the Metallurgical Industry is available on the website of the Association (www.bami.bg).

In addition to the national sources referred to above, materials and publications from international organizations such as EUROFER (www.eurofer.eu), the World Steel Association (www.worldsteel.org) , European Metals (<https://european-metals.eu>), Eurostat (www.ec.europa.eu) and other international organizations in the ferrous and non-ferrous metals sectors were also used in the preparation of this edition.

LIST OF ABBREVIATIONS:

BAMI	-	Bulgarian Association of the Metallurgical Industry
GDP	-	Gross domestic product
GVA	-	Gross value added
BCLA	-	Branch Collective Labour Agreement
AC	-	Apparent Consumption
ACPC	-	Apparent Consumption Per Capita
RHC	-	Real Home Consumption
RFM	-	Rolled Ferrous Metals
HR	-	Hot-rolled (rolled steel)
EU ETS	-	European Union Emissions Trading Scheme
ZGP	-	Hot galvanizing plant
KCM	-	Non-ferrous metals plant
MSST	-	Minimum Social Security Threshold
NSSI	-	National Social Security Institute
NSI	-	National Statistical Institute
CIS	-	Commonwealth of Independent States (former USSR)
PPS	-	Purchasing Power Standard
CR	-	Cold-rolled (rolled steel)
ASST	-	Average Social Security Threshold
HNFM	-	Heavy non-ferrous metals
CEE	-	Central and East Europe
NAFTA	-	North American Free Trade Agreement
NACE Rev 2	-	Statistical Classification of Economic Activities in the European Community
BNB	-	Bulgarian National Bank

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DEAR LADIES AND GENTLEMEN,

I have the honour to present the annual report of the Bulgarian Association of the Metallurgical Industry (BAMI) on the state of the metallurgical industry in Bulgaria in 2025.

Despite the uncertain economic and political environment, Bulgarian metal producers managed to overcome the challenges and preserve the positive development trend of the sector. Steel production remains low due to a variety of external and internal factors, including fluctuations in demand within the European

Union, particularly in the construction and industrial sectors, high and volatile electricity prices, as well as rising prices and limited availability of metal scrap. The non-ferrous metals industry continues to demonstrate strong results and remains the largest exporter, having achieved significant growth in the production and processing of metals and their alloys. Metallurgical companies continue to invest in new production capacities and technologies, while new high value-added products are being developed and introduced.

Strong results are evidence of sustainability, responsibility, and professionalism in corporate management. The metals sector plays a key role in the commodity exports of the country, generating a positive trade balance of 1.5–2 billion EUR annually.

A key priority for companies in the sector is the developed corporate social responsibility and active partnership with employees, local authorities, trade unions, the education sector, and civil society. As a result, metallurgical regions rank among the most economically developed areas in the country and are distinguished by high levels of remuneration.

Throughout the year, numerous national and regional events were organized with the support of metallurgical companies. These initiatives highlighted the achievements of the sector, the transformation of production, and the contribution of the metallurgical industry to both national and European industrial development. Current global challenges have a direct impact on the metallurgical industry. Alongside decarbonisation and digitalisation, strengthening supply chain resilience through increased production of critical and strategic raw materials has become a key priority. Bulgaria has the potential to become a leading player, and this potential should be fully developed and utilized.

Good luck and useful work to all!

Yours faithfully,



PhD Eng. Nikola Rangelov
Chairman of the Board

SECTION ONE
THE ECONOMY IN 2025
1.1. POPULATION, LABOUR MARKET AND REMUNERATION

In 2025, Bulgaria recorded steady economic growth and low unemployment, although the year was marked by profound political instability and public protests at the end of the year, which led to the resignation of the government. The Gross Domestic Product (GDP) of the country increased by 3.1% compared to 2024, placing Bulgaria among the top-performing EU (27) Member States in terms of GDP growth. Growth was driven primarily by domestic consumption, supported by rising household incomes.

Inflation remained moderate at 3.5%, despite concerns related to the forthcoming accession to the euro area. Speculation about the initial price effects of euro adoption and the announced intention of the government to strengthen the price monitoring contributed to higher demand, as well as to precautionary pricing by some producers and traders through increased wholesale prices and the incorporation of higher current and expected costs into final prices.

In 2025 the unemployment decreased to around 3.5%, while labour shortages remained a key challenge for the business sector.

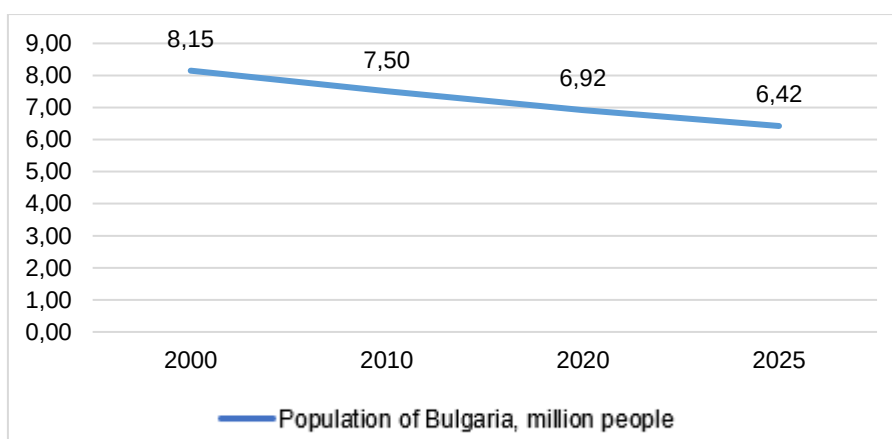
The challenges of recent years persist - the war in Ukraine is ongoing, political stability in the country remains fragile, trade policies among the world's largest economies are subject to continuous changes, and energy prices in the EU remain exceptionally high compared with other regions globally - all these factors are making it increasingly difficult to maintain the competitiveness of both European and Bulgarian industries.

Nevertheless, Europe continues to advance its transition towards a low-carbon, resource-efficient and digital economy. The European objectives of achieving resource independence through domestic extraction of strategic and critical raw materials essential for the transition, together with the high demand for metals, create new opportunities for the product and technological restructuring of the metallurgical sector and for the development of new high-value-added production.

Socio-economic conditions, particularly disparities in living standards, encourage migration both within the European Union and within individual Member States. These disparities have a direct impact on demographic trends, including birth rates, life expectancy, and access to healthcare and education, all of which shape overall population growth.

Figure 1.1

Population of Bulgaria, million persons



Source: NSI

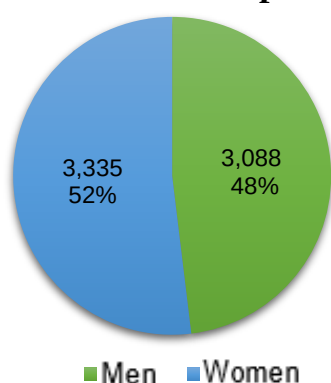
Over the past three decades, the population of Bulgaria has been steadily declining (Figure 1.1). This significant demographic decline is the result of a combination of two main factors: intensive external migration of young people of working age and a pronounced negative natural population growth, with deaths consistently exceeding births.

In 2024, the birth rate in Bulgaria was 8.3‰, down from 8.9‰ in 2023. The average rate for the EU(27) was 7.9‰, therefore the birth rate in Bulgaria remained slightly above the EU average.

The highest birth rate among EU Member States was recorded in Cyprus (10‰), followed by Ireland (9.9‰) and France (9.6‰), while the lowest rate was in Italy (6.3‰).

Figure 1.2

Population by Sex, million persons

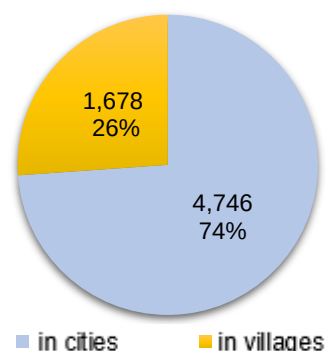


According to data from the NSI, in 2025 in Bulgaria women continued to outnumber men, with 3.335 million women compared to 3.088 million men

Figure 1.3

Population by Place of Residence, million persons

The majority of population in Bulgaria is concentrated in urban areas. At the end of 2025, the demographic distribution was as follows: 1.678 million people lived in rural areas, while 4.746 million lived in urban areas.



Source: NSI

The demographic profile of the country is also shaped by life expectancy. Despite the upward trend in this indicator in Bulgaria, the country unfortunately still has the lowest life expectancy (75.86 years) among all EU(27). A positive development is that, in recent years, Bulgaria has been gradually moving closer to the EU average life expectancy: the gap decreased from 8.8 years in 2021 to 5.7 years in 2024. According to NSI data for the period 2023-2025, the average life expectancy in the country was 75.86 years, with women having a higher life expectancy of 79.64 years compared to 72.8 years for men.

Figure 1.4

Life Expectancy (years) in Bulgaria and the EU (27)

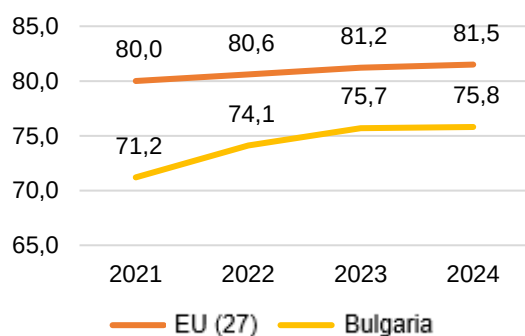
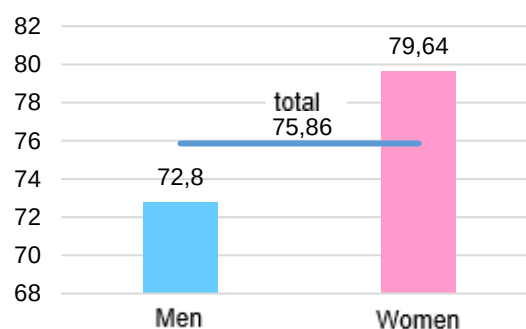


Figure 1.5

Life Expectancy (years) in Bulgaria, by sex



Source: NSI

Demographic processes have been changing the age structure of the population, affecting the labour force and the labour market. The aging of the population over the years has led to an increase in its average age, reaching 45.4 years at the end of 2025. The number and relative share of the population below, at, and above working age have changed over time. Both population aging and legislative changes in determining retirement age limits have an impact on the population groups of working age and above. As of 31 December 2025, the working-age population

amounted to 3 764 842 people, representing 58.6% of the population in the country, with 1 967 204 men and 1 797 638 women.

Table 1.1 presents data on the average annual number of employees under labour and service contracts, labour income, and other social indicators for the period 2022-2025."

Table 1.1

Average number of employed people, level of unemployment, inflation

Indicators	2022	2023	2024	2025
Average annual number of employed people (national calculations) in thousands	2 195.5	2 218.0	2 231.7	2 260.6
Average annual level of unemployment, %	4.3	4.3	4.2	3.5
Inflation/deflation, %	15.3	9.5	2.4	4.6

Source: NSI

The average annual number of employees continued to increase in 2025 reaching 2 260.6 thousand persons. The unemployment rate decreased to 3.5%, one of the lowest levels in the EU (EU average 6%). Inflation in 2025 was 4.5%, higher than the 2.4% recorded in 2024.

In 2025 the incomes of employees under labour and service contracts increased. For the country as a whole, the average wage increased by 12%, with growth of 12.6% in the public sector and 11.7% in the private sector.

The average wage in the manufacturing industry increased by 10.7 % reaching 1 127 EUR per month, although it remained below the national average. The differences between individual sectors are substantial, as evidenced by the figures for the metallurgical industry.

In 2025, the problems related to high electricity prices, disruptions in the internal market caused by high levels of unfair imports of metal products, reduced demand from major consumers, and constrained scrap supply remained unsolved. Despite these difficulties and challenges, producers in the ferrous and non-ferrous metals industries maintained both production and employment.

The average monthly wage in the ferrous and non-ferrous metallurgy exceeded 1 400 EUR, placing the sector among the highest-paying not only within the manufacturing industry but also across all economic activities. The non-ferrous metals industry, with an average monthly wage exceeding 1 600 EUR, ranked among the leading industries in terms of remuneration and additional employee benefits.

Table 1.2

Average Monthly Wage, EUR

	2024	2025
Average Monthly Wage of Employees under Labour and Civil Service Contracts	1 189	1 331
- public sector	1 222	1 376
- private sector	1 178	1 316
- manufacturing industry	1 018	1 127
Average Monthly Wage, NACE 24* - Manufacture of Basic Metals, including:	1 339	1 460
- Steelmaking	1 436	1 566
- Non-ferrous metals	1 620	1 770
- Casting of metals	986	1 075

Source: NSI, *preliminary data

In addition to basic remuneration, labour costs include also supplementary individual benefits and other payments provided by employers to each employee. These are either required by legislation or provided under collective labour agreements. In the metallurgical industry, these benefits account for a significant share of total employee remuneration of over 8%.

Table 1.3 presents the structure of costs incurred by employers for compensation per employee, on average for the country and for specific sectors, including for the metallurgical industry in 2024. It is obvious that in industries with specific working conditions, wage costs have a lower share of total labour costs, while other social payments and benefits have relatively larger share.

Comparing the remuneration received in the individual sectors solely on the basis of the average monthly wage reported by the NSI and the NSSI does not reflect the actual situation. The metallurgical industry is a typical example, as it often does not rank among the sectors with the highest wages because part of employee remuneration is provided through various additional payments and benefits.

Table 1.3

Employers' Labour Costs by Sector, %

Sectors of the Economy	Total	Wage	Compensations	Employers' social security and health insurance contributions	Other social costs and benefits, incl. related taxes
Total for the country, %	100	82,26	1,63	13,98	2,13
Extractive Industry	100	71,28	2,67	17,97	8,08
Manufacturing Industry, incl. Metallurgy	100	81,32	1,31	14,35	3,02
	100	71,43	2,00	16,97	9,60
Energy	100	70,39	4,92	14,82	9,87

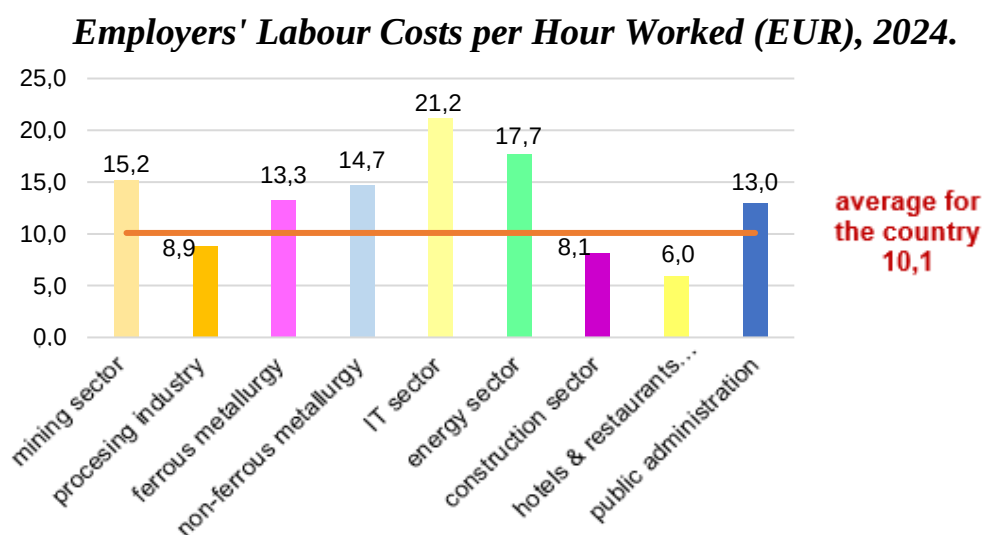
Source: NSI

Another indicator that captures all labour costs incurred by employers is the labour cost per hour worked by employees under labour and service contracts. Figure 1.6 presents NSI data for 2024 on this indicator by economic activity.

The average labour cost for the country as a whole was 10.1 EUR per hour worked in 2024, representing an increase of 13.0% compared to 2023. The analysis of the data shows that the metallurgical industry ranked among the leading sectors of the national economy, significantly above the national average of 10.1 EUR per hour. The non-ferrous metals sector reported labour costs of 14.7 EUR per hour worked, approximately 45% above the national average. In the ferrous metals sector labour costs amounted to 13.3 EUR per hour worked, around one-third higher than the average across all economic activities. Compared to 2023, labour costs increased by 5.3% in the ferrous metals industry and by 3.1% in the non-ferrous metals industry.

For comparison, the manufacturing industry as a whole remained below the national average, with labour costs of only 8.9 EUR per hour worked. These figures indicate that companies in the ferrous and non-ferrous metals industries generate high added value, invest in attracting highly qualified personnel, and provide competitive levels of industrial remuneration at the national level.

Figure 1.6



Source: NSI

1.2. GDP, GVA, PRODUCTIVITY

Gross Value Added (GVA) and Gross Domestic Product (GDP) for the last three years, for the country as a whole and by economic activity, are presented in Table 1.4.

In 2025, GDP increased by 3.1% in real terms compared to 2024 (after a growth of 3.4% in 2024 compared to 2023) and reached a nominal value of 116 018.3 EUR' mln. GDP per capita amounted to 18 060 EUR.

With average economic growth in the EU(27) at 1.5%, Bulgaria was among the countries with higher growth (3.1%). Despite this, Bulgaria remains in last place in

terms of GDP per capita, at only 16 080 EUR, which is the lowest level among all EU Member States and amounts to less than 45% of the EU(27) average of 41 650 EUR. Gross value added amounted to 100 934.2 EUR'mln at current prices. In real terms, the value of this indicator increased by 2.6% compared to 2024.

Nominal GVA increased across all sectors at different rates, ranging between 5% and 20% in the sectors “Trade, transport, accommodation and food service activities” and “Construction”, respectively. In the “Industry” sector, the increase was 9%.

In 2025, the industrial sector generated 24.4% of the gross value added of the economy, the services sector accounted for 72.8%, while the share of the agricultural sector was 2.8%.

Table 1.4

GDP by sectors and groups, EUR'mln

Economic sectors	2023	2024	2025*
Gross Value Added by Economic Activity, EUR'mln			
Agriculture, forestry and fishing	2 384,35	2 463,14	2 871,44
Industry (excluding construction)	17 793,32	17 762,96	19 341,88
- incl. Metallurgy	540,90	682,86	N/A
Construction	3 666,71	4 376,14	5 265,90
Trade, transport, accommodation and food service activities	19 204,33	21 788,09	22 944,12
Information and communication	6 846,57	7 736,93	8 626,02
Financial and insurance activities	5 142,43	6 058,83	6 509,19
Real estate activities	7 177,33	7 327,53	8 311,18
Professional, scientific and technical activities; administrative and support services	5 845,60	6 650,00	7 239,12
Public administration, education, human health and social work activities	13 387,12	15 652,09	17 981,85
Arts, entertainment and recreation; other service activities	1 410,62	1 588,82	1 843,51
Total Gross Value Added, EUR'mln	82 858,37	91 404,51	100 934,20
Adjustments (Taxes less subsidies on products), EUR'mln	11 666,73	13 362,71	15 084,07
Gross Domestic Product (GDP), EUR'mln	94 525,11	104 767,22	116 018,27

Source: NSI, * 2025 - preliminary data

In 2025, labour productivity of the Bulgarian economy, expressed in terms of gross value added (GVA) generated per employee, increased by 8.2% compared to the previous year, reaching 26 412.6 EUR per employee.

The services sector recorded the lowest increase at 5.9%. The highest growth was observed in the agriculture, forestry and fishing sector, at 19.0%, which traditionally has the lowest labour productivity per employee - 5 997.5 EUR in 2025, compared to 28 703.7 EUR in industry and 29 869.2 EUR in services.

Table 1.5

Labour productivity, GVA per person employed, EUR

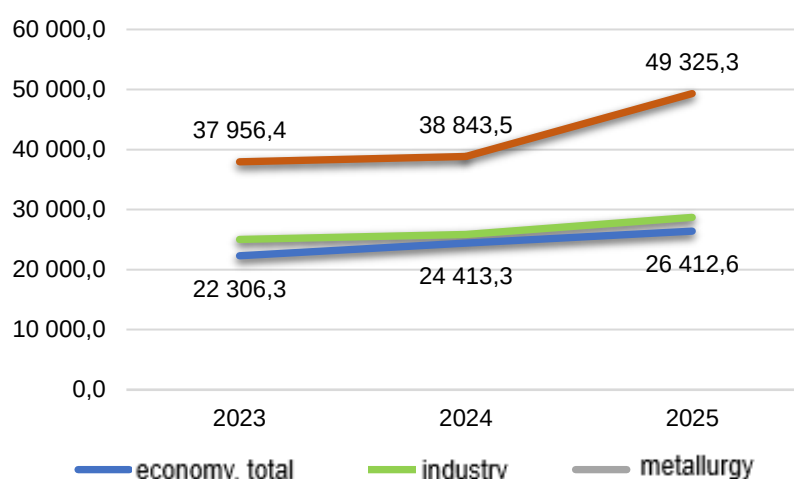
Economic sectors		2023	2024	2025
Agriculture, forestry and fishing	GVA per person employed	4 611,7	5 038,1	5 997,5
Industry	GVA per person employed	25 024,2	25 867,5	28 703,7
incl. Metallurgy	GVA per person employed	37 956,4	38 843,5	49 325,3
Services	GVA per person employed	25 542,3	28 198,2	29 869,2
Total economy	GVA per person employed	22 306,3	24 413,3	26 412,6
	GVA per person employed	27 151,4	29 774,6	32 267,3

Source: NSI

The metallurgical industry is one of the fundamental sectors of the economy. It produces internationally traded commodities and competes in highly competitive global markets, where prices are determined by international commodity exchanges. In principle, this limits the ability of the sector to generate high value added. Nevertheless, an employee in the sector generates gross value added that is nearly twice the average level of productivity in the industry and in the economy as a whole. In 2024, this indicator was 49 325.34 EUR, and in the non-ferrous metallurgy sector it reached a level approximately three times higher.

The substantial difference is due to the restructuring and modernization of facilities and technologies, as well as introduction of new high-tech processes and products which have significantly transformed the nature of the sector.

Figure 1.7

Labour productivity, GVA per person employed, EUR

Source: NSI

Because the sector is dependent on international markets and metal prices, the value of production fluctuates independently of its physical volume. In 2024 the total value of output produced by the metallurgical industry was 7 993 EUR'mln, which was more by 1 120 EUR'mln compared to 2023, or a growth of 16 %. The changes across the subsectors of NACE Rev. 2 Division 24 "Manufacture of basic metals" are as follows:

- *Production of cast iron, steel and of ferro-alloys* - 716 EUR'mln, less by 67 EUR'mln compared to 2023 (- 9%).
- *Other steel products* (Production of tubes, pipes, hollow profiles and related fittings of steel, and Production of other products in the primary processing of steel) – 482 EUR'mln, more by 20 EUR'mln compared to the previous year (+ 4%).
- *Non-ferrous metallurgy* - 6,631 EUR'mln in 2024, compared with 5,454 EUR'mln in 2023, representing a substantial increase of 1,177 EUR'mln, or a growth of 21.6%.
- *Metal casting* -164 EUR'mln, less by 10 EUR'mln, (- 6%) compared to 2023.

Gross domestic product (GDP) per capita in Bulgaria, expressed in Purchasing Power Standards (PPS), reached 28 300 EUR in 2025. For comparison, the average level for the European Union as a whole was 41 600 EUR. This corresponds to 68% of the EU(27) average, placing Bulgaria last among all EU Member States.

The countries with the highest GDP per capita expressed in PPS in the EU are Luxembourg (99 600 EUR) and Ireland (99 000 EUR), with values more than twice the EU(27) average

The changing global economic environment and the new EU policies on decarbonization, digital transformation, raw materials independence, and a strong defence industry, provide a new opportunity for accelerating development of Bulgaria. The new European Directives and Regulations on raw materials and net-zero emissions, as well as the European Steel and Metals Action Plan, the Industrial Acceleration Act, the "Made in Europe" initiative and other related measures create opportunities for support in the implementation of plans and projects in priority areas.

Effective coordination and the rapid adoption and implementation of the necessary legislation and measures are required for their successful application.

Metallurgy plays a key role in this transition and Bulgarian companies possess the capacity required to participate in and support the achievement of the European goals.

1.3. ENERGY CONSUMPTION, FREIGHT TURNOVER

The Bulgarian economy is characterized by high energy intensity, often exceeding the EU (27) average by nearly two times. This adverse indicator is largely attributable to the industrial profile of the country, namely the significant presence of heavy, energy-intensive industries in the structure of national production.

Such are also metals, with their production accounting for approximately 12%-15% of the total output of the manufacturing sector. The high consumption of energy resources is due to the specific characteristics of the technological processes, which are carried out at high temperatures. In individual enterprises, energy costs account for 20%-30% of total production costs, and for certain metals they may reach even 40%.

A key priority for producers is the implementation of innovative technologies aimed at optimizing energy consumption and minimizing losses throughout the production cycle. Achieving sustainable development requires a transition towards a circular economy and the more intensive use of secondary raw materials to enhance resource efficiency.

The share of recycled non-ferrous metals in production has been steadily increasing, reinforcing the transition towards more sustainable and resource-efficient models. The volume of processed metal waste (aluminum, zinc, copper and lead) has more than doubled over the period 2010-2024, reaching 227.6 thousand tons in 2024.

Steel production is based entirely on the processing of ferrous metals (scrap), which ensures high energy efficiency of the technological processes.

The metallurgical industry is highly energy-intensive and is the largest industrial consumer of electricity in the country.

The crises of recent years and the EU climate policies have resulted in a significant increase in energy prices. Energy-intensive metallurgical industries are particularly exposed to the impact of rising electricity prices. To mitigate the effects of higher energy costs and carbon emission expenses, EU Member States have introduced state aid mechanisms.

In April 2026, the European Commission approved the state aid scheme for Bulgaria as well. Energy-intensive enterprises in the country will receive compensation for high electricity prices, with an indicative amount of 334 EUR'mln over a three-year period. The programme entered into force on 1 July 2025, with up to 124 EUR'mln allocated for the first year.

According to the energy balance for 2024 published by the NSI, final energy consumption in industry amounted to 2 595 thousand **tons of oil equivalent (toe)**, compared to 2 455 thousand toe in 2023, or an increase of 140 thousand toe (5.7%). This volume reaches 26.4% of the final energy consumption in the country.

Traditionally, the share of industry has remained within the range of 25%-28% in recent years.

Electricity and natural gas dominate the energy mix of the industry, accounting for 30% and 28.3%, respectively.

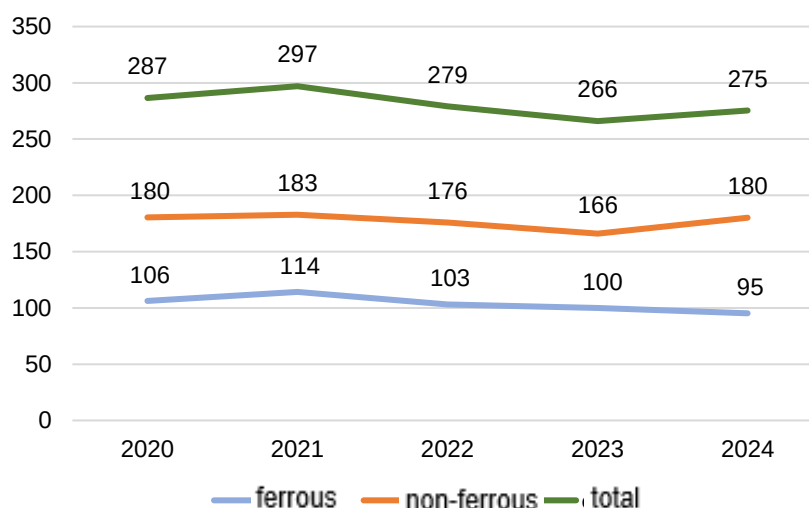
Within industrial energy consumption, the highest energy use is recorded in the chemical industry, with a total of 766.764 thousand toe, followed by the non-metallic mineral products sector, with 552 thousand toe.

The government policy of maintaining regulated electricity prices for household consumers remains in place, while mechanisms for subsidizing these prices continue to be applied in parallel. In 2024, household energy consumption was 1 962 thousand toe, which was a decrease by 4.2% compared to 2023, or another consecutive year of decline.

Figure 1.8 shows the consumption of energy resources in ferrous and non-ferrous metallurgy, as well as the total energy consumption for the sector in the period 2020-2024.

Figure 1.8

Energy Consumption in the Metallurgical Industry, thousand toe*



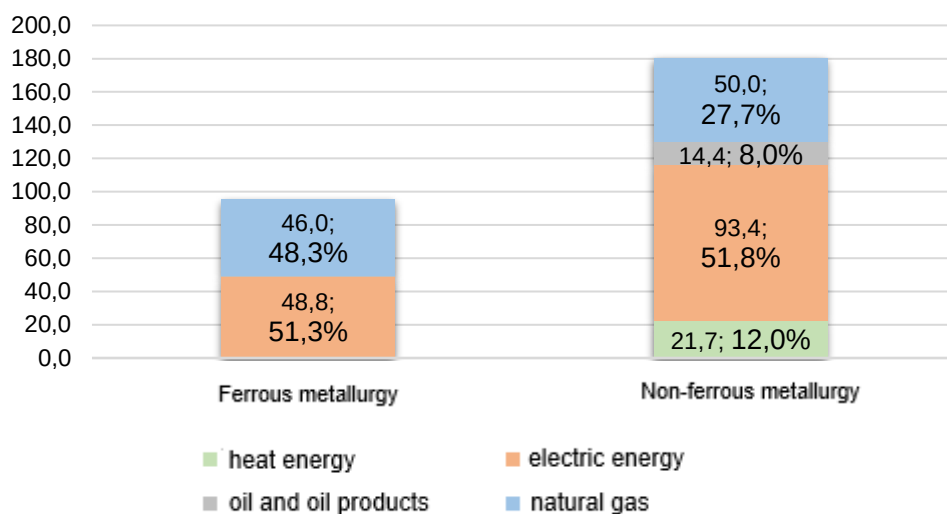
***toe - tons of oil equivalent**

During the indicated period (2020-2024), total energy consumption in the metallurgical industry was approximately 270-290 thousand toe.

In 2024, metallurgical enterprises consumed 275 thousand toe, compared to 266 thousand toe in 2023. Total consumption decreased by 9 thousand toe, or a drop of 3.4%. Non-ferrous metallurgy remained the main consumer with 180 thousand toe, or 65% of total consumption. Ferrous metallurgy consumed 95 thousand toe, which was 35% of consumption in the considered year.

Figure 1.9

**Consumption in the Metallurgical Industry by Energy and Fuel Type in 2024,
thousand toe**



Source: NSI

The allocation by type of energy and fuels depends on the technological processes. In the ferrous metallurgy, electricity has the largest share of 51.3% (48.8 thousand toe), while natural gas has 48.3% (46.0 thousand toe). The remaining minimal quantities are covered by liquid fuels and renewable energy sources (RES).

In non-ferrous metallurgy, electricity also has the largest share of 51.8% of total energy consumption (93.4 thousand toe). Natural gas consumption is lower - 50.0 thousand toe, or 27.7%. Among the remaining energy sources, oil and petroleum products, and heat energy, have a more significant contribution - 12% and 8%, respectively, of the energy requirements of the non-ferrous metallurgy sector.

Despite the implementation of energy efficiency measures and cost optimization efforts, metallurgy remains the industrial sector with the highest electricity consumption of 142.3 thousand toe in 2024. It is followed by the chemical industry, with consumption of 121.4 thousand toe.

With regard to natural gas, total consumption in the metallurgical industry was 96 thousand toe in 2024. Larger consumers in industry are the non-metallic raw materials sectors with 260 thousand toe, the chemical industry with 142.8 thousand toe, and the food, beverages and tobacco sector, with 110 thousand toe.

Metallurgy is one of the largest freight-generating sectors in Bulgaria, with total annual freight turnover amounting to approximately 7 million tons. Due to the large volumes of raw materials and the global nature of exports, metallurgical companies rely on a full range of transport services. The integration of different modes of transport - rail, maritime and road transport - is of key importance. The sector is highly dependent on rail transport due to the substantial volumes of raw materials and the specific characteristics of products such as sulphuric acid.

The total freight turnover of about 7 million tons per year is distributed by types of freight flows as follows:

- bulk cargo (ores, concentrates, waste products) - about 1.8-2 million tons per year;

- liquid cargo (finished products - sulphuric acid) - 1.1-1.3 million tons per year;
- solid bulk-form materials (secondary raw materials, products) - up to 4 million tons per year.

Rail freight transport in Bulgaria is directly dependent on the operations of the major metallurgical plants. These enterprises are the main users of rail freight services, transporting large volumes of raw materials and metals through the national railway network.

1.4. FOREIGN TRADE EXCHANGE, IMPORT AND EXPORT

The metallurgical industry is an export-oriented sector, with its production primarily destined for foreign markets. The main market for metals and metallurgical products is the European market, as well as neighbouring countries. The wide range of applications of metals in industry and everyday life ensures their export to various geographical regions and economic areas.

The total value of exported metals exceeds the value of imports, resulting in a positive foreign trade balance of approximately 1.5–2 EUR'bln annually.

Data from the Bulgarian National Bank (BNB) and the NSI on foreign trade in goods over recent years are presented in Table 1.6.

Table 1.6

Foreign trade balance in trade exchange, EUR'mln

Indicators	Year		Year-on-year change	
	2024	2025	EUR'mln	%
Total Imports	50 900,9	53 827,0	2 926,1	5,7
EU (27)	23 572,5	24 648,6	1 076,2	4,6
- o basic metals and products	5 067,3	5 286,6	219,3	4,3
relative share, %	10 %	9,8 %		
Total Exports	44 323,5	43 023,4	-1 300,1	-2,9
EU (27)	28 626,6	27 550,4	-1 076,2	-3,8
- basic metals and products	7 371,8	6 765,2	-606,7	-8,2
relative share, %	16,6 %	15,7 %		
Foreign trade balance, total	-6 577,5	-10 803,6		
incl. metals and products	2 304,5	1 478,5		

Source: BNB and NSI

It is evident from the data of the BNB and NSI that the metal sector is structurally decisive for the Bulgarian economy, generating a significant trade surplus despite the country's overall negative balance.

In 2025, imports into Bulgaria increased by nearly 6%, exceeding 53.8 EUR'bln. This represents an increase of 2.93 EUR'bln compared to 2024. The total exports of the country were 43.0 EUR'bln, representing a decline of 1.3 EUR'bln, or 2.9%,

compared to the previous year. As a result, in 2025 the negative foreign trade balance increased by 4.2 EUR'bln, reaching its highest level in recent years at 10.8 EUR'bln. Exports of consumer goods increased by nearly 6%, whereas exports of energy resources declined by more than 24%.

Table 1.7

Foreign trade - exports by commodity groups, EUR'mln

<i>Commodity groups</i>	EUR'mln		Year-on-year change	
	2024	2025	EUR'mln	%
Consumer goods, incl.	9 255,8	9 783,9	528,1	5,7
Raw materials, incl.	17 558,0	16 941,0	-617,0	-3,5
Investments goods, incl.	12 781,7	12 718,6	-63,0	-0,5
Total non-energy goods, incl.	39 595,5	39 443,5	-151,9	-0,4
Total energy resources	4 728,0	3 579,8	-1 148,1	-24,3
<i>Exports total</i>	44 323,5	43 023,4	-1 300,1	-2,9

Source: BNB

Raw materials and intermediate goods dominate the commodity exports of the country, amounting to 16.9 EUR'bln and a share of 39.4%.

This category includes metals and metal products (cast iron, iron, steel and non-ferrous metals), with exports in 2025 valued at 6.76 EUR'bln. Compared to 2024, exports decreased by 0.7 EUR'bln (- 13%). Capital goods rank second, with exports of 12.7 EUR'bln (29.6% share), maintaining the level recorded in 2024.

The European Union is the largest trading partner of Bulgaria. In 2025, exports of goods to European markets amounted to 27.6 EUR'bln, which represents a decrease of 1.08 EUR'bln (3.8%) compared to the previous year. The share of exports to the EU (27) was 64.0% of the total exports of the country (64.6% in 2024).

SECTION TWO

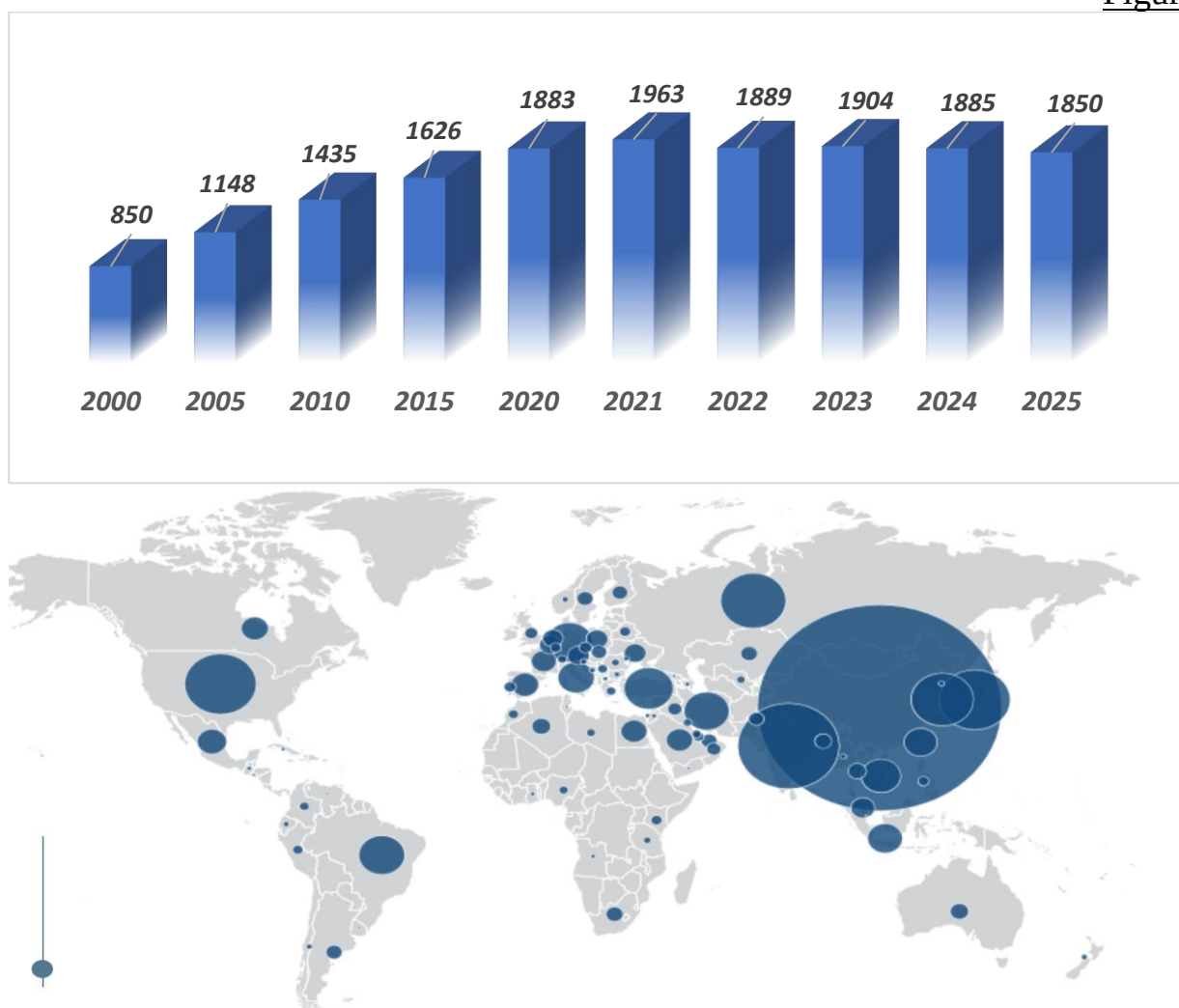
FERROUS METALLURGY IN BULGARIA

2.1. PRODUCTION OF FERROUS METALS AND ROLLED STEEL PRODUCTS

2.1.1. STEEL PRODUCTION IN THE EU AND IN THE WORLD IN 2025

Steel is the most versatile industrial material in the world, making the modern world possible, and as a fully recyclable resource, it is a key element of the circular economy. It plays a crucial role in the development and implementation of innovative technologies aimed at reducing CO₂ emissions, improving resource efficiency, and promoting sustainable development in Europe and globally. The wide variety of types and grades of steel developed by the industry forms the bases of modern economic activity and technological development.

Figure 2.1



Source: World Steel Association (WSA)

According to data from the World Steel Association (WSA), global crude steel production has been steadily increasing since 2000, rising from 850 mln. tons to a peak of 1 963 mln. tons in 2021. After slight fluctuations in the following years,

global steel production declined to 1 850 mln. tons in 2025, representing a decrease of 5.7% compared to 2021. Figure 2.1 illustrates global crude steel production and the geographical distribution of the leading steel-producing countries since 2000.

Nearly all global steel production (98 %) is concentrated in 69 countries. In 2025, the top 10 steel-producing countries accounted for 84 % of total world steel production, maintaining their positions from the previous two years (Table 2.1). China remains the undisputed global leader, contributing 51.9 % of worldwide crude steel production. India ranked second with a share of 8.9 %, remaining the only major economy to demonstrate strong growth in steel production. The Indian producer Tata Steel Group accounted for 1.6 % of global crude steel production. The United States and Japan have maintained stable but stagnant economies, while declines were recorded in Russia and South Korea. The Japanese company Nippon Steel Corporation contributes 2.3 % of global steel production, whereas ArcelorMittal, Luxembourg (the largest steel producer outside China), accounted for 3.4% of worldwide crude steel production.

Table 2.1

The world leading countries - major steel producers in 2025

<i>Position in the World production ranking</i>	<i>Producers</i>	<i>Production (TNE'MLN)</i>			<i>Share of the World production in 2025 (%)</i>
		<i>2025</i>	<i>2024</i>	<i>2023</i>	
	World Total	1850	1 885	1 904	100.0
1	China	960	1 005	1 029	51.9
2	India	164	149	141	8.9
3	USA	82	84	87	4.4
4	Japan	81	80	81	4.4
5	Russia	68	71	76	3.7
6	South Korea	62	64	67	3.4
7	Germany	38	37	35	2.1
8	Turkey	34	37	34	1.8
9	Brazil	33	34	32	1.8
10	Iran	32	31	31	1.7

Source: World Steel Association

Based on WSA data, global steel consumption reached 1,749 mln. tons in 2025, which is an increase of 0.4% compared to 2024. China remains the world's largest steel consumer despite the continuing downward trend in domestic demand. In 2025, steel consumption in China declined by 2% compared to the previous year. At the same time, consumption was rising (by 3.4%) in emerging economies such as India and certain countries in ASEAN, the Middle East, and North Africa. Steel consumption in the EU-27 amounted to 129.8 mln. tons in 2025, which is a decrease of 0.2% compared to 2024.

The global steel industry continues to face significant pressure from rising production costs and growing geopolitical uncertainty. That contributes to escalating trade tensions and indirectly constrains industrial activity and investment.

The EU steel industry continues to operate in an unfavorable market environment characterized by high energy costs, weakened industrial activity, increasing competitive pressure from imports, U.S. import tariffs, and ongoing geopolitical conflicts, including Russia's military aggression against Ukraine and the conflict in the Middle East. These developments have generated uncertainty regarding energy supplies and production costs. In 2025, crude steel production in the EU-27 amounted to 126.2 mln. tons, representing a decline of 2.6% compared to 2024. For comparison, 130 mln. tons of crude steel were produced in the EU (27) in 2024 and 126.3 mln. tons in 2023. Table 2.2 shows the crude steel production of the top ten steel producing EU Member States in 2025, together with their respective shares in total EU and global crude steel production. Collectively, these countries have produced 110.0 mln. tons of crude steel, or 87.2% of total EU (27) steel production. The remaining Member States, including Bulgaria, take a share of 12.8%.

Table 2.2

Top 10 Steel-Producing EU Member States in 2025

<i>Position in the EU(27) production ranking</i>	<i>Member State</i>	<i>Production (TNE'MLN)</i>	<i>Share of the EU(27) production (%)</i>	<i>Share of the World production (%)</i>
1	Germany	34.1	27.0	1.8
2	Italy	20.1	15.9	1.1
3	Spain	12.3	9.7	0.7
4	France	10.4	8.2	0.6
5	Poland	7.1	5.6	0.4
6	Austria	6.8	5.4	0.4
7	Belgium	5.6	4.4	0.3
8	The Netherlands	5.2	4.1	0.3
9	Czech Republic	4.3	3.4	0.2
10	Sweden	4.1	3.2	0.2
	EU (27)	126.2		6.8
	World Total	1850.0		

Source: World Steel Association

In order to stabilize and boost the growth of the European steel industry, as well as to strengthen its competitiveness, the European Union has envisaged to implement a package of policies. These include the implementation, from 1 July 2026, of a new mechanism for regulating steel imports through quotas and higher tariffs, restrictions on the export of secondary metals and the concentration of their processing within the

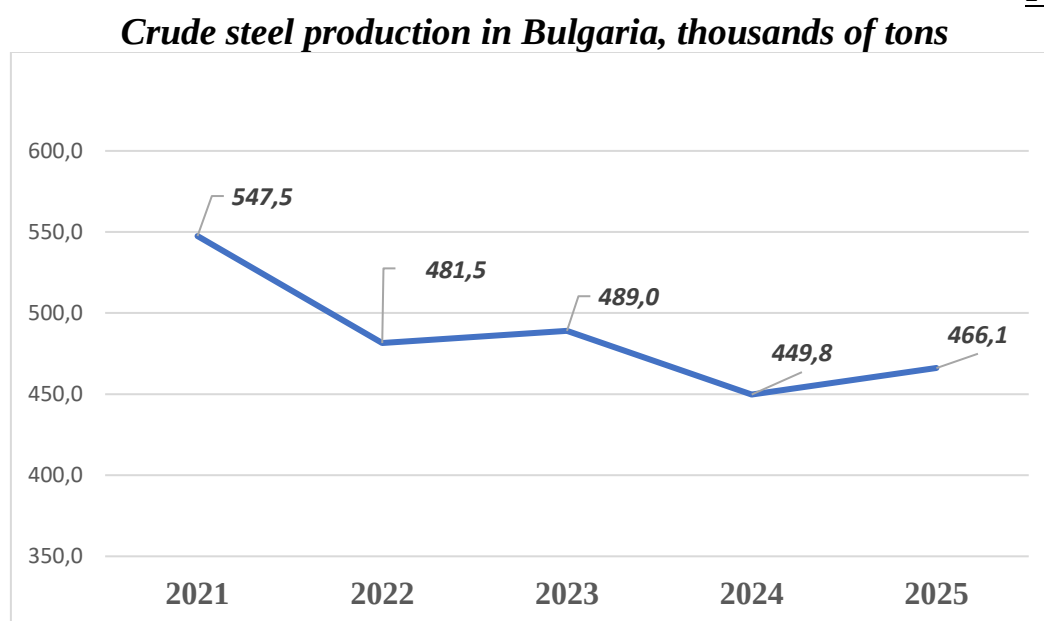
Union, the gradual reduction of the overall volume of emission allowances under the EU Emissions Trading System (ETS) and phasing out of free allowances for industry in the context of the Carbon Border Adjustment Mechanism (CBAM), as well as industrial incentives for decarbonization, aimed at enhancing the EU's strategic autonomy in the steel sector.

2.1.2. CRUDE STEEL PRODUCTION IN BULGARIA

“Stomana Industry” JSC, based in Pernik, is a key enterprise in the Bulgarian metallurgical sector and the country's only producer of crude steel, using scrap-based electric arc furnace (EAF) technology. The company manufactures both flat and long steel products.

Over the past five years, crude steel production at “Stomana Industry” JSC has shown a clear downward trend (Figure 2.2). Following a relatively high production level of 547.5 thousand tons in 2021, production declined sharply in 2022, followed by a temporary stabilization in 2023. In 2024, production reached its lowest level of 449.8 thousand tons. Despite a partial recovery in 2025, the production level of 466.1 thousand tons, remains significantly below the values recorded at the beginning of the five-year period.

Figure 2.2



“Stomana Industry” JSC has an annual production capacity of 1.2 million tons of flat and long products, special profiles, and other high value-added steel products that meet the current requirements of European markets. The production facilities include high-efficiency electric arc furnaces operating under optimized production regimes, as well as modernized equipment for scrap preparation, processing, and recycling. The company has consistently invested in technological modernization, digitalization, and improvements in energy efficiency, while also developing new steel grades and expanding its product portfolio in line with the requirements of industrial transformation and the EU's green transition agenda.

Production dynamics in ferrous metallurgy sector in Bulgaria are influenced by a range of external and internal factors. These include fluctuations in demand within the EU, particularly in the construction and manufacturing sectors; high and volatile electricity prices, which represent a major cost component in electric arc furnace steelmaking; and increasing scrap prices combined with constrained availability of recyclable raw materials. Additional challenges arise from geopolitical uncertainty, disruptions in global supply chains, growing worldwide steel overcapacity, and intensifying competitive pressure from producers operating with lower production costs.

In 2025, the steel industry in the country experienced its most difficult period in decades, characterized by reduced production and capacity utilization below 50%. Cheap imports from third countries, including Turkey, and Egypt cause significant price pressure on local producers in the domestic market. The high volume of ferrous scrap exports reduces the availability of domestic raw materials and necessitates additional imports, thereby increasing production costs and further constraining production capacity. The higher electricity costs faced by energy-intensive industries in Bulgaria, compared to many other European countries, have undermined the price competitiveness of Bulgarian manufacturers in foreign markets.

Despite the unfavorable market environment, companies in the sector have continued to invest in the modernization of production facilities, automation of processes and enhancement of energy efficiency. Special emphasis is placed on the decarbonization of production, the utilization of secondary raw materials, and the implementation of low-carbon production technologies, in line with the requirements of the European Green Deal and the EU's energy transition processes. Total investments in these areas have reached approximately 5 billion leva.

2.1.3. PRODUCTION OF ROLLED FERROUS METAL PRODUCTS

The production of rolled ferrous metal products in Bulgaria is concentrated in “Stomana Industry” JSC, Pernik and “Promet Steel” JSC, Burgas. In 2025, total production of rolled ferrous metal products amounted to 931.4 thousand tons, representing a decrease of 57.2 thousand tons compared to 2024. The negative trend in the sector continued to intensify – after the decline of 3.8% in 2024 compared to 2023, production decreases by 5.7% in 2025 compared to 2024 (Table 2.3 and Figure 2.3).

Hot-rolled long steel products (reinforcing bars (rebar) and steel sections) are manufactured by both companies. In 2025, total production of long steel products reached 734.6 thousand tons, which was by 36.6 thousand tons (4.7%) less than in 2024. “Stomana Industry” JSC has produced 215.4 thousand tons of them, by 1.8 thousand tons more compared to 2024 or a growth of 0.8%.

In 2025 “Promet Steel” JSC produced 519.2 thousand tons, representing a decline of 38.6 thousand tons compared to the previous year. The annual growth rate of production in 2025 compared to 2024 (–6.92%), together with the average annual growth rate over the five-year period (–2.95%), indicates a persistent downward trend in production, which has accelerated over the past year.

Table 2.3

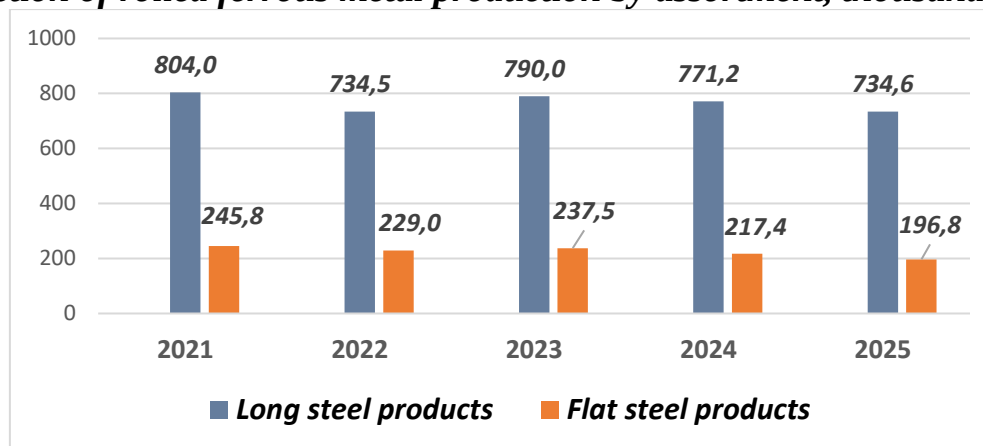
Production of rolled ferrous metal products (RFM), thousands of tons

Types of RFM	Companies	2021	2022	2023	2024	2025	2025/24	2025/24
							+/-	%
Hot-rolled long	„Promet Steel” JSC	585.1	467.1	550.8	557.8	519.2	-38.6	93.1
	„Stomana Industry” JSC	218.9	267.4	239.2	213.6	215.4	1.8	100.8
	Hot-rolled long	804.0	734.5	790.0	771.2	734.6	-36.6	95.3
Hot-rolled flat	„Stomana Industry” JSC	245.8	229.0	237.5	217.4	196.8	-20.6	90.5
Total	„Promet Steel” JSC	585.1	467.1	550.8	557.8	519.2	-38.6	93.1
	„Stomana Industry” JSC	464.7	496.4	476.7	421.0	412.2	-8.8	97.9
Total RFM		1 049.8	963.5	1 027.5	988.6	931.4	-57.2	94.2

Source: Company data.

Hot-rolled flat steel products (plates, coils, and sheets), are manufactured exclusively by „Stomana Industry” JSC. In 2025, production amounted to 196.8 thousand tons, representing a decrease of 20.6 thousand tons compared to 2024, or a decline of 9.5%. Overall, in 2025, Stomana Industry AD reported a decrease in total rolled steel production (flat and long products) of 8.8 thousand tons (2.1%) compared to 2024. The annual growth rate of production in 2025 compared to 2024 (–9.48%) and the average annual growth rate over the five-year period (–5.37%) indicate that production has been declining at a relatively rapid pace over the long term, while short-term fluctuations have not altered the overall downward trend.

Figure 2.3

Production of rolled ferrous metal production by assortment, thousands of tons

In Bulgaria, reflecting the capacity structure of the existing production facilities, long steel products have traditionally been produced in volumes two to three times greater than flat steel products. The ratio of long to flat steel products remained unchanged in 2025 (Figure 2.4), as the production volume of long steel products was 3.8 times that of flat steel products.

Figure 2.4

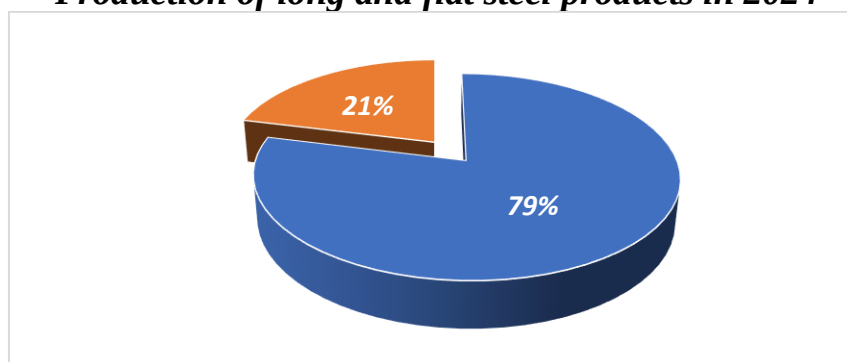
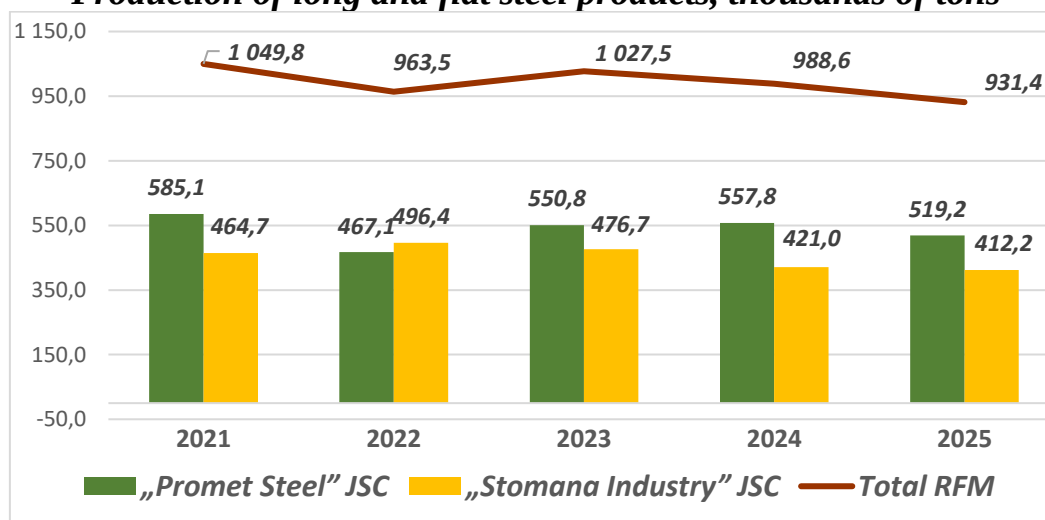
Production of long and flat steel products in 2024

Figure 2.5 illustrates the production dynamics of rolled steel manufacturers over the past five years.

Figure 2.5

Production of long and flat steel products, thousands of tons

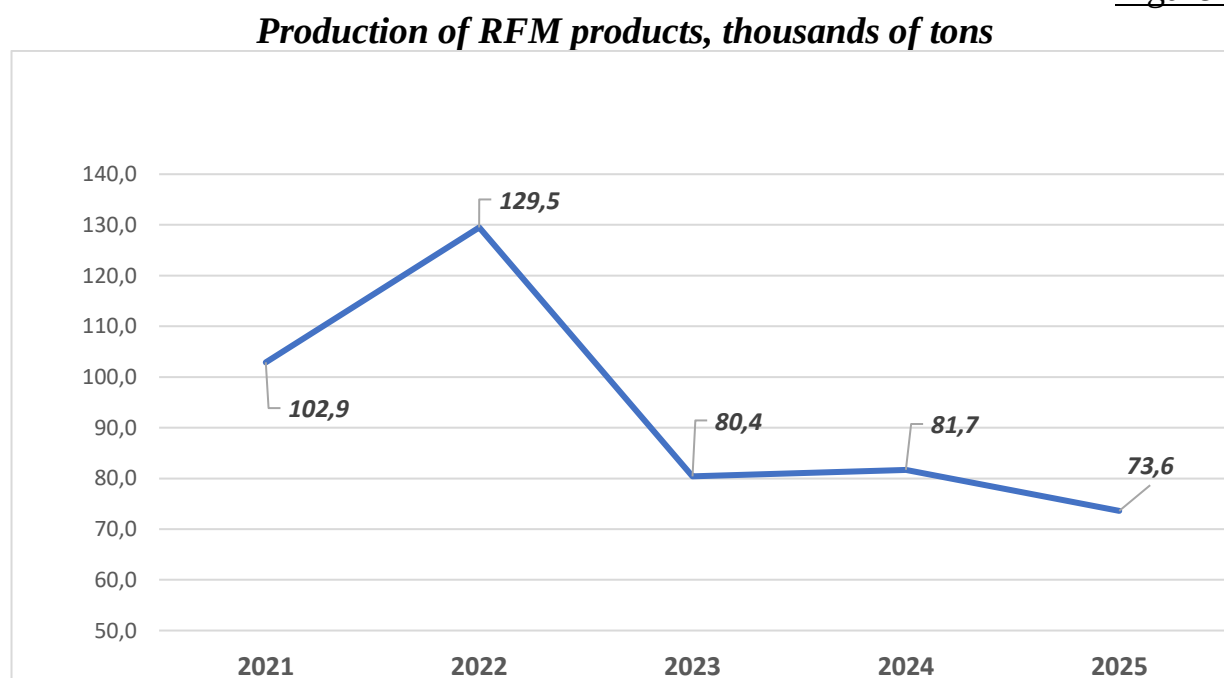
2.1.4. PRODUCTION OF PRODUCTS FROM ROLLED FERROUS METALS

Products from rolled ferrous metals (RFM) include a wide range of items such as steel pipes, galvanized sheet steel, grinding balls for mills, wire, and various wire products. The main raw materials used in their production—sheet metal, strip, and wire rod—are supplied both by domestic metallurgical enterprises and through imports. This analysis focuses solely on the production and sales of companies that are members of the Bulgarian Association of Metallurgical Industries (BAMI). It should be noted, however, that other manufacturers of welded pipes and rolled ferrous metal products also operate in the country.

Table 2.5 presents data on the production of products from rolled ferrous metals. In 2025, total production amounted to 73.6 thousand tons, representing a decrease of 8.1 thousand tons compared to 2024. Overall production declined by 9.9%.

The graph in Figure 2.6 illustrates the development of production of products from rolled ferrous metals over a five-year period. The annual growth rate for 2025 compared to 2024 was (–)9.91%, while the average annual growth rate for the five-year period amounted to (–)8.03%. The pronounced long-term downward trend and the negative average annual growth rate indicate an accelerating contraction in production, whereas short-term positive fluctuations have only a limited effect on the overall trend.

Figure 2.6



„EMC Distribution“ Ltd is specialized in the production and processing (bending, welding, and cutting) of electric-welded steel, galvanized, and aluminum tubes and hollow sections. The company sells its products on both domestic and international markets.

„Stomana Industry” JSC is the other producer of steel tubes, whose product portfolio includes a wide range of circular, square, and rectangular hollow sections in various thicknesses and dimensions designed for diverse industrial applications. These

products are manufactured from hot-rolled, cold-rolled, and hot-dip galvanized steel coils.

Grinding steel balls for ore processing are produced by “Stomana Industry” JSC and “El Stomana” Ltd. They are suitable for the extraction of gold, copper, iron, zinc, nickel, and silver and, thanks to their various levels of hardness, wear resistance, and impact toughness, provide efficient solutions for metal and mineral recovery.

„ZHITI“ JSC in Ruse, manufactures a broad range of wires and wire products in different types and sizes.

Table 2.4

Production of RFM products by companies, thousands of tons

Products	Companies	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Steel pipes, welded	„EMC Distribution“ Ltd	41.8	36.2	30.7	33.3	29.3	-4.0	88.0
	„Stomana Industry” JSC	16.2	14.3	15.3	15.9	15.5	-0.4	97.5
Steel balls for mills	„Stomana Industry” JSC “El Stomana” Ltd	32.3	38.9	22.8	23.3	20.2	-3.1	86.7
Wire and wire products	„ZHITI“ JSC	12.6	11.4	11.6	9.2	8.6	-0.6	93.5
Total RFM products		102.9	129.5	80.4	81.7	73.6	-8.1	90.1

Source: Company data

2.2. TRADE TURNOVER AND CONSUMPTION OF ROLLED FERROUS METAL PRODUCTS AND ARTICLES THEREOF

2.2.1. IMPORT OF SCRAP, ROLLED FERROUS METAL PRODUCTS AND ARTICLES THEREOF

According to the customs statistics, the imports into Bulgaria of rolled ferrous metal products and articles thereof, including ferrous scrap, reached 2 495.7 thousand tons in 2025, with a value of 1 640.0 mln. EUR (3 207.6 mln. leva). This is an increase of 285.6 thousand tons compared to 2024, corresponding to a growth rate of 12.9%. In 2025, the decline in imports of ferrous metals and products, previously observed over the preceding two years, was interrupted. In 2025, imports of non-alloy steel and products rose by 53.0 thousand tons, 161.2 thousand tons of rolled alloy steel products, and 71.4 thousand tons of rolled ferrous metals and products, with a value of 13.9 mln. EUR (27.1 mln. leva). Table 2.6 presents import volumes by product groups over the last five years.

Table 2.5

Imports of ferrous metals -raw materials, products and articles thereof, thousands of tons

Goods	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Non-alloyed total	1 676.5	1 739.2	1 795.2	1 792.4	1 845.4	53.0	103.0
cast iron - ingots, granules, powder	15.3	21.1	26.4	18.3	18.9	0.6	103.3
Ferro-alloys	14.6	20.8	19.0	24.0	25.1	1.1	104.4
Scrap	130.3	157.6	209.6	128.8	155.0	26.2	120.3
Semi-finished products	567.2	554.9	620.1	573.8	551.5	-22.3	96.1
Hot-rolled metal (coils and sheets)	486.6	491.5	446.0	542.5	599.4	56.9	110.5
Cold-rolled metal (coils and sheets)	126.6	102.0	95.9	85.7	93.1	7.4	108.7
Wire rod	169.2	194.3	169.0	201.3	195.4	-5.9	97.0
Bars	88.3	119.8	123.5	124.6	82.3	-42.3	66.0
Merchant bars/profiles	78.4	77.2	85.8	93.4	124.7	31.3	133.5
Alloyed total	105.4	218.5	118.7	104.2	265.4	161.2	254.7
Hot-rolled and cold- rolled coils and sheets	62.8	150.0	77.0	74.7	54.6	-20.1	73.1
Bars and profiles	42.6	68.5	41.7	29.5	210.8	181.3	714.5
Articles from rolled ferrous metals	206.4	303.8	312.6	313.6	385.0	71.4	122.8
Seamless pipes	0.0	37.3	33.2	30.4	30.0	-0.4	98.6
Welded pipes	0.0	32.5	49.2	44.8	72.4	27.6	161.7
Coated sheets	182.0	201.9	191.3	205.7	249.5	43.8	121.3
Wires ropes etc..	24.4	32.1	38.9	32.7	33.0	0.3	100.9
Total	1 988.3	2 261.5	2 226.5	2 210.1	2 495.7	285.6	112.9
Value, mln. EUR	1 529.7	2 270.8	1 741.7	1 626.1	1 640.0	13.9	100.9
Value, mln. BGN	2 991.8	4 441.3	3 406.5	3 180.5	3 207.6	27.1	100.9

Source: Custom statistics, NRA

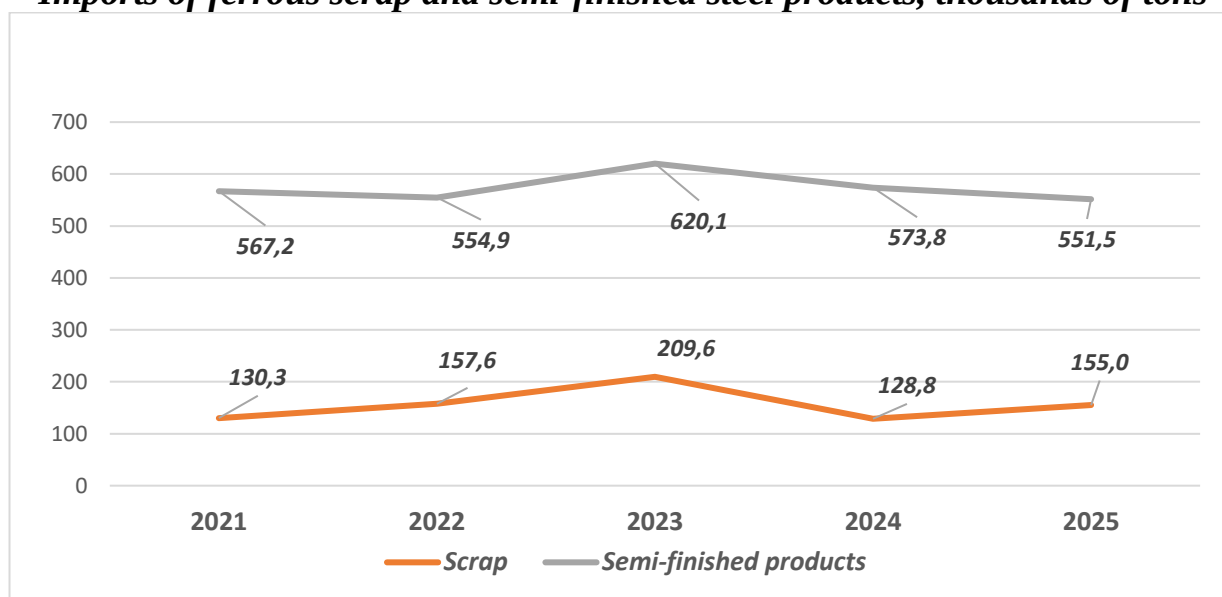
In 2025, Bulgaria imported 155.0 thousand tons of ferrous scrap used as a raw material for crude steel production. This volume exceeded the 2024 level by 26.2 thousand tons. Imports originated primarily from Romania, which accounted for 77.1% of total ferrous scrap imports into Bulgaria. Serbia ranked second with a share of 20.2%, followed by Ukraine with 2.6%. Collectively, these three countries supplied 99.9% of Bulgaria's ferrous scrap imports.

One of the commodity groups whose imports declined in 2025 compared to 2024 is semi-finished products. Following a five-year peak of 620.1 thousand tons in 2023, imports decreased in both 2024 and 2025. In 2025, total imports of semi-finished products amounted to 551.5 thousand tons, representing a reduction of 22.3 thousand tons compared to 2024, or a decline of 3.9%. Ukraine accounted for 84.5%, followed by Vietnam with 7.6%, Indonesia - 3.6%, and Greece - 2.4%. Together, these four countries supplied 98.1% of the imports of semi-finished steel products.

Figure 2.7 illustrates the dynamics of the imports into Bulgaria of ferrous scrap and semi-finished steel products in the period 2021–2025. Following their processing into higher value-added products, these materials are supplied both to the domestic market and for export.

Figure 2.7

Imports of ferrous scrap and semi-finished steel products, thousands of tons



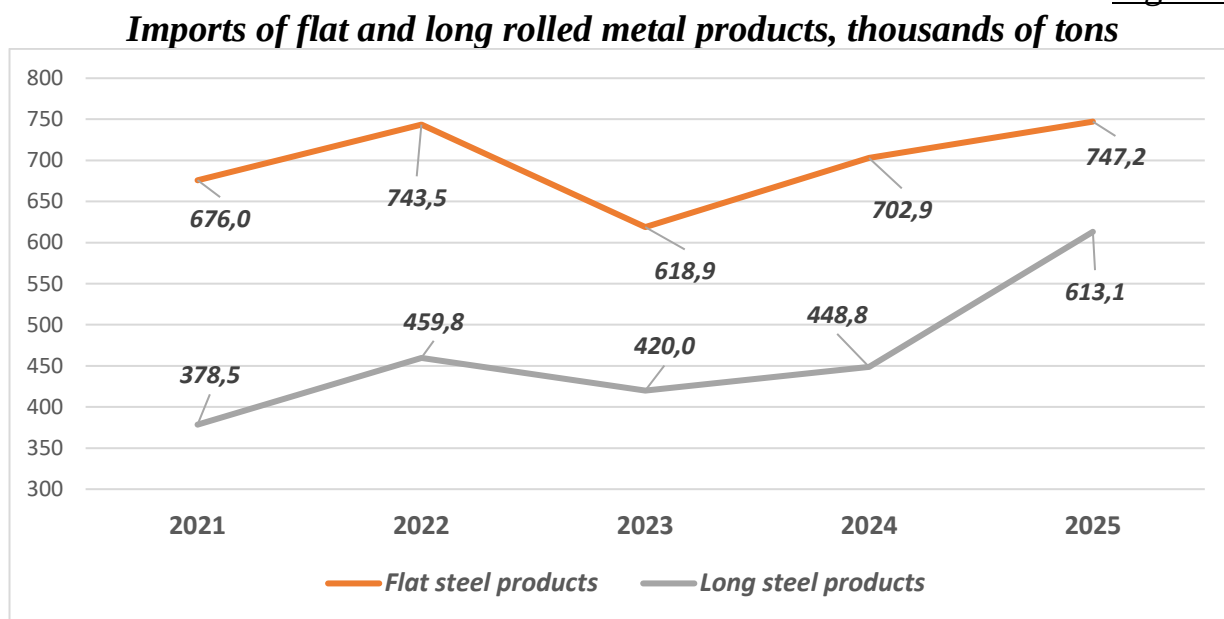
Imports of **flat and long steel products** into Bulgaria during the period 2021–2025 are presented in Figure 2.8. In 2025, Bulgaria imported 747.2 thousand tons of hot-rolled (HR) and cold-rolled (CR) flat steel products manufactured from both non-alloy and alloy steels. Compared to 2024, imports increased by 44.3 thousand tons, which is a growth rate of 6.3%. Imports of non-alloy hot-rolled products (coils and sheets) amounted to 599.4 thousand tons, representing an increase of 56.9 thousand tons compared to the previous year.

Cold-rolled flat steel products are not manufactured domestically. In 2025, imports reached 93.1 thousand tons, which was 7.4 thousand tons (8.7%) higher than in 2024. Flat steel products were imported primarily from Ukraine (39.1%) and Turkey (30.1%), followed by Serbia (12.3%) and Egypt (11.9%). Together, these four countries accounted for 93.5% of the imports of cold-rolled flat steel products.

In 2025, total imports of **long steel products** (bars and sections of plain and alloy steel, wire rod)) amounted to 613.1 thousand tons. Compared to 2024, imports increased by 164.3 thousand tons (36.6%). Once again, Turkey was the leading supplier, accounting for 23.8% of total long steel products imports, followed by Egypt (20.6%), Greece (17.0%), China (12.3%), and other countries.

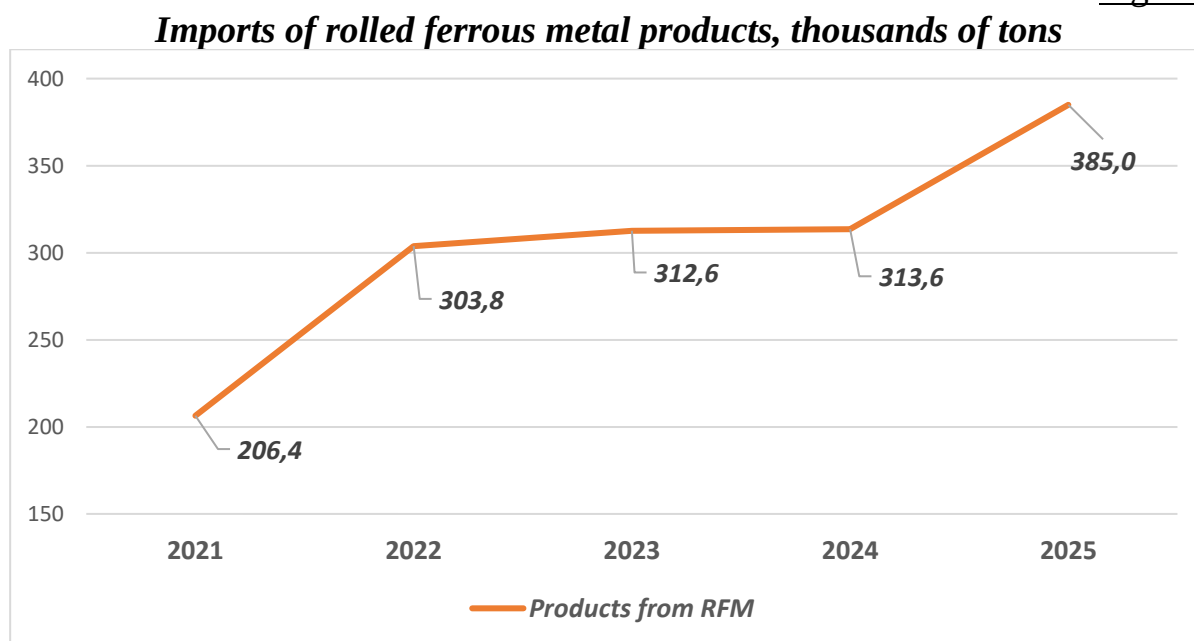
In 2025, imports of **non-alloy steel bars and sections** amounted to 207.0 thousand tons, less by 11.0 thousand tons (5.0%) compared to 2024. Imports of wire rod declined to 195.4 thousand tons. Compared to the previous year, imports were lower by 5.9 thousand tons, or a decrease of 3.0%.

Figure 2.8



In 2025, the gradual upward trend in imports of products manufactured from rolled ferrous metals continued. Total imports reached 385.0 thousand tons, representing an increase of 71.4 thousand tons compared to 2024, or a growth of 22.8%. Figure 2.9 illustrates the volume of imports of rolled metal products over the last five years.

Figure 2.9



In 2025, a total of 102.4 thousand tons of seamless and welded pipes were imported, by 27.2 thousand tons more (a growth of 36.2%) compared to 2024. A slight increase of 0.3% was recorded in imports of steel wire and wire rope products.

2.2.2. EXPORT OF SCRAP, ROLLED FERROUS METAL PRODUCTS AND ARTICLES THEREOF

According to the customs statistics, the total volume of metal raw materials (pig iron, ferrous scrap, semi-finished products), rolled steel products, and rolled metal products exported from Bulgaria in 2025 amounted to 1 417.1 thousand tons, with a value of 887.6 mln. EUR (1 735.9 mln. leva). Export volumes were 91.1 thousand tons lower than in 2024, which is a decline of 6.0%.

Table 2.6 presents export volumes by commodity group over the last five years. As can be seen from the data, exports of metal raw materials and rolled metal products followed a clear downward trend in the period 2021–2025. The uneven dynamics of the decline can be attributed to a combination of external and internal factors, such as weakening demand, high electricity prices, increasing unfair international competition, and other market-related challenges. Export volumes decreased across all commodity groups, with the exception of ferro-alloys, steel bars and sections, and welded steel tubes.

In 2025, exports of ferrous scrap were 364.1 thousand tons, 18.3% lower compared to 2024. Although the downward trend in scrap exports continued for a fourth consecutive year, export volumes remained substantial. This situation limits the availability of raw materials for domestic steel production and creates challenges for Bulgaria's crude steel industry, which is based entirely on electric arc furnace (EAF) technology utilizing ferrous scrap as its sole raw material. The main exports of scrap are directed to Turkey and North Macedonia, which account for 58.6% and 34.1% of total exports respectively. The dynamics of Bulgaria's ferrous scrap exports over the five-year period are presented in Figure 2.10.

Figure 2.10

Exports of ferrous scrap, thousand tons

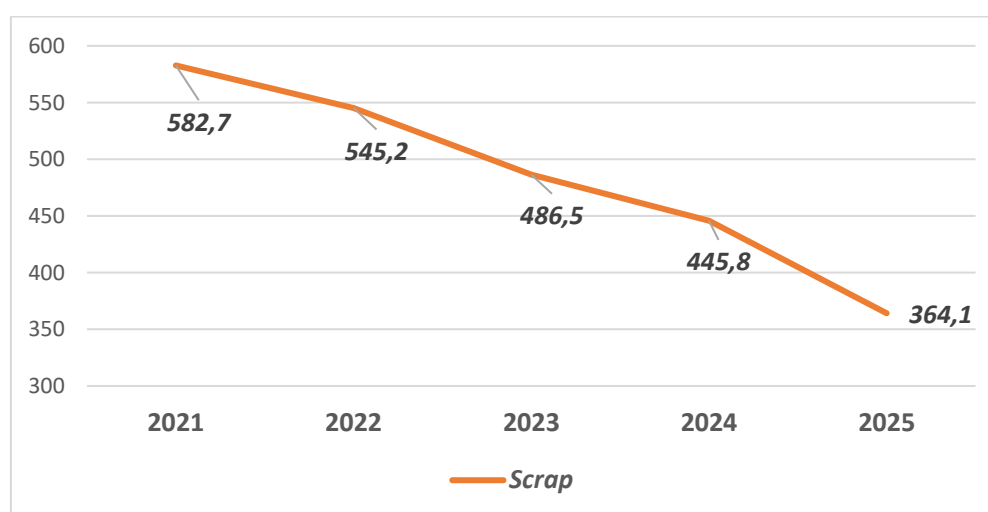


Table 2.6

Exports of ferrous metals -raw materials, products and articles thereof, thousands of tons

Goods	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Non-alloyed total	1 373.0	1 197.1	1 217.8	1 148.6	1 026.0	-122.6	89.3
cast iron - ingots, granules, powder	1.3	0.1	0.1	0.1	0.9	0.8	874.7
Ferro-alloys	5.2	7.5	9.0	9.0	14.0	5.0	155.7
Scrap	582.7	545.2	486.5	445.8	364.1	-81.7	81.7
Semi-finished products	16.2	3.8	4.2	9.0	0.7	-8.3	7.3
Hot-rolled metal (coils and sheets)	210.2	234.7	222.6	207.6	197.2	-10.4	95.0
Cold-rolled metal (coils and sheets)	7.4	5.2	3.4	2.6	2.2	-0.4	82.9
Wire rod	1.1	0.7	3.1	1.1	1.1	0.0	100.0
Bars	516.8	381.7	471.2	459.7	423.6	-36.1	92.2
Merchant bars/profiles	32.1	18.3	17.8	13.7	22.2	8.5	162.2
Alloyed total	67.4	79.2	73.2	56.5	62.9	6.4	111.4
Hot-rolled and cold-rolled coils and sheets	17.7	23.3	20.2	16.1	14.4	-1.7	89.7
Bars and profiles	49.7	55.9	53.1	40.4	48.5	8.1	120.0
Articles from rolled ferrous metals	325.6	291.3	267.4	303.1	328.2	25.1	108.3
Seamless pipes	4.7	1.8	0.5	0.8	1.4	0.6	173.7
Welded pipes	283.7	252.0	235.4	261.2	291.2	30.0	111.5
Coated sheets	13.8	13.6	8.5	11.7	12.1	0.4	103.7
Wires ropes etc.	23.4	24.0	23.0	29.5	23.5	-6.0	79.7
Total	1 766.0	1 567.5	1 558.4	1 508.2	1 417.1	-91.1	94.0
Value, mln. EUR	1 216.7	1 460.7	1 082.5	984.0	887.6	-96.4	90.2
Value, mln. BGN	2 379.7	2 857.0	2 117.2	1 924.6	1 735.9	-188.7	90.2

Source: Custom statistics, NRA

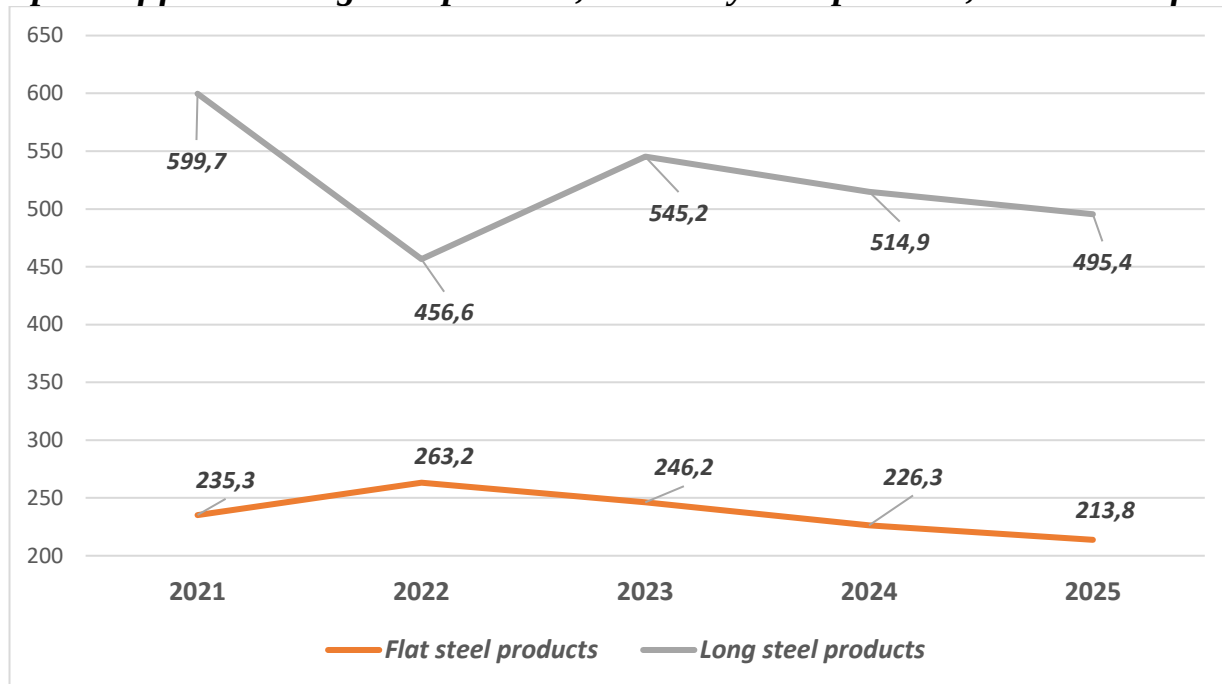
In 2025, exports from the country of both flat and long steel products (Figure 2.11) declined compared to 2024. A total of 213.8 thousand tons of **flat steel products** were exported, 12.5 thousand tons less than in the previous year, or a decrease of 5.5%. Accordingly, 495.4 thousand tons of **long steel products** were exported, or a decline of 19.5 thousand tons (3.8%).

Domestic producers of flat and long rolled steel products also reported a decline in exports. In 2025, these companies exported 31.1 thousand tons (16.5%) less flat steel products and 36.2 thousand tonnes (6.9%) less long steel products compared to 2024. More than 78% of exports of **non-alloy flat steel products** in 2025 were destined for EU countries. The largest share was exported to Romania (36.3%), followed by Hungary (9.6%), Greece (9.3%), Poland (7.8%), Slovakia (5.3%), Denmark (6.6%), and others. Exports to Turkey took 6.7% of total exports, while Serbia and Ukraine represented shares of 3.8% and 3.2%, respectively.

More than 80% of exports **steel bars, sections, and rebars**, were directed to EU countries, with Romania accounting for the largest share (45.4%), followed by Greece (16.3%) and Cyprus (10 %). Exports to the USA represented 9.1% of total exports. The total share of exports to the neighboring Balkan countries, North Macedonia and Serbia, accounted for 5.6%, and 1.6% of total exports of long-rolled steel products were directed to Ukraine.

Figure 2.11

Exports of flat and long steel products, incl. alloy steel products, thousands of tons



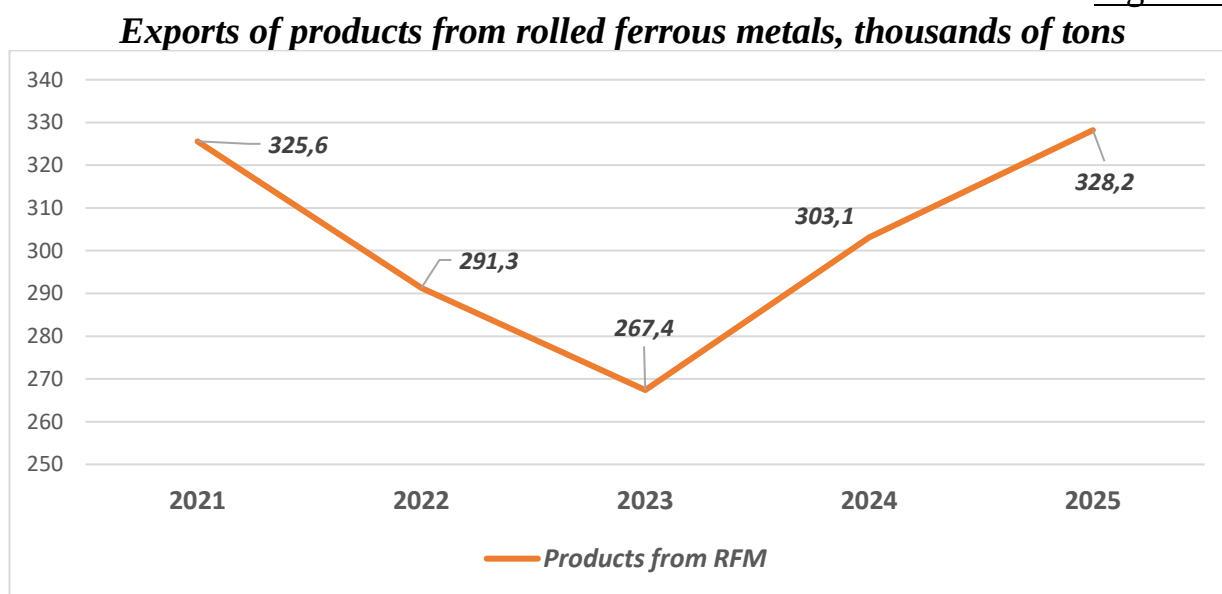
According to customs statistics, in 2025 exports of **non-alloy steel bars** (the main product of the Bulgarian steel industry) were 423.6 thousand tons, which was 36.1 thousand tons less than in 2024, representing a decline of 7.8 %. Romania was the leading trading partner accounting for 45.9% of total exports, followed by Greece with 18.5%, Cyprus with 11.7%, etc. More than 80% of exports were destined for the EU countries (this share was 49.7% in 2024). Exports to the USA accounted for 10.6% of the total exports, while North Macedonia and Serbia together accounted for 3.7%, and Ukraine for 1.7%.

In 2025, exports of **non-alloy steel sections** reversed the trend observed in previous years and recorded an increase. Exports reached 22.2 thousand tons, an increase of 8.5% compared to 2024, or a growth of 1.4%. Once again, neighboring countries

accounted for more than 80% of exports, led by Romania (50.4%), North Macedonia (13.1%), Serbia (13.0%), Bosnia and Herzegovina (9.9%), and Croatia (1.9%). More than half of all exported steel sections were destined for EU Member States. The share of Greece was 4.5 %, followed by Hungary -1.2 %, etc.

In 2025, exports of **products from rolled ferrous metals** recorded an increase (Figure 2.12). Total exports reached 328.2 thousand tons, which was 25.1 thousand tons higher than in 2024, or a growth of 8.3%. In general, exports increased in almost all product categories - welded steel tubes (11.5%), seamless steel tubes (73.7%), and coated steel sheet products (3.7%), except for steel wire and wire rope products, for which exports declined by 20.3%. The figures presented in Table 2.4 regarding the production of products from RFM are lower, as there are other manufacturers operating in the country whose production is not included in the data.

Figure 2.12



2.2.3. FOREIGN TRADE EXCHANGE OF ROLLED FERROUS METAL PRODUCTS AND FINISHED PRODUCTS

Foreign trade statistics for Bulgaria for the period 2021–2025 clearly characterize rolled ferrous metal products (excluding pig iron, ferro-alloys, and ferrous scrap) as a sector structurally dependent on imports, with a persistent negative trade balance and a widening imbalance between imports and exports. The divergent trends in imports and exports in 2025 – with imports increasing by 10.8% while exports declined by 3.6% – led to a deterioration in the trade balance. The trade deficit reached 1,202.0 thousand tons, the most unfavorable level recorded during the five-year period, representing an increase of 213 thousand tons (21.5%) compared to 2024. Total trade turnover increased by 6.5% compared to the previous year, but this was due to a 10.8% increase in imports, while exports decreased by 3.6%.

Table 2.7

**Foreign trade turnover of products and articles from rolled ferrous metals,
thousands of tons**

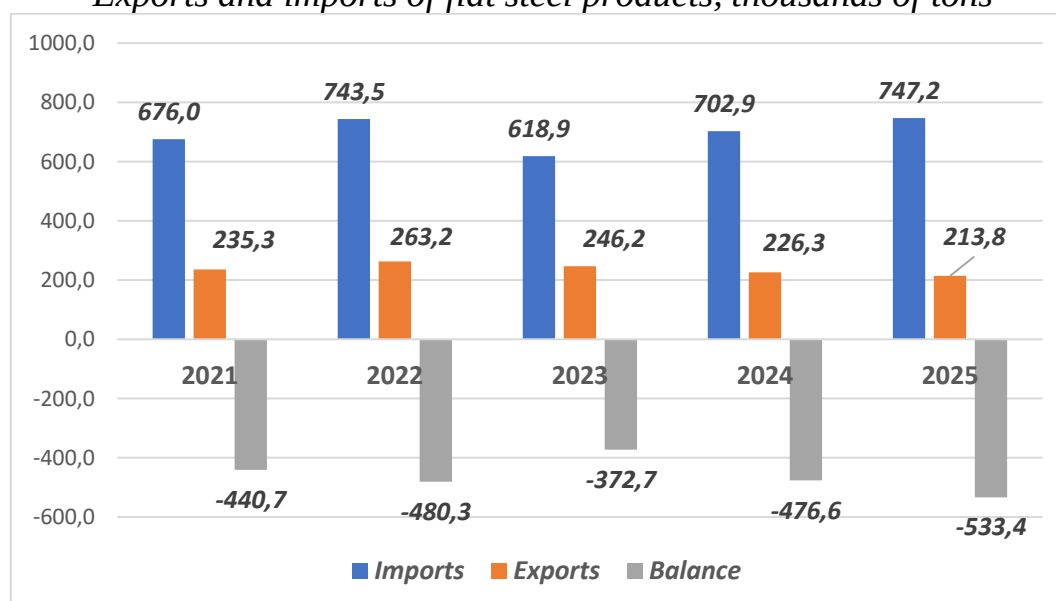
<i>Products and articles from RFM</i>	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Rolled ferrous metals							
-Imports (incl. semi-finished products)	1621.6	1758.2	1827.9	1725.4	1911.8	186.4	110.8
-Exports (incl. semi-finished products)	851.2	723.5	798.5	736.5	709.9	-26.6	96.4
Turnover total	2472.8	2481.7	2626.4	2461.9	2621.7	159.8	106.5
Balance (Exports-Imports)	-770.4	-1034.7	-1029.4	-989	-1202.0	-213.0	121.5
Products from RFM							
- Imports	206.4	303.8	312.6	313.6	385.0	71.4	122.8
- Exports	325.6	291.3	267.4	303.1	328.2	25.1	108.3
Turnover total	532	595.1	580	616.7	713.1	96.4	115.6
Balance (Exports-Imports)	119.2	-12.5	-45.2	-10.5	-56.8	-46.3	540.5

Source: Custom statistics, NRA

Data on the development of exports, imports, and the trade balance of flat steel products during the period 2021–2025 (Figure 2.13) indicate a persistently negative trade balance. In 2025, the trade deficit increased by 11.9% compared to the previous year, driven by a 6.3% increase in imports of flat steel products combined with a 5.5% decline in exports.

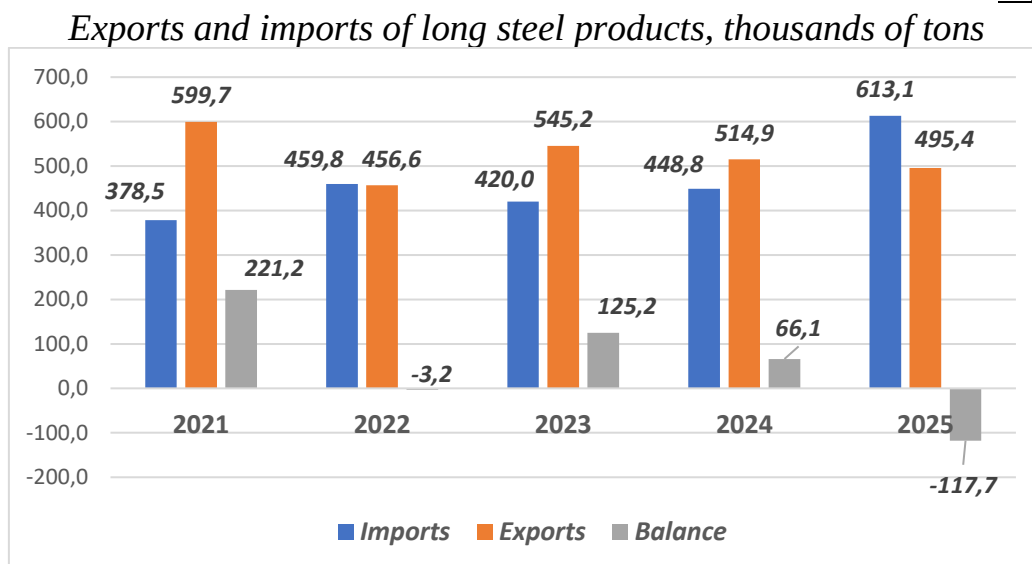
Figure 2.13

Exports and imports of flat steel products, thousands of tons



In 2025, **long steel products** (Figure 2.14), despite a generally positive trade balance, followed a trend similar to that of flat rolled products. Imports exceeded exports by 117.7 thousand tons. Compared to 2024, imports increased by 36.6%, whereas exports declined by 3.8%. A significant divergence in growth rates was observed, with imports expanding by 36.6% and exports contracting by 3.8%.

Figure 2.14



The existing domestic production capacities for long products can meet a large share of demand and, under otherwise equal conditions (price pressure, unfair trade practices, etc.), could serve as a factor for reducing imports of ferrous metal products. In the case of **products from rolled ferrous metals** (Figure 2.15), the dynamics differ but also lead to a deterioration of the trade balance. Over the five-year period, imports grew at a strong average annual rate of 16.9%, while exports remained virtually stagnant at 0.2%. As a result, the positive trade balance observed in 2021, became negative in the following years, reaching (-) 56.8 thousand tons by the end of the period. In 2025, imports of products from RFM increased by 22.8% compared to 2024, whereas exports grew by only 8.3%.

Figure 2.15

Exports and imports of products from rolled ferrous metals, thousands of tons

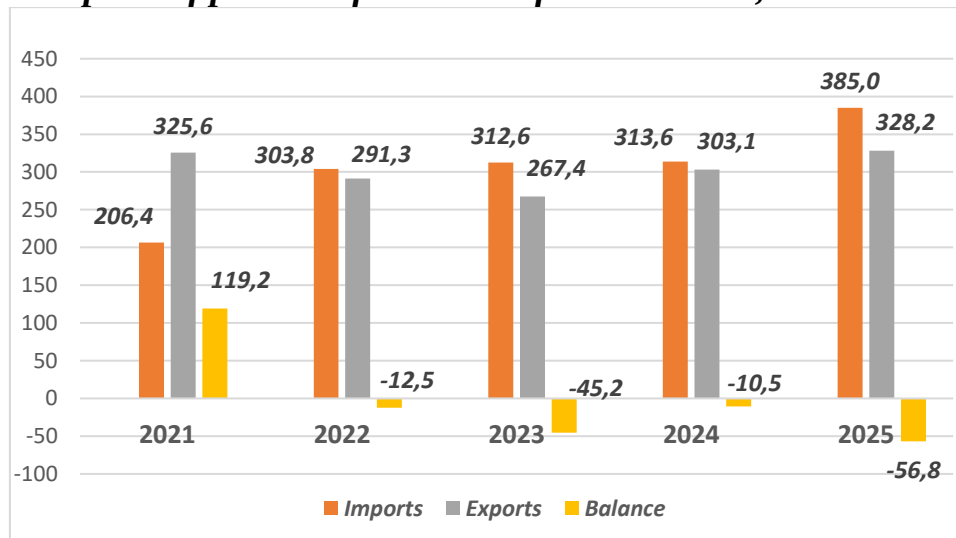


Table 2.8 presents a summary of foreign trade balance showing the difference between exports and imports for all **major categories of ferrous metal products and raw materials** (excluding pig iron and ferro-alloys) in 2025.

Table 2.8

Foreign trade balance of ferrous metals in 2025, thousands of tons

Products and raw materials groups	Exports	Imports	Difference
Semi-finished products	0.7	551.5	-550.9
Flat steel products	213.8	539.9	-326.2
Long steel products	495.4	613.1	-117.7
Products from RFM	328.2	385.0	-56.8
Scrap	364.1	155.0	209.2
Total	1 402.2	2 244.5	-842.3

Source: Custom statistics, NRA

- **Semi-finished steel products** – Bulgaria remains a net importer of blooms, billets and slabs, which are the raw materials for further processing along the metallurgical value chain. In 2025, the trade balance amounted to (-) 550.9 thousand tons, compared to (-)564.8 thousand tons in 2024.

- **Flat steel products** – Bulgaria is also a net importer within this product category. In 2025, imports exceeded exports by 326.2 thousand tons. For comparison, the trade deficit was (-)476.6 thousand tons in 2024.

- **Long steel products** – Despite the existence of substantial domestic production capacity, the trade balance turned negative in 2025, reaching (-)117.7 thousand tons, compared with a positive trade balance of 66.2 thousand tons in the previous year.

- **Products from rolled ferrous metals** – In 2025, the trade balance remained negative at (-)56.8 thousand tons. For comparison, the deficit was (-)10.5 thousand tons in 2024. The trade balance was negative for all categories of steel products, except for welded steel tubes, where exports exceeded imports by 218.7 thousand tons.

- **Scrap** – For another consecutive year, exports of scrap exceeded imports. The positive trade balance amounted to 209.2 thousand tons. By comparison, the positive balance reached 317.0 thousand tons in 2024 and 276.9 thousand tons in 2023. Bulgaria continues to be a net exporter of raw materials rather than higher value-added steel products.

Trade balance for all **major categories of ferrous metal products and raw materials** (excluding pig iron and ferro-alloys), which has remained negative since 2019.

Table 2.9

(thousands of tons)

2025	2024	2023	2022	2021	2020	2019
-842.3	-668.7	-797.7;	-659.6	-288.8	-711.0	-810.1

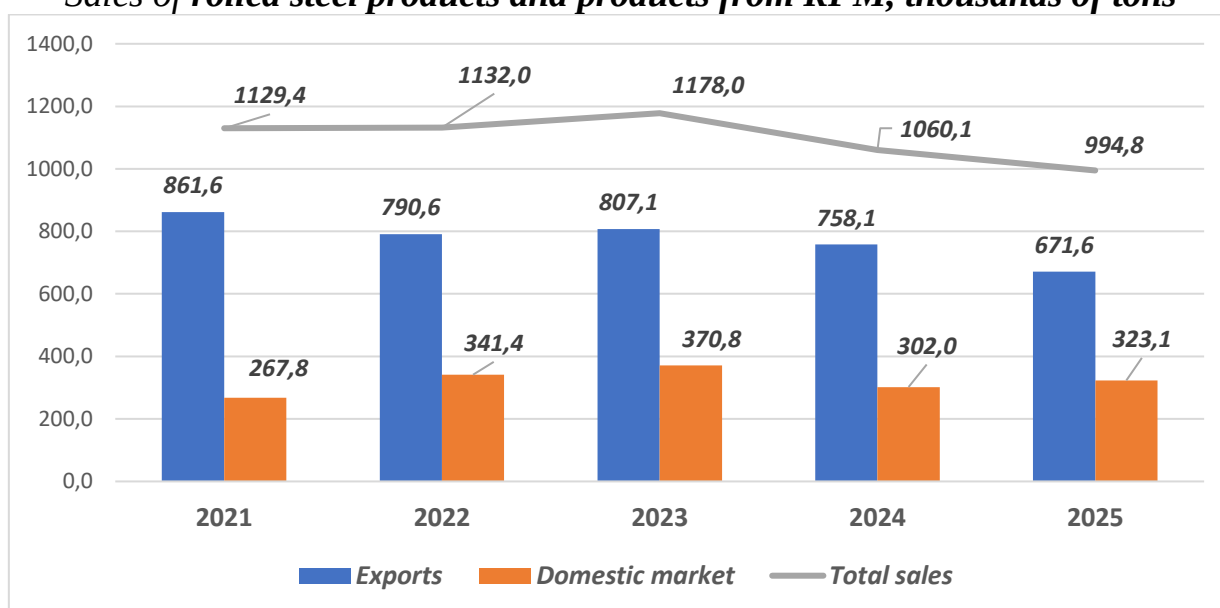
2.2.4. SALES OF ROLLED FERROUS METALS AND PRODUCTS THEREOF

In 2025, domestic sales of ferrous metals and products thereof, produced by the BAMl member companies reached 323.1 thousand tons, representing an increase of 21.2 thousand tons (11.4%) compared to 2024.

Total sales (domestic market sales + exports) by BAMl member companies amounted to 994.8 thousand tons. The decline of 65.3 thousand tons (6.2%) was due to lower export volumes. In 2025, these enterprises exported 86.5 thousand tons less than in 2024, corresponding to a decrease of 11.4%. Figure 2.16 illustrates the dynamics of sales of rolled steel products and products from RFM in the period 2021–2025.

Figure 2.16

Sales of rolled steel products and products from RFM, thousands of tons



Source: Company data

Table 2.10 presents sales data for flat and long rolled steel products over the last three years. Over the period, sales volumes by BAMl member companies generally declined, reflecting the contraction in export activity. In 2025, total sales of flat and long steel products were 931.5 thousand tons which was 45.4 thousand tons lower than in 2024 (a decline of 4.6%) and 67.5 thousand tons lower than in 2023 (a decline of 6.8%). The production of rolled steel products and products from rolled ferrous metals (RFM) in Bulgaria is export-oriented, as exports of flat and long steel products have traditionally exceeded domestic sales volumes by 2.5 to 3 times. However, over the past year, the ratio fell to 2.2.

Table 2.10

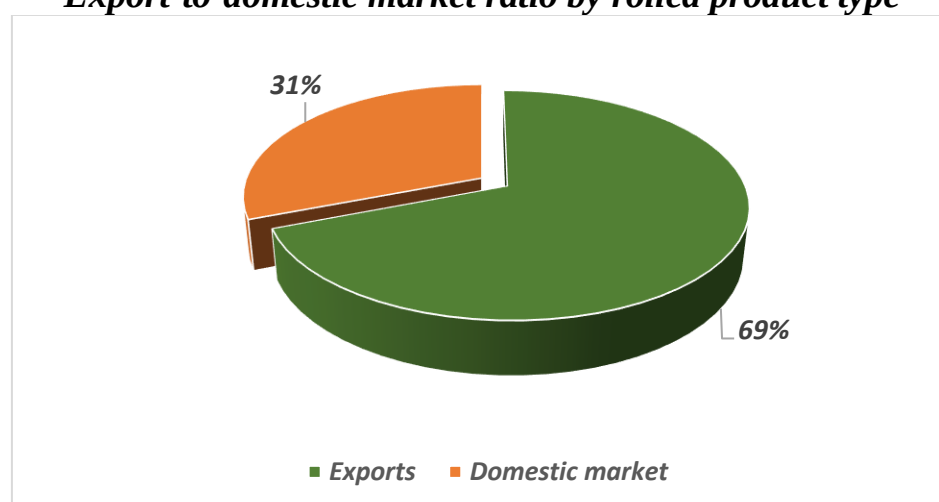
Sales of rolled ferrous metal products by types, thousands of tons

Rolled products	Exports			Domestic market			Total sales		
	2023	2024	2025	2023	2024	2025	2023	2024	2025
Long rolled steel products	547.3	523.4	487.2	213.5	235.3	261.4	760.8	758.6	748.6
Flat rolled steel products	206.9	188.1	157.0	31.3	30.2	25.9	238.2	218.3	182.9
Total rolled products	754.2	711.5	644.2	244.8	265.4	287.4	999	976.9	931.5

*Company data

The export-to-domestic market ratio for flat and long steel products in 2025 is 69/31.

Figure 2.17

Export-to-domestic market ratio by rolled product type

Source: Company data

2.2.5. ACTUAL DOMESTIC CONSUMPTION (ADC) OF STEEL PRODUCTS

The consumption of steel and steel products is an important indicator of the performance and strategic autonomy of an economy.

Actual Domestic Consumption (ADC) in Bulgaria of rolled ferrous metals and products thereof is the sum of domestic sales of domestically produced products and imports of the same products into the country. Table 2.11 presents ADC over the last three years (2023–2025), while Figure 2.18 illustrates the dynamics of ADC over the period 2021–2025.

Table 2.11

Real domestic consumption of steel products, thousands of tons

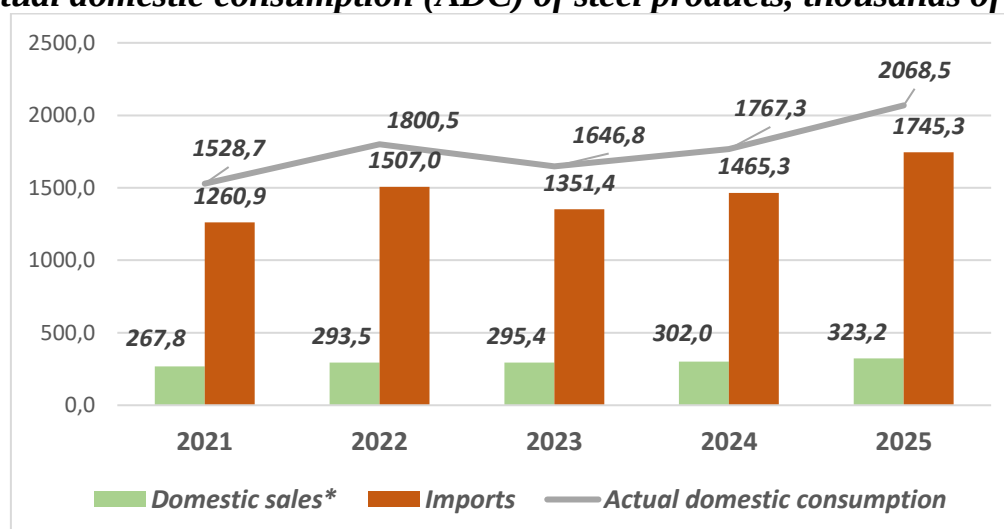
Products	2023			2024			2025			2025/2024	
	DS*	Imports	RDC	DS*	Imports	RDC	DS*	Imports	RDC	Difference	%
Long steel products	216.3	419.9	636.2	235.3	448.8	684.1	261.4	613.1	874.5	190.5	127.8
Flat steel products	31.2	618.9	650.1	30.2	702.9	733.1	25.9	747.2	773.1	40.0	105.5
Total steel products	247.5	1038.8	1286.3	265.4	1151.7	1417.1	287.4	1360.3	1647.7	230.6	116.3
Products from RFM	47.9	312.6	360.5	36.5	313.6	350.1	35.8	385.0	420.8	70.6	120.2
Total	295.4	1351.4	1646.8	302.0	1465.3	1767.3	323.2	1745.3	2068.5	301.2	117.0

*DS – Domestic sales

Source: Customs data and National Revenue Agency (imports); company data (domestic sales)

In 2025, actual domestic consumption in Bulgaria of rolled ferrous metals and products thereof reached 2 068.5 thousand tons, up by 301.2 thousand tons (17.0%) compared to 2024. Over the last three years, a positive trend has been observed in the consumption of both rolled steel products and products from RFM. This is driven by import levels, which in 2025 were five times higher than domestic sales

Figure 2.18

Actual domestic consumption (ADC) of steel products, thousands of tons

Apparent consumption (AC) and actual domestic consumption (ADC) of steel are key indicators of investment activity in critical sectors such as construction, infrastructure, and mechanical engineering, as steel consumption is directly linked to the implementation of long-term production and capital investment projects. Both

indicators are used to assess the degree of economic strategic autonomy and ongoing structural changes, including shifts towards higher-value-added and more technologically advanced production, or alternatively towards less resource-intensive activities.

Apparent consumption per capita (ACPC), in kilograms, is used as a metric of the level of industrialization of an economy. It is calculated using the formula: $AC = (P + I) - E$, where:

AC- Apparent consumption, thousand tons

P – Production of steel products, thousand tons. (*Domestic production of steel products by national producers*)

I – Imports of steel products, thousand tons. (*Total imports of steel products entering the domestic market*)

E – Exports of steel products, thousand tons (*Total exports of steel products, excluding pig iron, ferro-alloys, and scrap*)

Apparent consumption of steel products, including **apparent consumption per capita (ACPC), in kilograms**, by year is presented in Table 2.12.

Table 2.12

Apparent Consumption of Steel Products, thousand tones

Year	Production	Imports	Eports	Apparent Consumption	Apparetn Consumption per capita
2020	930.8	1 518.0	1 084.1	1 364.7	197.3
2021	1 049.8	1 260.9	1 160.6	1 150.1	168.2
2022	963.5	1 507.0	1 010.9	1 459.6	225.8
2023	1 027.6	1 351.4	1 061.7	1 317.3	204.4
2024	988.6	1 434.8	1 043.6	1 379.9	214.4
2025	931.4	1 715.3	1 036.0	1 610.7	252.9

Source: Company's data (production), Custom data (Imports and Exports)

In 2025, compared to 2024, apparent consumption (AC) of steel products in Bulgaria increased by 16.7% to 1 610.7 thousand tons, while apparent consumption per capita (ACPC) rose by 18% to 252.9 kg per person.

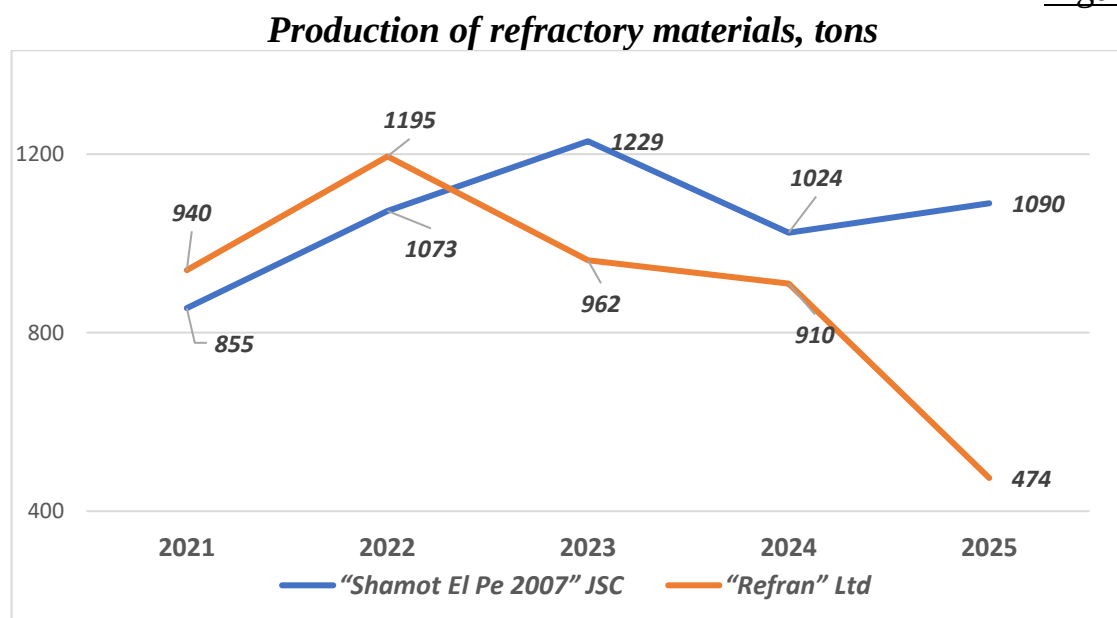
ACPC levels in developed industrial economies are typically around or above 500 kg per person, while the average for the EU (27) exceeds 300 kg per person.

2.3. PRODUCTION OF REFRACTORY MATERIALS AND PRODUCTS

Refractories and refractory materials are primarily used for lining and coating furnaces and metallurgical installations in metallurgical enterprises. The main producers of refractory materials and products are “Shamot El Pe 2007” JSC and “Refran” Ltd. Data on the production of refractory materials by these companies in the period 2021–2025 are presented in Figure 2.19.

In 2025, “Refran” Ltd produced 447 tons of non-shaped and shaped refractory products, representing a decrease of 48% compared to 2024. Production by “Shamot El Pe 2007” JSC amounted to 1 090 tons, an increase of 10 tons (1.1%) compared to the previous year. The total production of refractory materials by both companies in 2025 reached 1 564 tons, representing a decline of 19% compared to 2024.

Figure 2.19



Refractory materials are primarily supplied to the domestic market, with no recorded exports in recent years. In 2025, total domestic sales by the two companies amounted to 1 600 tons.

SECTION THREE
NON-FERROUS EXTRACTIVE METALLURGY IN BULGARIA
3.1. NON-FERROUS METALS PRODUCTION

Bulgaria produces basic non-ferrous metals – lead, zinc and copper from import and local raw materials – ore concentrates, metal waste (scrap) and secondary semi-products of these metals in two enterprises – for copper in Aurubis Bulgaria AD and for lead and zinc in KCM AD. Only secondary raw materials – out-of-use lead battery packs and their wastes are being processed to lead in block and in two other enterprises – Monbat Recycling EAD and El Bat AD. Lead is being invested in the production of lead battery packs. During the technological process, we extract other accompanying metals and from the useful components contained in these we get new commodity products. We perform comprehensive utilization of raw materials to end products and increase the added value.

Along the processing chains in the branch cutting-edge metallurgic capacities are built for subsequent non-ferrous metals and their alloys' processing to ready products and items of high added value. "Sofia Med" JSC produces products made of copper, zinc and their alloys. In the sector of aluminium processing there are several enterprises – ALCOMET AD, ETEM AD, LINKIN LTD. These products and items are being used in the construction, vehicle construction, energy, machine construction and other sectors of the economy and domestic life. As a result of this development, Bulgaria is among the leading countries that are producers of non-ferrous metals in the EU. Considering the value of the produced products in recent years, our country ranks 5th or 6th among all the member-states.

In 2025 the production was impacted by numerous exogenous and endogenous factors. The ongoing war in Ukraine and the sanctions levied on Russia caused energy crises that we have still not coped with. The prices of energy carriers in the EU remain higher than countries with competitive production of this in Europe. Metals' price at the global markets are very volatile, there are difficulties in the logistics during the import of raw materials. For the production of non-ferrous metals the Bulgarian producers import high quantities of ore concentrates, metal and other secondary products. Marketing the ready production is also mainly for export and this makes the branch strongly depend on the condition of global markets, exchange prices of metals and values of energy resources.

Irrespective of the deteriorated economic and political conditions worldwide and in our country, the non-ferrous extractive metallurgy keeps reporting high indicators and remains the largest exporter of all the commodity groups. In 2025 production for around 4 billion EUR was exported and resulted in positive balance of 2.3 billion EUR.

3.1.1. PRODUCTION OF COPPER (ANODIC AND ELECTROLYTIC)

The only producer of electrolytic copper from primary ore concentrates and secondary copper raw materials is Aurubis Bulgaria AD, part of the Aurubis Group, Germany. The production site is located close to the town of Pirdop, where four basic capacities are outlined: metallurgic production for autogenous melting and getting anodic copper, electrolytic refinement of anodes to cathode copper, production of sulphur acid and enrichment factory for copper slags.

The implemented scheme is a model for circular economy that ensures processing the primary and secondary raw materials with high level of utilization of the useful components and natural protection. All the waste products of the abovementioned production processes such as copper slags, exhaust gases, caught dusts and electrolytic slags are processed to end products. They are reintroduced in the production process or offered for marketing in other businesses such as construction.

Installation for copper melting from old ore spoilt banks and electrolytic extraction to cathode copper is available in Asarel Medet JSC, whereas quantities are minimum (around 2 thousand tonnes/annually).

After the implementation of projects for refurbishment and technological renewal of production and the investments made so far for over 1 billion BGN, Aurubis Bulgaria AD started the execution of the program of largest scale for 400 million EUR

“Investments for progress. Bulgaria 2027”. The Company expands its annual capacity for cathode copper from 240 thousand tonnes to 360 thousand tonnes started constructing two new photovoltaic parks, “Aurubis-2” and “Aurubis-3” in addition to the first solar plant created in 2021. Additionally, the fourth stage was approved – “Aurubis-4”. After the finalization of the projects, the photovoltaic complex of “Aurubis Bulgaria” would have 41 MWp green capacities for its own needs being 15% of the necessary energy for production. This replacement saves over 25 000 tonnes of indirect carbon dioxide emissions annually.

In 2025 overhaul of the melting furnace was performed within the enterprise and the processed primary copper raw materials are with 254 thousand tonnes lower, and the metal contents within these decreases with 75.8 thousand tonnes. This decrease is only from the imported concentrates. The deliveries from local deposits increased with 5.7 thousand tonnes of metal whereas the ration of local to imported concentrates is 30% : 70%. In 2024 this ratio was 21%:79%, because of the higher copper production. The ores extracted in the country have low copper contents and provide concentrates of quantities to around 30% of the capacities of the metallurgic production plants. The other quantities are being imported from various regions and countries such as South America (Chile, Brazil, Peru), from the region (Macedonia, Greece, Serbia) etc.

Table 3.1 presents the quantities of processed raw materials for the production of anodic and cathode copper in the last 5 consecutive years and figure 3.1 presents the ratio of local to imported raw materials for the same period. It is obvious that with higher production the import of copper concentrates goes up too.

Table 3.1

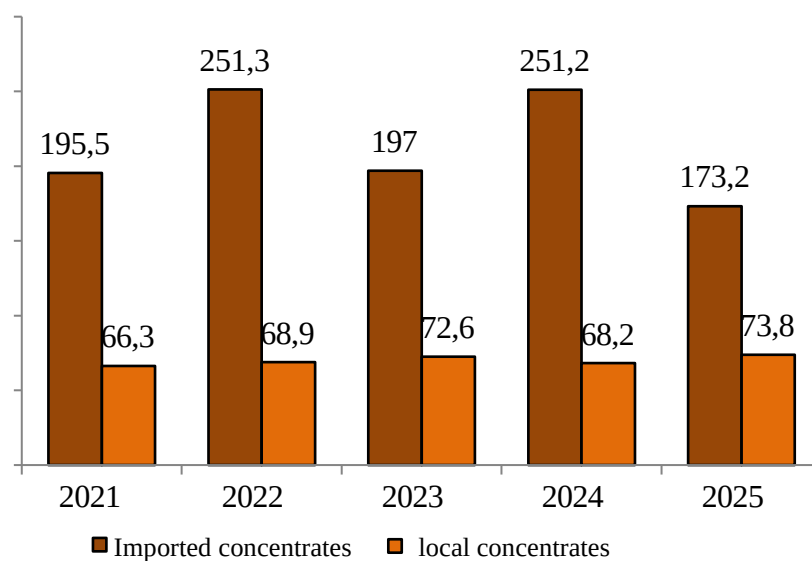
Processed raw materials for the production of anodic and electrolytic copper

Product	2021	2022	2023	2024	2025	Difference 2022/2021	
						+/-	%
Concentrates, t	1 177 643	1 441 149	1211 822	1 379 886	1 125 782	-254 104	81.6
- copper concentrates, %	22.23	22.22	22.26	23.14	21,95		
- metal quantity, t	261 790	320 257	269 752	322 893	247 109	-75 784	76.5
Including: in imported	195 501	251 258	197 090	251 186	173 240	-77 946	60.2
In local	66 312	68 999	72698	68159	73 869	5 710	108.4
Scrap (purchased),	36 701	45 283	40858	46287	48 578	2291	104.9

Source: Company data.

Copper scrap could be replacement of concentrates yet the quantities have went up insignificantly throughout the years. Of the waste processed in 2025 only 7 thousand tonnes came from the local market, the other over 41 thousand tonnes were imported. Because of the growing need of copper in the EU and its inclusion in the list of critical and strategic raw materials, as well as the forthcoming decarbonization and in promoting the raw material independence, the European Commission is considering the introduction of prohibition or limiting regime on the export of copper scrap for third countries.

Figure 3.1



Processed concentrates, thousands of tonnes of metal

The whole quantity of copper scrap being collected in the country could be processed in the metallurgic extraction companies whereas in view of its quality and metal contents it is being invested in the production of end products made of brass in “Sofia Med” JSC or in the metallurgic aggregates of “Aurubis Bulgaria” JSC for processing to electrolytic copper. Nevertheless, export is significant, in 2025 **9 509 tonnes were exported**.

The quantities of the anodic and electrolytic copper produced in 2025 in Aurubis Bulgaria JSC and in view of the previous period they are provided in 3.2 and graphically presented at figure 3.2.

Table 3.2

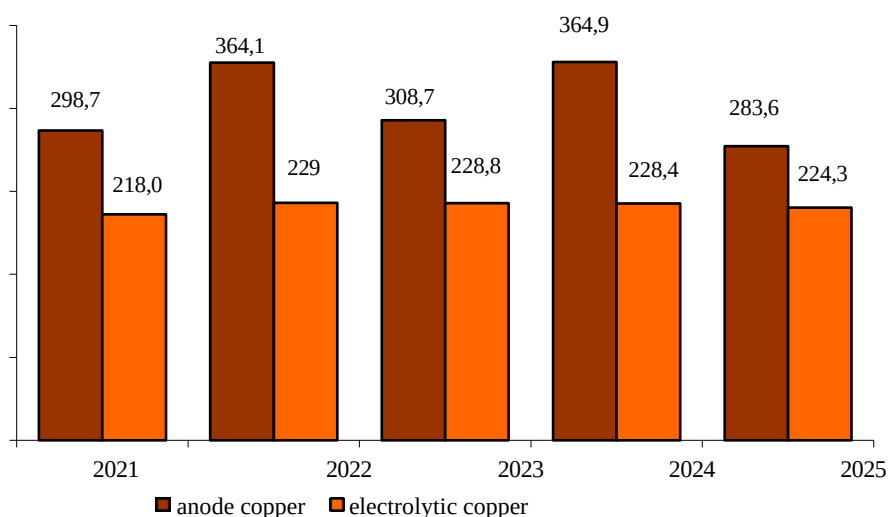
Production of anodic and electrolytic copper, tonnes

Product	2021	2022	2023	2024	2025	Difference 2025/2024	
						+/-	%
Anodic copper	298 728	364 178	308 726	364 964	283 563	-81 401	77.7%
Electrolytic copper	218 020	229 070	228 831	228 447	224 319	-4 128	82.1%

Source: Company data.

In 2025, Aurubis Bulgaria JSC produced 283.6 thousands of tonnes of anodic copper, with 81.4 thousand tonnes less than in 2024 and this is the lowest quantity for the defined period.

Figure 3.2



Production of anode and electrolytic copper, thousand tonnes

When it comes to electrolytic copper, there is also a decline from 4 128 tonnes being 88 % of the quantity produced throughout the year. The capacity of the copper electrolysis shop until now didn't ensure processing the whole anodic copper

quantity. That is why annually they were exported anodes for refinement in other capacities of enterprises within the group. In relation to the growing consumption of cathode copper, the investment programme “Bulgaria 2027“ includes expansion of electrolysis with 150%, to up to 360 thousand tonnes of electrolytic copper annually. With this expansion, the whole quantity of anodic copper would be processed to cathode, the added value is being increased and new high-quality jobs are being created.

Globally, the production of electrolytic copper grows and in 2025 went up to 28 559 thousand tonnes (table 3.3). Compared to 2024 1073 thousand tonnes more were produced being an increase of 103.3 %. In view of regions, the greatest producer is Asia with 57.4 % of the total production (56.9 % share in 2024) and annual increase of 105 %.

Table 3.3

Global production of electrolytic copper, thousand tonnes

Region	2023	2024	2025	Difference 2025/2024	
				+/-	%
Asia	14 907	15 642	16 385	743	104.7
America	4 113	3 984	4 019	35	100.9
Europe	3 701	3 585	3 703	118	103.3
Including the EU	2 467	2 405	2 401	- 4	99.8
Africa	2 426	2 765	3 020	255	109.2
Others	1 400	1 510	1 431	- 79	94.8
Total	26 547	27 486	28 559	1 073	103.9

Source: ICSG

America keeps its second place with over 4 million tonnes produced and 14.1 % of the global extraction, with minimum increase of nearly 1 %. Of this copper, 60 % were produced in Latin America.

Europe in 2025 reported increase of 103.3 %, yet due to increased production in countries outside the EU. As a region, it still keeps its third place with a share of 13 %. EU reported a decrease of 4 thousand tonnes that coincides with the decreased production in Aurubis Bulgaria JSC.

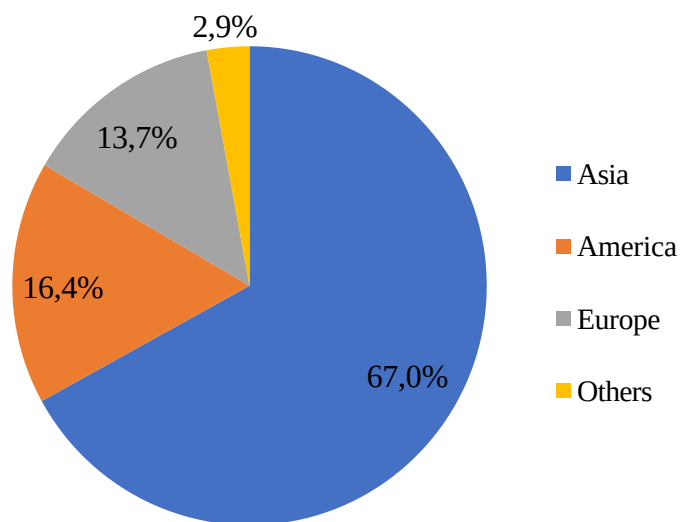
Of the total quantities produced in Europe, the EU share is highest – in 2025 nearly 65 %, yet lower than the previous 2024 (67 %). **In recent years, the EU share in the global production significantly goes down and in 2025 to 8.4 % with 10.8 % for 2020.** Copper is a strategic raw material to European security and independence, it is necessary for the low carbon transition, for energy decarbonization and RES, digital transformation with application in almost all sectors of economy and industry. The expected high increase of consumption of

Actual production decrease could put the EU in strong dependence on the copper import from third countries. An opportunity to increase the production is to include copper and copper alloys (scrap) in the list of critical materials in order to stop their export to third countries.

Annually Africa marks an increase, even a two-digit one and is capable of replacing Europe at the third place as global producer of electrolytic copper. In the last two years their production is higher than the EU one.

Because of the high energy intensity of electrolysis, the electricity prices are important factor and impact the competitiveness of copper production. They could result in relocation of production processes (“carbon outflow”) with the resulting negative consequences for the EU security and the achievement of the set objectives.

Figure 3.3



Global production of electrolytic copper (by regions), 2024, %

Bulgaria is a significant producer of anodic and cathode copper, with high share of the European production, and with the commissioning of new capacities for cathode copper country's role in the security and resource independence of the EU is enhanced. The produced electrolytic copper in 2025 is **9.3 % of the EU one** and within the global production the share is limited by the capacities until now and ranges at 0.8 % - 0.9 %.

The share of Bulgarian production in 2025 defined on the grounds of the quantities of anodic copper is 12 % of the EU one and 1 % of the anodic copper produced globally.

3.1.2. LEAD PRODUCTION

Bulgaria is a significant producer of lead and lead alloys from primary raw materials (concentrates) and lead-containing secondary raw materials, mainly decommissioned battery packs and their waste. The constructed cutting-edge metallurgic powers and the production technologies are in conformity with the best available techniques, the European requirements for environmental protection, good work environment and energy efficiency.

Lead producers are three enterprises in the country – KCM AD, Monbat Recycling EAD and El Bat AD. The only enterprise for processing lead concentrates and largest producer of block lead from primary and secondary raw materials in the country as well as throughout South-Eastern Europe is KCM AD, town of Plovdiv. The capacities built within the enterprise make it possible to process waste and interim metallurgic products within integrated technological schemes for lead and zinc extraction in these. The technological relation between these two main production divisions is good example of the circular economic models that make it possible to utilize comprehensively and in-deep the useful components from the used raw materials. They extract the contained previous metals and other accompanying elements – gold, silver, cadmium, tellurium, bismuth, antimony and from the sulphur oxides that result from the melting process Sulphur acid is being produced.

The technological restructuring of the lead production in KCM AD is performed on the basis of high-tech scheme for autogenous melting of raw materials that is in conformity with the highest energy and environmental standards. After its implementation, they expanded the scope of the raw materials being processed, significantly increased the technological opportunity for processing secondary products that contain lead and secondary resources are predominant in the balance of metal for the lead production.

The increased process of secondary resource resulted in decrease of primary concentrates' quantities, and in particular the ones from import. Yet for the purposes of optimal furnace loading and effective production they import lead concentrates for processing whereas their share throughout the years goes down - from 78 % in the total quantities of processed concentrates and 50 % from metal in Schicht in 2021, for 2025 this per cent went down to 54 % in the total quantity of the invested concentrates and to 25 % in the quantity of all the lead raw materials, Despite the overall decline of concentrates, the quantity of own concentrates from the ore mines of Holding 2000 JSC keeps growing/ In view of the defined five-year period an increase of 171 % was marked.

The quantities of primary concentrates processed in KCM AD that are from own extraction in the country and from import, as well as the secondary raw materials for the lead production in the last five years are presented in table 3.4., and figure 3.4 demonstrates the quantity of processed concentrates from import and from local extraction.

Table 3.4

Raw materials for the production of primary lead, tonnes

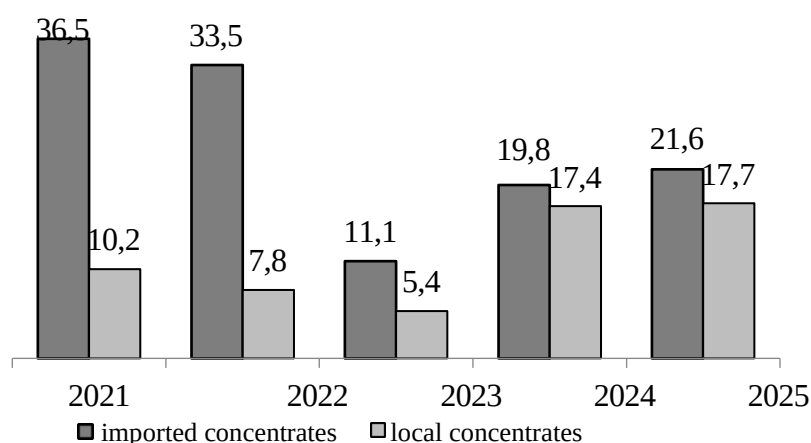
Product	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Metal in concentrates	46 672	41 297	16 439	37 249	39 431	+2 182	105,86
Including; in imported	36 479	33 472	11 057	19 814	21 660	+1846	93.17
In local	10 193	7 825	5 382	17 435	17 771	+336	101.93
Waste/semi-products (external supplies)	24 967	33 101	29 715	39 978	45 189	+5 211	113.03
Total raw materials	71 639	74 398	46 154	77 227	84 620	+7 393	109.53

Source: Company data.

Additionally, in 2025 the trend of the lead produced from processing higher waste quantities kept on growing. The processed primary raw materials decreased correspondingly. The highest increase of nearly 2 times could be attributed to waste and semi-products that contain lead. In recent years, the metal share in primary raw materials went below half the total lead quantity in raw materials, for 2025 it was 46.6 %, whereas in 2021 it was over 65 %.

Based on the data provided in table 3.4 about all the processed raw materials and the processed quantities presented at figure 3.4. only in view of lead concentrates we established the changes in these raw materials for a period of 5 consecutive years. It is evident that the quantities of the secondary resource grows and makes up nearly twice the decline of the primary resources.

Figure 3.4

Processed concentrates, thousand tonnes of metal lead

The implemented technological scheme in the lead production of KCM AD changed the ration between the primary and secondary raw materials in the country since the new furnace could process waste or byproducts of various kinds and contents from other production processes. In view of the defined period, the ratio between metal in concentrates and the one in wastes changes whereas from

from 65 % in concentrates and 35 % secondary raw materials in 2021, in 2025 it became 46 % and 54 % correspondingly, i.e. the secondary ones were with nearly 6 thousand tonnes more.

In order to improve the production indicators, natural preservation and good work environment, KCM AD keeps investing whereas in **2025 the investments made amounted to 14.3 million BGN**. Important sites are the waste dump, refurbishment and repairs of Waeltz furnaces and the facilities to these, construction of new warehouse areas. Annually, they make capital investments in new facilities, Waeltz furnaces, silos to these, mixer, safeguarding pathways etc.

Monbat Recycling EAD, town of Montana and El Bat AD, town of Dolna Banya are enterprises with constructed cutting-edge capacities for processing lead battery pack wastes and decommissioned lead batteries. The operational capacities process all the collected quantities of out-of-use lead battery packs and their waste generated throughout the country, as well as in order to fill the capacities they perform import of lead waste.

Monbat Recycling EAD recycles battery pack and lead scrap from batteries, plates, lead slags, fractions and other waste from lead and lead-calcium alloys. **The company develops in sustainable manner within the structure of Monbat Group JSC. Effective vertical integration was performed of the whole production process – from the delivery of raw materials to the production of end commercial product – lead-acid battery packs.** The production facilities are in conformity with the European requirements and environmental standards. As a byproduct, sodium sulphate is being produced. In order to achieve successful and sustainable development, on annual basis they invest in the refurbishment and replacement of equipment with new cutting-edge one. In 2025 900 thousand BGN were invested to this end.

El Bat AD is the first Bulgarian enterprise for extraction of block non-ferrous metals (lead) that was built after the political changes in market economy, entirely with private capital. In the last 2-3 years it is the most rapidly developing metallurgical production that increased the capacity for processing secondary lead raw materials to block lead and lead alloys over three times. **The enterprise works with cutting-edge processing installations for separation, recycling and utilization of batteries and battery pack waste that could not be used.** For the new equipment and improvement of its capacity, as well as in order to satisfy the high environmental standards during this period tens of millions of BGN were invested and only in the last two years – 10 million BGN of which in 2025 – 3 million BGN.

In Bulgaria, a national buyback, collection and utilization of decommissioned lead battery packs is organized, correspondingly for control of the resulting unfit battery packs and their waste. Lead is highly recyclable material and its production from secondary resources is highly effective, environmental and ecologically friendly.

The installations that are constructed in the country are in conformity with the best available techniques and the national and European environmental legislation, they ensure high per cent of utilization of the extractable components contained in these. In addition to block lead and lead alloys, the enterprises produce sodium sulphate.

Data about the produced block lead and lead alloys from processing primary and secondary raw materials by company-producers are presented in table 3.5. Figure 3.5 presents their relative shares of the total production.

Table 3.5

Lead production, tonnes

<i>Product</i>	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
<i>Lead, block /primary and secondary raw materials/</i>	71 822	69 709	44 542	74 367	80 306	5 939	108.0
KCM AD	71 822	69 709	44542	74 367	80 306	5 939	108.0
<i>Lead and alloys, block /only secondary raw materials/</i>	32 673	33 719	48 032	68 780	76 659	7 879	111.5
Monbat Recycling EAD	17 693	18 729	19 252	19 080	19 259	179	100.9
El Bat AD	14 980	14 990	28 780	49 700	57 400	7 700	115.5
<i>Lead - total</i>	104 495	103 428	92 574	143 147	156 965	13 818	109.7

Source: Company data

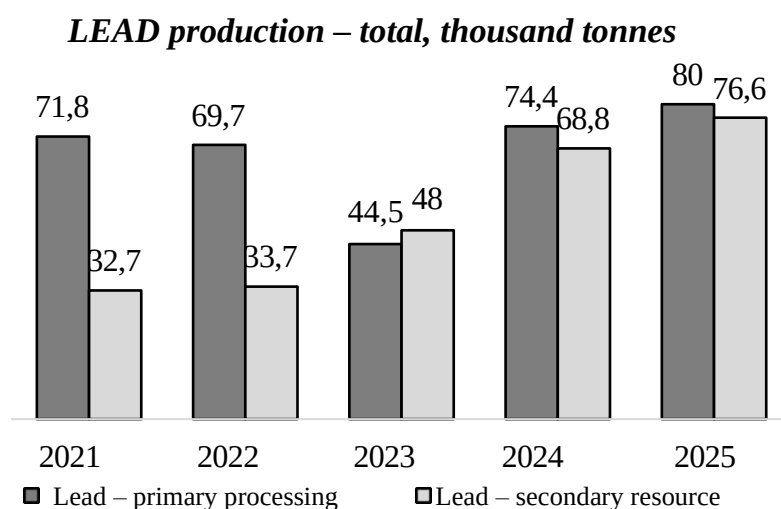
In 2025 in the three enterprises the highest quantity of lead and alloys was produced considering all the years of the defined period.

To KCM AD and El Bat AD these are peak achievements since commissioning the operational capacities so far. Somewhat over 75 % of the produced total lead is from secondary resource. High degree of utilization of secondary lead raw materials was achieved and this makes Bulgaria's ranking among the first countries globally.

In both enterprises for processing only secondary lead raw materials – Monbat Recycling EAD and El Bat AD a total of 76 659 tonnes of lead and alloys were produced, being 7,9 thousand tonnes more compared to the previous year. This quantity results from 115.5 % increase in El Bat AD in 2025 being 7.7 thousand tonnes of metal in addition.

The total annual production reaches **157 thousand tonnes and is peak for the block lead in the country, annual increase of 110 % was achieved.** 13.8 thousand tonnes more were produced compared to 2024, of them nearly 6 thousand tonnes by KCM AD, 7.7 thousand tonnes by El Bat AD and 180 tonnes – Monbat Recycling EAD.

Figure 3.5



The global production of lead by regions and by countries – large producers for the last five years are presented in table 3.6.

These quantities in relative share of the total lead for 2025 are presented at figure 3.6.

Table 3.6

Global lead production, thousand tonnes

Region / Country	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Asia, including	8 547	8 623	8 912	8 674	9 159	485	105.6
- China	5 448	5 471	5 687	5 277	5 425	148	102.8
- India	923	966	1 022	1 465	1 534	69	104.7
- Republic of Korea	790	760	776	835	784	-51	93.9
- Japan	298	295	279	290	279	-11	96.2
Europe	2 034	1 780	1 768	1 833	1 866	33	101.8
- EU 27	1 431	1 299	1 302	1 371	1454	83	106.1
Including Germany	310	227	310	300	330	30	110.0
Spain	192	192	192	217	218	1	100.5
Bulgaria*	106	104	93	143	157	14	109.8
Poland	158	154	155	151	145	-6	96.0
Belgium	122	109	116	112	128	16	114.3
Italy	158	133	66	87	88	1	101.1
America,	2 100	2 081	2 178	2 158	2 244	86	104.0
Including the USA	976	960	1 019	1 030	1 057	27	102.6
Mexico	420	419	435	435	462	27	106.2
Brazil	265	278	286	286	300	14	104.9
Canada	203	182	191	164	200	36	121.9
Total for the world	12 552	13 019	13 590	13 416	13 654	238	101.8

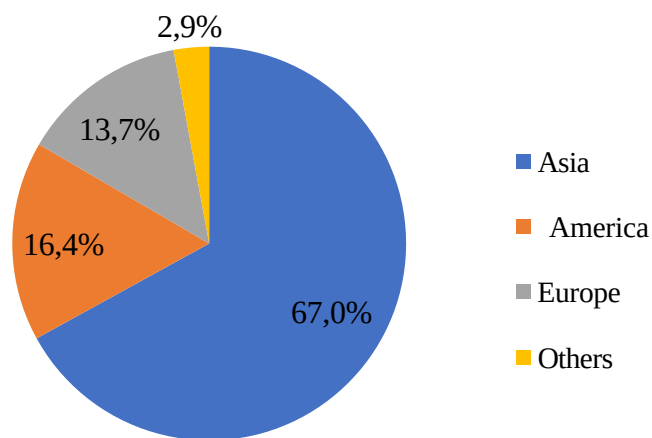
Source: ILZSG (International Lead and Zink Study Group13), *company data

Asia retains its first position globally with a share of 67 % of the produced lead (66.5 % in 2024) and after a decline in 2024 again in the next 2025 it reported increase of 105.6 %. 59 % of this lead was produced in China and of the global lead the country has share of 40 %.

America remains second with a share of 16.4 % and increase for 2025 of 104 % (86 thousand tonnes). The largest producer is the USA –1 057 thousand tonnes for 2025 and increased production with 27 thousand tonnes, increase of 102.6 %. The highest annual increase is marked by Canada – with 122 %.

Figure 3.6.

Lead production by regions in 2025, (%)

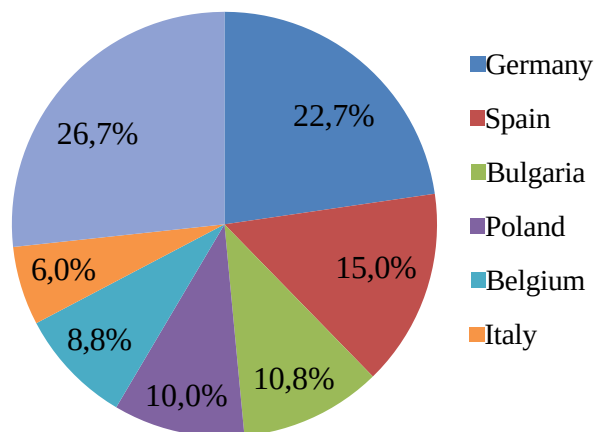


After two years of consecutive declines of lead production (2022 – 2023), subsequent growth of 103.7 % (65 thousand tonnes) for 2024 and 101.8 % (33 thousand tonnes) in 2025. **Europe remains third as a region with a share of 13.7 % of the global extraction** (14 % in 2024). This increase results from the increased production in the EU member-states (27) – a total of 1 454 thousand tonnes were produced, 83 thousand tonnes more and an increase of 106.1 %.

Among the member-states, the highest increase is marked by Belgium – 114.3 %, followed by Germany with 110 %, which is the largest producer with annual production of 330 thousand tonnes. Spain retained its production of around and over 200 thousand tonnes and continuously ranks second in the EU. Thanks to its expanded capacities and growth of produced lead achieved in recent years, our country reached the one of Poland. In the previous year even outstripped it in terms of quantity with 12 thousand tonnes and jumped one position ahead while replacing Poland in the European ranking.

Figure 3.7 presents the relative shares of the total lead quantity of the larger producers of the member-states.

Leading countries who produce lead in EU-27 in 2025 (%)



With the 157 thousand tonnes of block lead produced in 2025, Bulgaria became the third producer in the European Union with a share of 10.8 % of the total production of the member-states and 1.15 % if this globally.

The lead produced in the EU has a share of 78% of the total lead of Europe and 10.6 % of the one globally (in 2024 correspondingly with 75 % of the one produced in region Europe and 10.5 % globally).

3.1.3 ZINC PRODUCTION

The only producer of refined zinc in Bulgaria is KCM AD. The enterprise is part of Holding KCM 2000 AD, town of Plovdiv, which has completed cycle for processing primary and secondary raw materials whereas they extract the basic metals – lead and zinc, as well as other precious elements contained in these, such as gold, silver, cadmium, tellurium, sulphur to sulfuric acid. Both basic metals are being produced in outlined individual divisions that are technologically integrated in order to process the interim products and extraction of all precious components. The technological scheme in KCM AD is a model of the circular economy in metallurgy of non-ferrous metals.

Data about the concentrates processed in 2025 from local extraction and from import as well as the other waste products purchased and invested in the production in metal quantity are presented in **table 3.7**. In 2025 the processed concentrates contain **53 880 tonnes of zinc**, with **908 tonnes** of metal less compared to 2024 (98.34 %). The extraction of own zinc concentrates could not ensure the quantity the enterprise needs and annually it imports concentrates, mainly from countries in the region.

Table 3.7

Processed raw materials in zinc production, tonnes

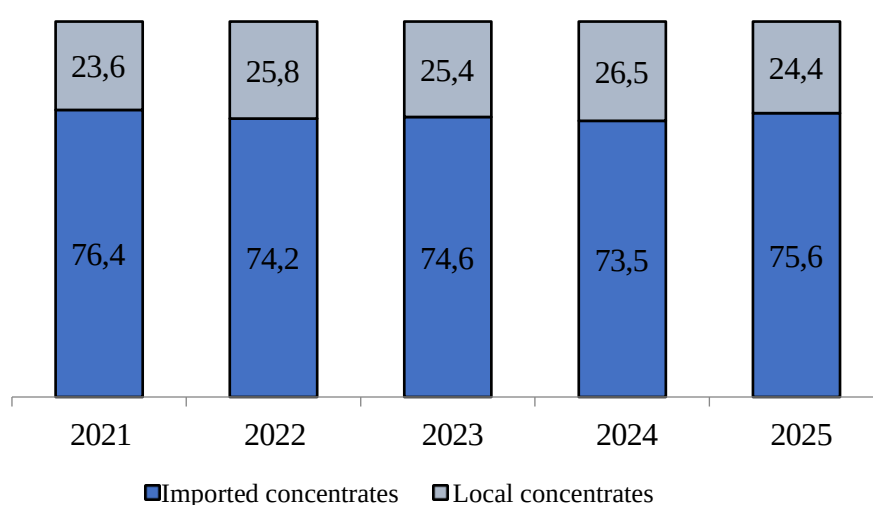
Product	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Metal in concentrates, including:	61 730	53 242	55 795	54 788	53 880	-908	98.34
imported	47 174	39 480	41 600	40 286	40 731	+445	101.10
local	14 556	13 762	14 195	14 502	13 149	-1 353	90.67
Secondary metal	14 855	19 055	19 190	18 405	20 824	+2 419	113.14
Total	76 585	72 297	74 985	73 193	74 704	+1 511	102.06

Source: Company data

In 2025 compared to the previous year the own concentrates contain 1 353 tonnes of metal less and the imported ones with 445 tonnes more. The quantities of imported and local concentrates in recent years approximately maintain their ratio whereas the share of own concentrates is only one-fourth of the total metal in the raw materials processed throughout the years. **In 2025 it was 24.4 %, and the imported concentrates are with a share of 75.6 %.**

Figure 3.8 presents the ratio (in %) between the primary raw materials from import and local production processed in the last five consecutive years.

Figure 3.8

Processed concentrates in the period of 2021 - 2025, (%) metal

Holding KCM 2000 AD in recent years acquired lead-zinc deposits in the Rhodope Mountains. Significant investments were made and we expect that in the upcoming years the extraction of own ores and concentrates would increase.

In 2025 the secondary metal is 20.8 thousand tonnes. The processed secondary products tend to increase compared to 2024 and are with 2,4 thousand tonnes more, an increase of 113, 14 %. Whereas in 2021 the secondary resource amounted to 19.4 % of the total metal quantity in the processed raw material, in 2025 this per cent was 27.9 %. The largest zinc quantities in the dusts from steel extraction as a result of good symbiosis between these productions.

In KCM AD, in 2025 72 036 tonnes of zinc were produced, with 2 341 tonnes more compared to the previous year, an increase of 103.36 %. (Table 3.8).

Table 3.8

Zinc production, tonnes

Product	2021	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Zinc - total	72 418	72 527	72 324	69 695	72 036	+2 341	103.36

Source: *Company data*

The global zinc production in 2025 increases with a total of 323 thousand tonnes yet there is decline in some individual countries and regions like America, France, Kazakhstan, Republic of Korea. A total of 13 788 thousand tonnes of refined zinc were produced.

Table 3.9 presents data about the global zinc production by regions and **figure 3.9** reflects the distribution of these shares in per cent of the total global production.

In 2025 after a decline in the previous year, the global zinc production increased with 323 thousand tonnes whereas the highest increase is in China – with 420 thousand tonnes. EU increased its production with 133 thousand tonnes, an increase of 106,3 % correspondingly. The largest zinc producers are the countries in Asia, a total of 9,5 million tonnes and a share of nearly 70 % of the quantity produced globally. Only China produces over 7 million tonnes with a share of 51 % of the global extraction. Because of decline in other regions and countries, the relative share of Asia and China grows throughout the years.

Table 3.9

Global zinc production, thousand tonnes

Country/Region	2022	2023	2024	2025	2025/24 +/-	2025/24 %
Asia, including	9 162	9 637	9 303	9 534	+231	102.5
China	6 358	6 850	6 620	7 040	+420	106.3
Republic of Korea	868	862	753	697	-56	92.6
India	838	836	857	864	+7	100.8
Kazakhstan	268	280	288	260	-28	90.7
Europe including	2 211	2 155	2 095	2 272	+177	108.4
EU including	1 834	1 786	1 772	1 905	+133	106.3
Spain	505	520	515	511	-4	99.8
Finland	294	294	302	290	-12	96.0
Belgium	240	260	240	255	+15	106.2
Netherlands	209	239	188	255	+67	135.6
France	109	102	150	130	-20	95.9
Poland	160	157	158	154	-4	97.5
Bulgaria*	73	72	70	72	+2	102.8
America including	1 808	1 635	1 664	1 646	-18	98.9
Canada	643	485	504	509	5	101.0
Mexico	340	349	346	350	4	101.2
Peru	340	349	346	341	-5	98.6
USA	220	220	220	220	0	100.0
Total globally	13 408	13 935	13 495	13 788	+323	102.2

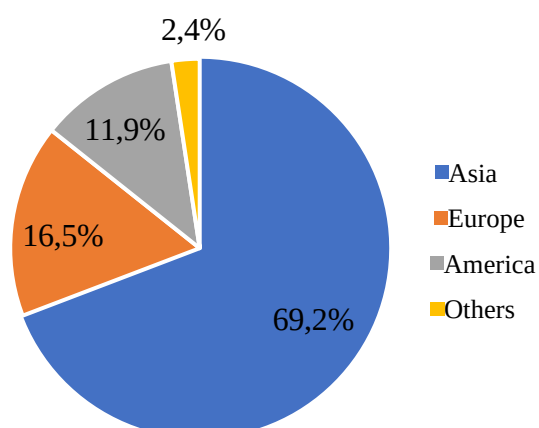
Source: ILZSG *KCM

As a region, Europe ranks second in terms of zinc production with 2 272 thousand tonnes and share of 16.5 % of the global one. Of these, the share of EU (27) is the highest - 84 % , and the one globally - 13.8 % (in 2024 – 13.1 %). In view of 2025 the production increased with 133 thousand tonnes whereas the largest producers are Spain (over 500 thousand tonnes), followed by Finland, Belgium and the Netherlands. Bulgaria is also a significant zinc producer, from primary ore concentrates as well as from secondary resource.

The main reason behind the decrease of zinc production in recent years is the high electricity price because of the high consumption during the production of electrolytic zinc, increase of financial costs and process ineffectiveness. In particular, this impacted the production in EU countries, bearing in mind the higher energy prices compared to the other regions globally that resulted in significant decrease after 2021.

Figure 3.9

Global zinc production in 2025 (share by regions, %)

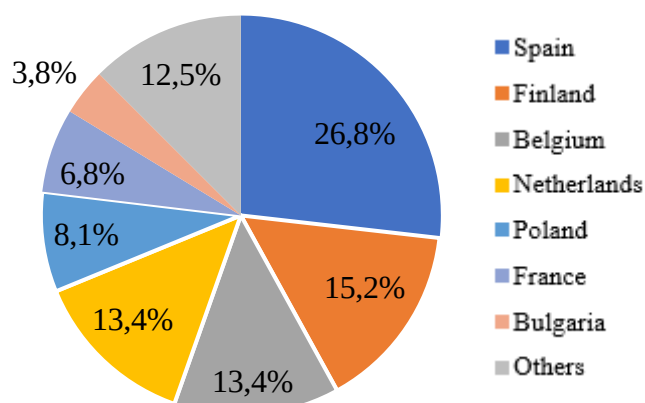


The American continent maintained its third place with the production of 1 646 thousand tonnes of zinc and a share of 11.9 % with 12.2 % in 2024, whereas the total production decreased with 18 thousand tonnes. Canada is the largest producer with 509 thousand tonnes of annual quantity for 2025 and share of 31 %, followed by Mexico and Peru with annual production of around 340-350 thousand tonnes. The USA maintained its production for four consecutive years at a level of 220 thousand tonnes.

The total production in EU (27), distributed in relative shares of the main countries that produce zinc is presented at figure 3.10.

Figure 3.10

Leading producers of zinc in the EU (27) in 2025, (%)



The zinc produced in Bulgaria in 2025 is mainly from processing primary raw materials – zinc concentrates. Their quantity in 2025 decreased and this was made up by processing secondary resource - with 2.4 thousand tonnes more than in the previous one. As a result, we achieved increase of electrolytic zinc of 2.3 thousand tonnes. The secondary resource reached a share of 28 % in the processed zinc raw material.

Additionally, zinc is being extracted from the available old slag spoil banks from the production in the town of Kardzhali that was shut down. The resulting zinc oxides are being marketed at the external markets yet there is project for their processing to block metal. From the basic non-ferrous metals produced by Bulgaria, only copper is included in the list of raw materials that are critical and strategic to the EU in the promulgated **Regulation on critical raw materials (CRM)**..

The European and Bulgarian producers of metals including Bulgarian Association of the Metallurgical Industry insist on including the lead and zinc in the list of critical raw materials, bearing in mind their application for the production of zero emission products, such as electricity storage batteries, zinc coating of the main facilities for the construction of new RES and other products.

3.1.4. PRODUCTION OF PRECIOUS, BYPRODUCT METALS AND CHEMICAL PRODUCTS

The metallurgic enterprises for the production of non-ferrous metal blocks – copper, lead and zinc process raw materials of comprehensive compounds. The contents of some of these components makes it possible to effectively extract these to end products. These polymetallic compounds are inherent mainly to the copper, lead and zinc concentrates.

The technological scheme implemented in Aurubis Bulgaria AD does not foresee such an additional processing except for using sulphur in copper concentrates for the production of sulfuric acid. The other elements, mainly precious metals (gold and silver) are concentrated in the anode slag when receiving the electrolytic (cathode) copper being exported for processing in available capacities of another enterprise of their group.

In KCM AD there is a complete processing cycle and cycle for comprehensive utilization of the processed lead and zinc raw materials. The material technological flows in the available production capacities are integrated in order to extract the useful components in these. In addition to block lead and zinc, the enterprise produces other metals and products such as cadmium, tellurium, gold, silver. Of the sulphur gases during furnace melting and frying the concentrates in the main production processes we produce sulfuric acid.

Table 3.10 presents these accompanying production processes in view of types and quantities in 2025 and for the previous four-year period.

Table 3.10

***Production of precious and byproduct metals, alloys and
chemical products (t, kg)***

Products	2021	2022	2023	2024	2025	Difference 2024/2023	
						+/-	%
Cadmium block, t	343	315	306	379	384	5	101.3
Silver, kg	31 816	20 247	15 261	32 490	30 901	- 1 589	95.1
Gold, kg	53.76	33.88	66.95	50.1	136.08	85.98	271.6
Tellurium, kg	2 797	2 790	1 087	1 652	573	1 079	34.7
Sulfuric acid, t	1 328712	1 576459	1 320 294	1 487 708	1 261 588	-226 120	84.8

Source: Company data

Only metallurgic industry produces sulfuric acid as byproduct in the country. The main producer with a share of around 90 % is Aurubis Bulgaria AD. For 2025 they produced 1 261 588 tonnes being 89.3 % of the total quantity. In the KCM AD 134 592 tonnes were produced. The quantity of silver and gold in addition to the contents of these metals in lead and zinc concentrates depends on the processed quantities of other raw materials used for production to be exported. Hence the differences throughout the years are significant. As a byproduct when processing the out-of-use battery packs **the companies produce sodium sulphate.**

3.1.5 PRODUCTION OF ROLLED/PRESSED NON-FERROUS METALS AND ALLOYS

In addition to sustainably developed and competitive extraction non-ferrous metallurgy, Bulgaria becomes factor in processing non-ferrous metals and their alloys along the value chains within the EU. Metallurgic commodities are being produced that are competitive at the external market with high added value that satisfy the needs of important branches such as vehicle building, construction, electric equipment, as well as for being invested in the products of zero emissions.

Our country has cutting-edge capacities for processing heavy non-ferrous metals (HNFM) – mainly from copper and copper alloys and light metals – aluminium and its alloys. **Table 3.11** presents the quantities of the produced production in 2025 by the main producers that are members of the Bulgarian Association of the Metallurgical Industry.

Copper and copper alloys as well as other heavy non-ferrous metals (Pb, Zn) are being processed in “Sofia Med” JSC, city of Sofia – the largest industrial enterprise in the capital of the compounds of the Greek Group VIOHALKO. The production is exclusively export directed and in 2025 99 % of the production was exported whereas over 70 % is for EU countries. The total revenues from the business exceed 1 billion EUR and the enterprise is second when it comes to volume of the produced products in the metallurgic sector.

The largest producer of aluminium products is Alcomet AD, town of Shumen, with full cycle of processing the raw materials to ready production – melting, pouring, rolling, pressing, additional mechanical processing to end products and items to be used in the industry, construction and domestic life. The capacity already goes up to 100 thousand tonnes annually and the investments for its expansion are ongoing.

In the enterprises of the Etem group via extrusion of aluminium workpieces rods and profiles of various shapes and sizes are being produced. Welded aluminium pipes and various profiles from aluminium sheets and strips are produced in EMC Distribution Ltd., town of Ruse.

There are smaller enterprises in the country for aluminium profiles and systems for construction that are not covered by the present analysis.

In the case of metallurgic processing of non-ferrous metals and alloys and metal waste with high purity in 2025 a total of 197 840 tonnes of products and items were produced, with 545 tonnes more compared to 2024, growth of 100.3 %. Of the total quantity, 48.1 % is the share of the copper commodity group and 51.9 % of the aluminium products. This ratio results from the higher number of these enterprises and their capacity, including the establishment of new, in order to satisfy the consumption growth of aluminium products consumption in sectors, such as construction, vehicle building, in the household etc.

Even though that cutting-edge capacities for r/p metals and finished products made of HNFM are available only in Sofia Med JSC, our country is significant producer that ranks **2nd when it comes to producing extruded (drawn) products and 4th in view of rolled metals in the EU.**

The 95 213 tonnes of products produced in **2025 from heavy non-ferrous metals – copper and brass** are with 1 548 tonnes more than in 2024. The enterprise produces mainly **copper rolled and pressed metals which reaches 78 158 tonnes in 2025** with annual increase of 2 144 tonnes and takes 82 % share of the total production. **Brass metal products are only rolled.** The annual production is **17 055 tonnes**, being 18 % of the total volume and annual decrease of 596 tonnes.

Regarding the copper products the higher production is of rolled (flat) products – 74 % compared to 26 % of pressed (long) copper products. For their production the raw material is cathode copper and copper waste of high purity. For the brass R/P metals they use mainly copper waste and zinc block. The increase of quantities of the invested clean copper waste is strategic task since it results in increasing the production effectiveness and its competitiveness.

In 2025 a total of 36 206 tonnes of copper and brass waste were processed compared to 37 829 tonnes in the previous year. The quantity is entirely dependent on the external market, since the internal market provides very limited quantities. In 2025 these were only 1324 tonnes of copper and 30 tonnes of brass. The export of copper waste by the country continues in quantities of around 10 thousand tonnes irrespective of the available capacities for processing these in our country. The highest quantities were exported for China - in 2025 3 600 thousand tonnes and in Turkey –

2 800 thousand tonnes. So that the European industry does not lose valuable resource, in the near future changes should be made in the Regulation on critical raw materials and include in it the waste of ferrous and non-ferrous metals.

Table 3.11

Production of rolled/pressed non-ferrous metals and alloys, tonnes

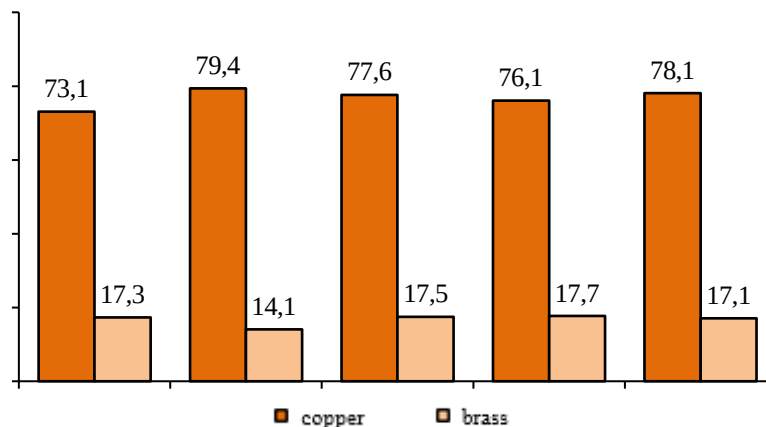
Product/ producer	2021	2022	2023	2024	2025		Difference 2025/2024	
Products from HNFM, “Sofia Med” JSC, total	90 447	93 491	95 119	93 665	95 213	48.1%	+1 548	101.7%
including - copper	73 139	79 404	77 601	76 014	78 158		2 144	102.8 %
- brass	17 308	14 087	17 518	17 651	17 055		-596	96.6%
Products from aluminium, total	113 108	99 506	91723	103 630	102 627	51.9%	-1003	99.0%
Including Alcomet AD, total	88 883	70 903	57 381	81 096	79 079		-2 017	97.5%
- rolled	59.8	45.8	32.4	57.0	53 656	67.8%		94.0 %
- pressed	29.0	25.1	24.9	24.0	25 423	32.2%		105.8 %
Etem Bulgaria (Alum Extrusions AD)	23 000	27 567	21 007	21 569	22 528	-	+959	104.4%
EMC Distribution Ltd.	1 225	1036	1 014	965	1 020	-	55	105.7%
TOTAL	203 555	192 997	186 842	197 295	197 840	100	545	100.3%

Source: Company data

Figure 3.11 presents the total quantities of R/P metals produced from copper and copper alloys (brass in the period of 2021 – 2025)

Figure 3.11

Production of R/P HNFM, thousand tonnes



As it is evident from this figure, the ratio between the copper and brass R/P metals throughout the years was around 4 : 1, yet with trend of copper growth. In 2025 it was already 4.6 : 1, with shares of 82 % and 18 % correspondingly.

In the total quantity of R/P HNFMs, flat (rolled) products are nearly 2 times more than pressed (copper) and yet this changes year by year. In 2025 57 491 tonnes of rolled products were produced and 37 722 tonnes of pressed products were produced, the ratio was 1.52 : 1. In 2024 this ratio was 1.7 : 1 in favour of rolled products.

In order to satisfy the needs and increased demand of rolled products for the external markets, throughout the years the main production capacities were technologically and product restructured and renewed. Hundreds of millions were invested to achieve sustainable and competitive production development, quality improvement and assimilation of new products, good work environment and effective use of energy and mineral resources. **In 2025 35. 287 million BGN (18 million EUR) were invested and this process is continuous (in 2024 35. 901 million BGN were invested).**

In recent years, Bulgaria becomes more and more significant producer of products and light non-ferrous metals – **aluminium and its alloys**. The necessary raw materials from primary aluminium in block and workpieces of aluminium and alloys are being imported. Bulgaria does not produce aluminium yet the largest processor of aluminium and aluminium alloys is **Alcomet AD, town of Shumen**. The constructed capacities and the technological scheme foresee full processing cycle – melting and pouring the metal into workpieces, subsequent processing inside the rolling capacities to flat or in pressed production to long products. In order to increase the added value, new products are being assimilated, additional activities are being performed such as laying covers or mechanical processing to end products for consumption, including items for the global vehicle construction, renewable energy sources installations, energy, construction.

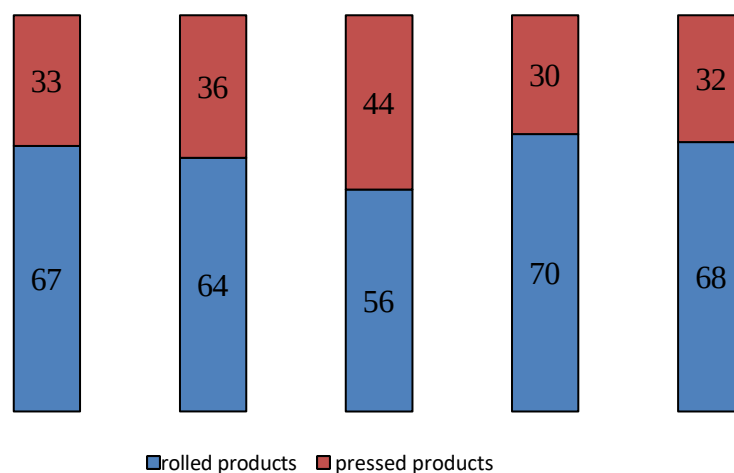
The data presented in **table 3.11** about the produced quantities of aluminium R/P metals in Alcomet AD in the last five consecutive years demonstrate that after the economic crises and decrease of production in 2022 and in 2023 a long-term process of stabilization and production increase is established.

Even though in 2025 compared to 2024 there was a slight decrease of 2 thousand tonnes, the enterprise operates successfully. There is decrease only in the roll production whereas the pressed products reached an increase of 105.8 %.

In its capacity of only producer of flat products in the country, the rolled products throughout the years in view of quantity and assortment exceed the long products and is around 2 times more. In 2024 the differences were largest whereas 70 % was rolled and 30 % - pressed production.

The ratio between the pressed and rolled products throughout the years in Alcomet AD is presented on **figure 3.12**.

Figure 3.12

Aluminium R/P metal, by type in Alcomet AD, share in %

The sustainable development of aluminium production in Alcomet AD is due to the continuous investments of significant volumes in new capacities and technologies. In 2025 the total volume of investments reaches **66 302 thousand BGN**, aimed at refurbishment of the production, expansion of the product portfolio and improvement of environmental sustainability and work environment. The new equipment increases the capacity of press production technologies to 45 thousand tonnes and of the rolled ones - to 115 thousand tonnes (from 100 thousand tonnes). This strengthens enterprise's leading position at the international market of aluminium and is in conformity with the sector requirements for **sustainable, high-tech and energy-efficient solutions**.

The main raw material for the production in Alcomet AD is the primary block aluminium and in 2025 137 thousand tonnes were imported in the country since the main consumption is in the metallurgic industry. The processed secondary raw materials from import and from the internal market are 13 442 tonnes, with 6 265 tonnes more compared to the previous year. This is the highest quantity so far yet the secondary resource in the country is not being utilized in effective manner and is being exported. For 2025 the direct export of waste was 35 thousand tonnes and of the produced secondary block and alloys – 15 thousand tonnes.

Extruded aluminium profiles from imported workpieces are being produced in “**Etem Gestamp Aluminium Extrusions**” AD, city of Sofia. In 2025 22 528 tonnes were produced, with 100 tonnes more compared to the previous year.

Of these, via additional processing in “**Gestamp Etem Automotive Bulgaria**” components are being produced for high-end vehicles including Porsche, BMW and Stellantis. Companies' product development is based on highly effective ecological solutions for the production of construction products for light, cutting-edge and energy-efficient architectural applications.

The achievements results from the annual investments that in 2025 amounted to 6 547 thousand BGN.

Welded aluminium pipes and profiles made of aluminium stripes/sheet are made in **EMC Distribution Ltd, town of Ruse**. The production in recent years decreases and the total decrease reached 36 %. Since 2025 there are indications of markets and growth stabilization.

3.1.6. UTILIZATION OF NON-FERROUS METALS WASTE

Metals are raw materials of “endless” lifecycle that makes it possible to use them on numerous occasions via melting and processing to new products for application in all areas of economy and household. In Bulgaria we have introduced waste collection system from the basic metals - iron, copper, lead, aluminium and zinc. Still there is no satisfactory solution to utilize metals from the electronic scrap and the utilization of industrial waste (slags, dusts, fire-resistant materials). The recycling enterprises do not ensure high degree of separate offer of the various waste types in view of their contents in view of chemical compounds and mechanical admixtures. This hinders their subsequent direct application in production of metallurgic products of higher added value.

Data about the quantities of non-ferrous metals being invested in the period of 2021 - 2025 in the metallurgical enterprises of the non-ferrous metallurgy are presented in table 3.12.

Table 3.12

Processed non-ferrous metal waste, tonnes

Waste						Difference 2025/2024	
	2021	2022	2023	2024	2025	+/-	%
Copper	67 036	77 291	74 668	83 126	84 784	1 658	102
Lead	62 024	80 126	84 270	118 870	128 030	9 160	108
Zinc	14 855	19 055	19 190	18 405	20 824	2 419	113
Aluminium	9 590	2 014	8 793	7 177	13 442	6 265	187
Total	153 505	178 486	186 921	227 578	247 080	19 502	108

Source: Company data

There is a clear positive trend for quantities growing annually whereas in 2025 record-breaking processing was achieved at 247 thousand tonnes. The total quantity of processed waste of non-ferrous metals in the last year compared to the previous one increased with nearly 20 thousand tonnes. Lead waste increased the most yet significant increase was marked by the aluminium ones. The quality and origin of this secondary resource is variable. Not all of these are from metal scrap. There are technological waste from various production processes being processed in the extraction metallurgical enterprises.

The highest utilization is the one of the lead waste received in the country. These are not entirely processed in our country since there is an import of such raw materials. Lowest is the use of aluminium waste and most of them is directly exported. The reasons behind this are the non-functional separate collection and recycling to ensure quality of needed for production of R/P metals, because of the absence of extraction of primary aluminium in the country. A part of this waste is being melted and as a block is being marketed in the country and for export.

3.2. COMMERCIAL EXCHANGE, CONSUMPTION OF NON-FERROUS METALS

Th non-ferrous metals are being traded at prices of the global exchange markets whereas in the case of supply of raw materials from import and export of metal production by the producers in the country most often we apply the values of the London Metal Exchange (LME). The internal prices are also function of the exchange prices and follow these levels. This makes metallurgical industry and indicators of the individual productions highly dependent on numerous exogenous factors that impact the metal prices. Practice demonstrates that these are not only the changing economic and market indicators but also the political changes and conflicts globally and within the individual regions. Hence within a single year the differences between the highest and lowest prices at which the separate metals are being traded go up to 25 % – 35 %. The next figures - from 3.13 to 3.16 graphically present the prices of basic non-ferrous metals (copper, lead, zinc and aluminium) on certain days of all months of 2025.

Copper prices (USD per tonne)

Figure 3.13

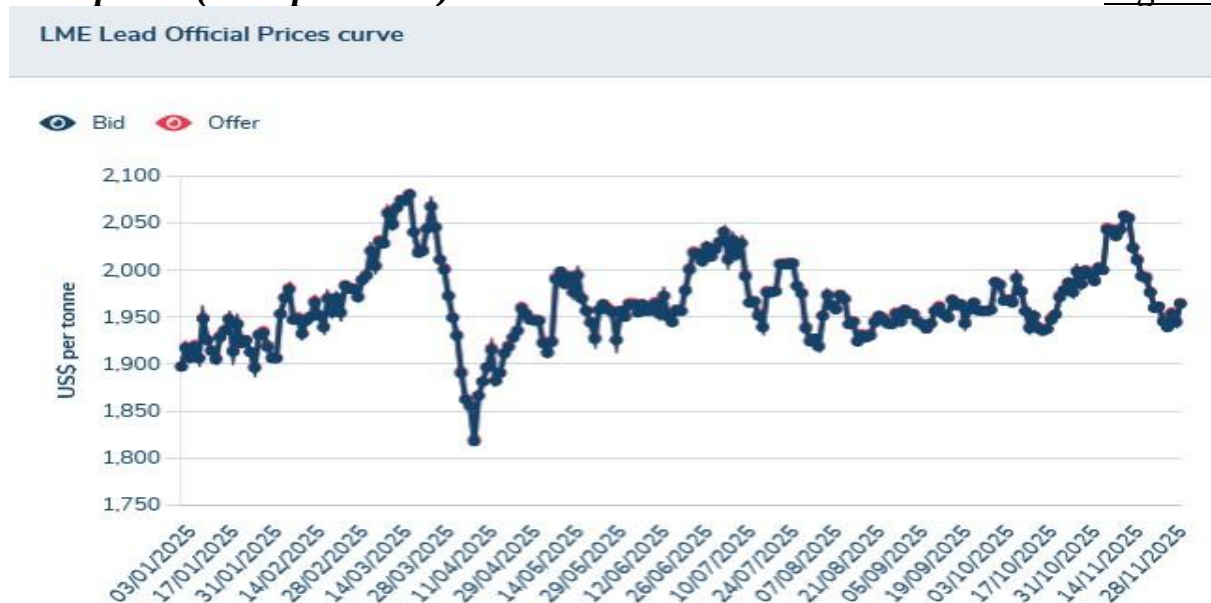


In 2025 the exchange price of copper changes in almost the same range like in 2024. In the beginning of the year the values are lower, the minimum one was in April - 8 500 USD/tonne (8 thousand in 02/2024) and the highest one - 11 500 USD/tonne in November – December of the same year (for 2024 it reached 11 thousand in June). The differences between these two values in recent years reach 3 thousand USD/tonne being 137 %.

Lead in 2025 retained average price below 2000 USD/tonne and this is the lowest value for 2024. Even the highest value barely approximates 2 100 USD with 2300 USD in previous year. For the year the minimum one is 1 800 USD/tonne whereas in recent years the difference between border values as per cent retained its value of 116 %-117 % . In the case of lead there is profound trend of price decline.

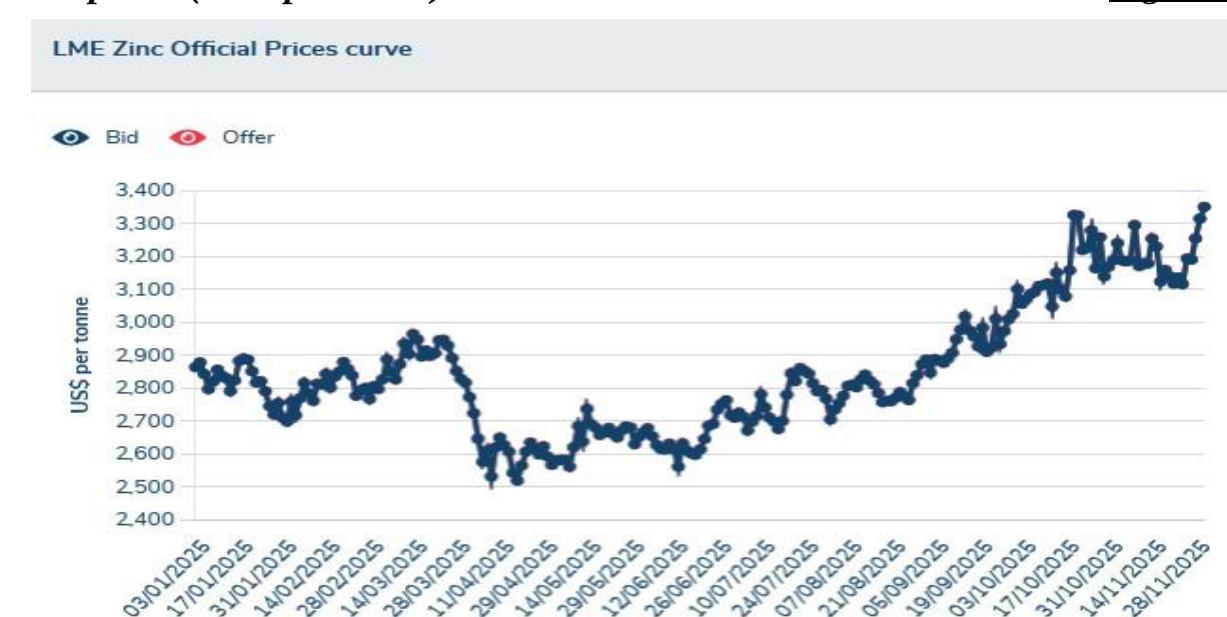
Lead prices (USD per tonne)

Figure 3.14



Zinc prices (USD per tonne)

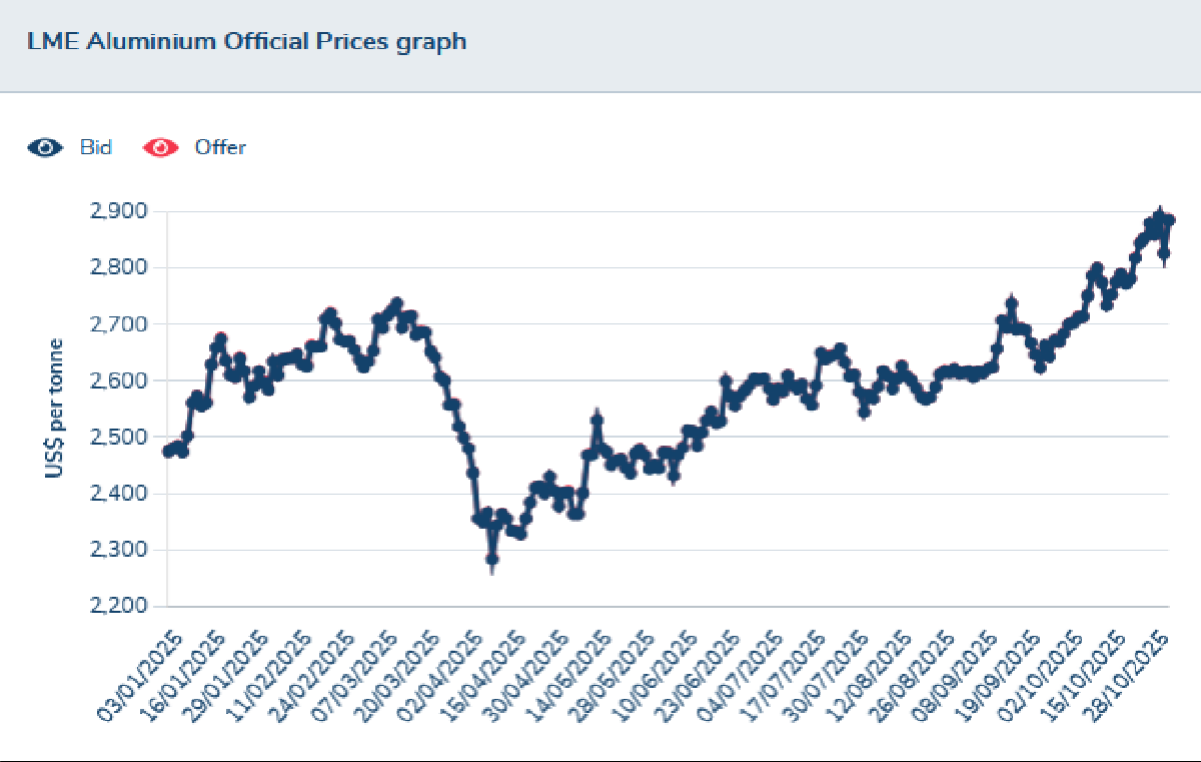
Figure 3.15



In 2025 the zinc prices underwent change and the trend of recent years of decline turns into increase. From long-term value below 3 000 USD/tonne, in the fourth quarter an increase started and reached maximum price of 3 250 USD/tonne in the end of 2025. The lowest was in April - 2 500 USD and difference between the two was 750 USD/tonne, 130 % correspondingly.

Aluminium price (USD per tonne)

Figure 3.16



In the case of aluminium, price dynamics is significant. In 2025 the minimum (2 250 USD/tonne) and the maximum one (2 800 USD/tonne) price are higher compared to the ones in 2024 (correspondingly 2 100 USD and 2 700 USD). The difference between the limit values throughout the years is maintained within 125 %.

3.2.1. IMPORT OF NON-FERROUS METALS AND THEIR PRODUCTS

Despite the export-oriented metallurgical production and its high share in the export value, the sector is a significant importer of block non-ferrous metals and the workpieces made of these (mainly aluminium) that it processes and along the value added chains produces new high-tech products of these. End metallurgical products are being imported that we produce as well as from the product list of our producers. This is a normal process of functioning at a free competitive European market and reflects the liberal commercial policy of the EU.

Data about the imported main block of non-ferrous metals and metallurgical products including metal waste during the considered five-year period are presented in **table3.13**. We have included only the metals produced and processed by Bulgaria since they relate to the production and marketing of products in the sector.

The data demonstrate that the increase which started in 2024 concerning the physical import volume continues in 2025. The total imported **403.7 thousand tonnes of metals and products** made of these exceed with 14.6 thousand tonnes the quantities of the previous year yet considering the value they are with 88 million EUR or 172 million BGN less compared to the same year. This confirms the price dynamics of non-ferrous metals at the international markets that significantly impacts the sector indicators in the particular years.

Table 3.13

Import of basic non-ferrous metals and items made of these, tonnes

Commodities	2021	2022	2023	2024	2025	Difference 2025/2024	
						+/-	%
Copper, total including	104 445	130 917	137235	141 066	155 188	14 122	110.0
Anodes	4.5	1 009	4	954	1	-953	0.1
Refined copper, alloys	28 049	29 320	32 891	28 328	46 292	17 964	163.4
Scrap	52 300	68 739	71 347	79 766	74 299	-5 467	93.1
Rods and profiles	5 648	4 749	4 721	4337	3 991	-346	92.0
Wires	15 090	21 146	22 747	22 643	26 561	3 918	117.3
Sheets and foil	1 209	2 028	1 893	2 444	1 356	-1 088	55.5
Pipes, other	2 144	2 454	3 632	2 594	2 688	94	103.6
Lead, total, including	35 423	60 592	54571	41 430	45 597	4 167	110.1
Block and alloys	16 509	21 354	39 267	35 984	35 163	-821	97.7
Scrap (metal)	13 939	34 843	11 705	3 305	7 057	3 752	213.5
R/P metal	4 975	4 394	3 599	2 141	3 377	1 236	157.7
Zinc, total, including	5 099	5 040	3 644	9 610.6	5 413	-4 197	56.3
Block and alloys	4 768	4 368	2 585	9 194	5 135	-4 059	55.9
Scrap	75	21	1	17.6	11	-6	65.1
R/P metal	256	650	1 058	399	267	-132	66.8
Aluminium, total, including	183 148	207 793	187997	196 968	197 518	550	100.3
Block and alloys	129 589	144 931	121914	133 629	137 194	3 565	102.7
Scrap	1 739	4 838	5 963	4 226	3 559	-667	84.2
Rods and profiles	29 649	27 367	30 730	24 970	23 146	-1 824	92.7
Wires	4 373	6 116	7 342	7 099	9 218	2 119	129.9
Sheets and strips	13 262	18 556	13 620	20 523	17 985	-2 538	87.6
Foil	3 451	4 522	4 006	4 043	4 408	365	109.0
Pipes	1 085	1 462	4 422	2 478	2 008	-470	81.0
Total, tonnes	328 115	402 873	383 447	389 075	403 716	14 641	103.8
Value, million €	1 294.8	1 932.4	1 773.7	2 125.8	2 038.1	-88	95.9
Value, million, BGN	2 532.3	3 779.4	3 469.0	4 157.7	3 986.2	-172	95.9

Source: Customs statistics and National Revenue Agency

For the period of the defined 5 consecutive years, the quantities of the production of non-ferrous metals imported marked an increase of 123 %, and the value of these commodities grew with two times higher per cent and goes up to 156 %. This is due to the increase of prices at the international exchanges that intend to increase.

Only in 2025 the imported metals under the basic commodity groups amounted to 403 716 tonnes compared to 2024 they are with 14 641 tonnes more (increase of 103.8 %), whereas the value decreases with 88 million EUR (172 million BGN), a decrease to 95.9 %.

In view of the individual commodity groups there is also a change yet it impacts only the distribution within the group. Throughout the period we retain the relative weight of each and every defined commodity group within the total import. **The highest physical volume is the one of the commodities of the aluminium group and the highest value is the one of the copper group.**

The relative shares of imported quantities of block metals and their products for 2025 are presented at **figure 3.17**.

In the **copper group that is with a share of 38.4 % of the total import**, highest is the scrap quantity – 74,3 thousand tonnes. Depending on the quality, this resource is being used in copper extraction or for the production of products made of copper and brass. In 2025 the import was performed from 39 countries, the highest quantity is of the scrap delivered from the three neighbouring countries - Romania (13.7 thousand tonnes), Greece (12.7 thousand tonnes) and Turkey (11 thousand tonnes), followed by Italy (9.5 thousand tonnes)

In terms of quantity, refined copper ranks next with import of 46.3 thousand tonnes from 23 countries of them 25 thousand tonnes from Serbia. Of the copper items throughout the period, wires are of the highest quantities - around 17 % of the total import of copper products that is easy to explain because of the absence of producer in the country. This year, the monopoly is of Turkey's import of copper wires with share of 80 %.

The import of aluminium block and alloys remains with the highest volume in this group. Bulgaria does not produce metal aluminium yet it was capacities constructed at high technological level for processing to end products. That is why in 2025 from 34 countries 137.2 thousand tonnes of aluminium raw materials were imported – block and alloys, with 3.5 thousand tonnes more compared to the previous one. These quantities are

69.5 % of the import of all aluminium commodities and are 34 % of the total quantities of the imported non-ferrous metals in 2025.

The highest quantity of aluminium block was imported from Turkey – 25 thousand tonnes or 18 % (30 thousand/22 % in 2024), followed by the Netherlands with 20 thousand tonnes, Georgia with 18 thousand, Russia – 16 thousand tonnes, Bahrain – 15 thousand tonnes and UAE – 12 thousand tonnes. Around 10 thousand tonnes were imported from Greece and Egypt. The others are small importers – below 2 thousand tonnes.

Even though the country produces broad range of long and flat metals including foil, the import was significant in 2025 with nearly 57 thousand tonnes whereas in 2024 it was over 59 thousand tonnes.

Within this group there is positive trend of import of raw materials growth for processing and decrease of quantities of ready products. Throughout the year 23 thousand tonnes of rods and profiles as well as 18 thousand tonnes of sheets and strips have been imported. In view of both production types we report decrease of import compared to the previous year – with 2 thousand tonnes of the long ones and 2.5 thousand tonnes of the flat products. The import of wires increases with 2 thousand tonnes whereas 80 % are from Turkey that are not being produced by our metallurgical enterprises.

The flat products in quantity of 18 thousand tonnes are being imported from 38 countries and the highest import is from Oman - 4.5 thousand tonnes (8 thousand in 2024). Other countries from which we import flat products in higher quantities in 2025 - from 2 thousand to 2.5 thousand tonnes are Germany, Turkey and Poland.

The import of rods and profiles is 23 thousand tonnes (25 thousand in 2024) and is performed from 35 countries, of them 13 thousand tonnes or 57 % from Turkey. Other larger importers are Greece - with 3.4 thousand tonnes and Italy, Austria, Hungary and Poland with around 1000 tonnes of import in 2025.

Of the long products we import 25 thousand tonnes of rods and profiles of various dimensions, from 39 countries in total. The import from Turkey is 14 thousand tonnes (56%), the other quantities are lower, such as from Greece (3.3 thousand) and Italy (2.5 thousand). The import of foil from China is highest (1000 tonnes), followed by turkey, Germany and Poland.

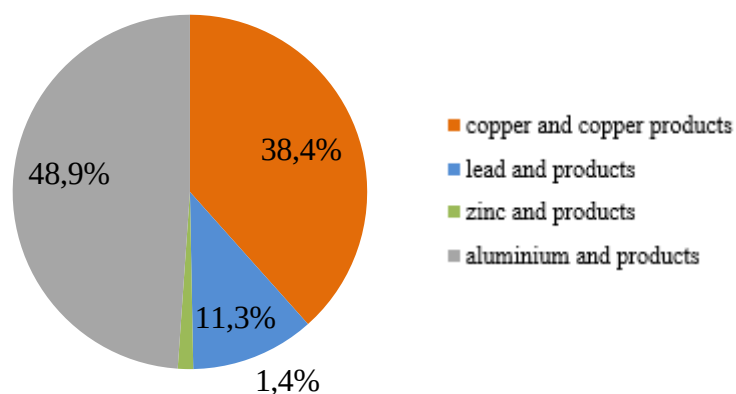
The import of the other two metals – lead and zinc, is performed mainly in block, because of the limited consumption in individual products. The lead import is 35 thousand tonnes and marks an insignificant decrease of 2.3 %.

Even though there is import from 16 countries, the supplies of block lead throughout the years is mainly from three countries and for 2025 these are: from Serbia - 11,7 thousand tonnes, Romania – 8.7 thousand tonnes and from Italy - 6 thousand tonnes.

Additionally, 7 thousand tonnes of lead scrap were imported whereas the quantities have increased more than twice. The import of lead R/P metal in 2025 also increases with 1 236 tonnes and marks an increase of 158 %.

In the case of zinc, a decline of over 50 % is noted in all commodity groups. The import of block metal is 5 thousand tonnes and of metal scrap – only 11 tonnes compared to 18 tonnes in 2014. Additionally, the R/P metal also decreases from 400 tonnes to 267 tonnes or with 67 %.

Figure 3.17



Structure of import in view of types of non-ferrous metals and products, 2025

3.2.2. EXPORT OF METALLURGICAL PRODUCTS OF NON-FERROUS METALS

The Bulgarian metallurgical industry is export-oriented, exports ready products and metal blocks mainly for the EU markets, as well as for all the other regions globally. In recent years, there is increase of the export for the Middle East, North Africa, America.

The quantities of exported non-ferrous metals and metallurgical products including metal waste in the last five years are presented in **table 3.14**.

The total export volume in 2025 in kind was 724 824 tonnes, compared to the previous 2024 reported a decline of 50 thousand tonnes, 93.60 %. The export value amounts to 9 178 million BGN, correspondingly 4 693 million EUR and is 90.90 % of the value in 2024. Greater decline of the export value compared to the one in kind demonstrates greater decrease of prices of these products at the global exchanges.

Table 3.14

Export of non-ferrous metals, their items and scrap, tonnes

Commodities	2021	2022	2023	2024	2025	Difference 2025/2024	
						+/-	%
Copper, total including	319 649	422 694	376 467	441 746	384 546	- 57200	87.05
Anode copper	68 654	131 441	84752	132 938	61 103	-71 835	45.96
Refined copper, alloys	168 584	183 195	187 258	202 361	209 560	7 199	103.56
Scrap	8 357	10 855	8 201	8 712	9 509	797	109.14
Rods and profiles	22 448	31 870	32 239	32 293	36 908	4 615	114.29
Wires	1 678	4 823	4 695	6 321	5 902	-419	93.36
Sheets, strips and foil	49 847	60 480	57 668	59 064	61 024	1 960	103.48
Pipes	81	28	49	57	540	483	947.28
Lead, total, including	79 525	98 662	84 209	122 487	136 577	14 090	111.50
Lead block	79 386	98 135	81 232	122 047	136 105	14 058	111.52
R/P metal	139	527	211	433	472	39	109.11
Scrap (metal)	0	0	2 765	7.1	0.0	-7.1	0.00
Zinc, total, including	61 324	63 922	72 989	68 887	67 159	-1 728	97.49
Zinc block	60 922	63 518	72 694	68 402	66 723	-1 679	97.55
R/P metal	70	3	7	0.3	0.0	-0.3	0.00
Scrap	332	401	283	485	436	-49	89.88
Aluminium, total, including	148 407	152 148	140 345	141 276	136 542	-4 734	96.65
Block	5 679	14 804	16 064	7 970	7 786	-184	97.69
Scrap	40 006	36 721	35 085	36 043	35 279	-764	97.88
Rods and profiles	39 463	46 914	47 262	39 513	36 626	-2 887	92.69
Wires	130	153	103	601	244	-357	40.61
Strips and sheets	23 145	13 331	11 957	16 543	16 844	301	101.82
Foil	30 037	33 005	22 352	33 063	32 743	-320.3	99.03
Pipes	9 947	7 217	7 521	7 543	7 020	-523	93.07
Total	608 905	737 427	674 004	774 396	724 824	-49 572	93.60
Value, million €	3 421.0	5 241.1	4 170.5	5 163	4 693	-470	90.90
Value, million BGN	6 691.9	10 250.8	8 156.8	10 097	9 178	-919	90.90

Source: Customs statistics and National Revenue Agency

Decline of the physical volume of export is attributable to most commodity groups. The metal blocks and metal waste/scrap take up significant share of this export. The highest export is the one of refined copper and copper products whereas these are 53 % of the whole export of non-ferrous metals in 2025. A total of 384 546 tonnes were exported only of this commodity group whereas the electrolyte/refined copper amounts to 209 560 tonnes and share of 54.5 % within the group. Compared to 2024 there is decrease of export because of the lowered annual production, export (- 57 thousand tonnes) of anode copper correspondingly.

Cathode copper is being exported for 15 countries in Europe and for two outside it yet at insignificant quantities. The highest export is for Turkey – 98 thousand tonnes. Followed by Italy with 66 thousand tonnes and Croatia with 15 thousand tonnes.

The copper products mark an increase whereas pro rata to production the export of flat/rolled products is higher. 61 thousand tonnes have been exported, 2 thousand tonnes more for 70 countries at different continents. The largest importers are Germany – 16 thousand tonnes and Italy – 12 thousand tonnes. The export for the USA is ongoing at quantity of 3.5 – 4 thousand tonnes annually.

The long products are 37 thousand tonnes, with 4.6 thousand tonnes more compared to 2024. These are being exported for 43 countries of Europe, Asia and America. The highest export is for Poland – 9.5 thousand tonnes, followed by Germany with 7.7 thousand tonnes and Italy – with 3 thousand tonnes.

The export of **copper scrap in 2025 was 9.5 thousand tonnes, with 1000 tonnes more compared to the previous year.** It is being exported in 17 countries, yet the traditional markets – China and Turkey are reserved with export of 3,4 thousand tonnes and 2 thousand tonnes correspondingly. This raw material should remain in Bulgaria.

The export in the lead and zinc commodity groups is formed mainly of the one of block metals. The other products such as R/P metal or waste are at negligible quantities. **For 2025 the export of block lead amounted to 136 thousand tonnes, with 14 thousand tonnes more, being an increase of 112 %.** It takes place in 17 countries, exclusively in the region and the EU member-states. In 2025 43 thousand tonnes (33 %) were exported for Turkey, for Greece – 30 thousand tonnes, Romania – 15 thousand tonnes, Slovenia – 14 thousand tonnes and 8 thousand tonnes for Italy.

Also, the produced zinc is designated mainly for export, in 2025 the exported quantities were 66.7 thousand tonnes, a small decrease of 1.7 thousand tonnes. It is being exported in 17 countries of the EU and Europe, as well as larger quantities for Turkey – 21 thousand tonnes, Slovakia – 12 thousand tonnes and Italy – import of 10 thousand tonnes of zinc. The export of metal scrap of lead and zinc throughout the years is non-existent or negligible. In 2025 there is export of only 436 tonnes of zinc waste.

Bulgaria has well-developed processing aluminium industry on the basis of import of raw materials – block and workpieces. Hence the **aluminium commodity group includes export only of end products – sheets, strips, foil, rods and profiles, pipes.** In addition to these, there is export of secondary aluminium block and alloys produced from aluminium waste as well as quantities of significant volume of non-processed aluminium waste (scrap).

The total quantity of the exported commodities of the aluminium group in 2025 is 136.5 thousand tonnes whereas of these 7.8 thousand could be attributed to the secondary aluminium block and 35.3 thousand tonnes is the quantity of the scrap exported for 28 countries.

The secondary block is produced of aluminium waste, it is being exported in small quantities for 13 countries, higher for Turkey – 5.5 thousand tonnes and Slovenia – with 1.2 thousand tonnes. Waste is not being processed to satisfactory degree in order to get quality raw material to be invested in the production of end products.

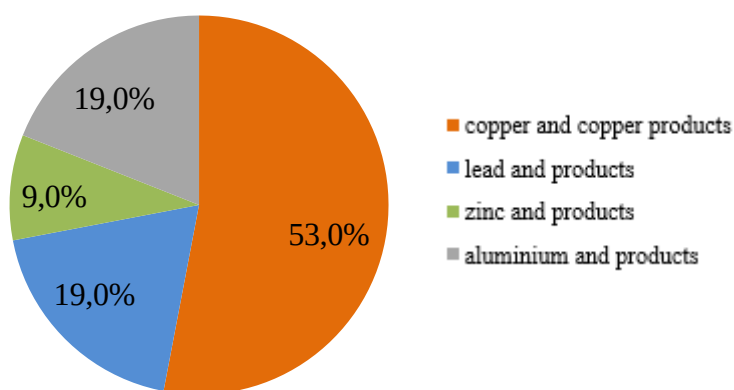
As a result of the production of long aluminium products **in 2025 36.6 thousand tonnes of rods and profiles have been exported** and at lower quantities wires and pipes. The main export is for EU countries, of them higher quantities for Germany - with 8.7 thousand tonnes, Poland – 3 thousand tonnes, the Netherlands – 4.3 thousand tonnes and Belgium – 2.5 thousand tonnes. Over 1 000 tonnes are being exported for Romania, Greece, Austria, Italy and Denmark.

Additionally, Alcomet AD exports **16.8 thousand tonnes of sheets and strips** for 47 countries yet the main market is Europe. Higher export is performed for Italy – 6.7 thousand tonnes, Poland – 2.7 thousand tonnes and Germany – 1.7 thousand tonnes.

Aluminium foil is an important product in the production and second ranking when it comes to export volume among the long products. In 2025 33 thousand tonnes were exported of various types and sizes for 47 countries of Europe, America and Asia. In Italy 7.3 thousand tonnes were imported, in Germany – 5.2 thousand tonnes, in Poland – 5 thousand tonnes, Spain and France – around 3 thousand tonnes. In the USA in 2025 5.3 thousand tonnes were imported.

The export structure of the main non-ferrous metals and metallurgical products made from these according to the data provided by the National Revenue Agency and the “Customs” Agency for 2025 and reflected in table 3.14 are presented at figure 3.18. The quantities correspond to the annual production and its marketing, yet in some cases it includes other available metals at salespersons or consumers.

Figure 3.18



Structure of the non-ferrous metals and products export, 2025

The data provided in tables 3.13 about the import and 3.14 about the export of metallurgical products from non-ferrous metals demonstrate the impact of metal prices on sales revenues, correspondingly on the financial-economic indicators in the various periods. For 2025 there is greater decline of the export value compared to the one of quantity of the exported commodities. The lower exchange prices also impact this. Nevertheless the positive balance from the external commercial operations remains high, only in view of the non-ferrous metallurgy in 2025 it was 2.6 billion EUR.

3.2.3. SALES OF NON-FERROUS METALS AND R/P METALS

Non-ferrous metallurgy in Bulgaria develops sustainably, it has high contribution in the national economy and in the EU metal production. The available capacities and product list of the metallurgical enterprises exceed country's needs and the production is being exported. Data about the marketing of the produced metallurgical products by the Bulgarian producers in 2025 at the internal and external markets including for the EU in the last five years are presented in **table 3.15**.

Table 3.15

Sales of non-ferrous metals and r/p metals, tonnes

Commodities	Marketing	2021	2022	2023	2024	2025
Electrolytic copper	Local market	34 636	54 135	42 090	44 648	32 213
	Export	184 337	183 955	193 981	187 396	209 440
	Total	218 973	238 090	236 071	232 044	241 653
Lead and alloys	Local market	26 588	20 907	26 362	22 769	21 119
	Export	80 748	84 112	66 253	121 088	135 802
	Total	107 336	105 019	92 615	143 857	156 921
Zinc and alloys	Local market	7 503	7166	9 734	5 946	6 125
	Export	64 244	62 570	64 093	63 840	64 478
	Total	71 747	69 736	73 827	69 786	70 603
R/P HNFM	Local market	958	1 165	1 300	1 041	1 029
	Export	88 405	91 592	93 517	92 556	95 213
	Total	89 363	92 757	94 817	93 597	96 242
R/P Aluminium	Local market	4 214	13 217	13 603	17 487	20 376
	Export	104 319	86 740	75 187	89 579	74 291
	Total	108 533	99 957	88 790	107 066	94 667

Source: Company data

Throughout the considered period, the marketing of Bulgarian production at the internal markets takes up small share of their production. The range within which this marketing takes place and of the minimum 1 % of products from heavy non-ferrous metals to the maximum of 21 % of the R/P aluminium and its alloys. This predefines the sector as highly export and with high relative share in the value of country's export.

At the internal market of the Bulgarian metallurgical production, the highest quantity is attributable to the marketed **electrolytic copper** – 32.2 thousand tonnes being 13.3 % of the total production of Aurubis Bulgaria AD in 2025. Yet this is the lowest quantity for the internal market in the last 5 years compared to the previous 2024 it goes down with 12.4 thousand tonnes. In order to make up for this decrease and satisfy country's needs, the import of refined copper in 2025 increased with almost 18 thousand tonnes compared to the one for 2024 (table 3.13.).

For a second year in a row, yet with smaller quantities the marketing of Bulgarian lead at the local market decreases. In 2025 this decrease compared to the previous is relatively small – with 1650 tonnes yet in 2024 it was significantly higher – nearly 4 thousand tonnes. This metal is not made up by another source and reflects the lower internal consumption.

Block zinc has limited realization in the country, it is being mainly used for zinc coating of steel products. Of the annual production, the share of the internal marketing is around 10 %. The other quantity is being exported and this metal throughout the period has a share not less than 90 % of the annual production.

The smallest quantity sold on the Bulgarian market is the R/P HNFM - **copper and brass**. Throughout the years the quantities are not more than 1 000 – 1300 tonnes and this is somewhat over 1 % of their production. The presence at our market is actually symbolic and almost the whole production is being exported.

Aluminium products have higher internal realization compared to the other metals and throughout the years the quantities have grown. These are defined by the production increase as well as by the expanding product list and the assimilation of new items. Nevertheless aluminium production is also export oriented and around 80% of it is also being exported.

The quantities of the products and items of non-ferrous metals realized at the Bulgarian markets in **2025 are a total of 80 862 tonnes** whereas in **2024 these were 91 thousand tonnes** and 93 thousand in 2023. The quantities that decreased for the year of 10 thousand tonnes entirely result from the decreased internal marketing of electrolytic copper with 12 thousand tonnes. These quantities are made up by higher import.

The total annual marketing of the production by the non-ferrous metallurgy in 2025 was 660 086 tonnes distributed at 12 % for the internal market and the other 88 % are exported. Compared to the previous years the sales in the country decrease with two per cent annually (14 % in 2024 and 16 % in 2023). The high export indisputably predefines the non-ferrous metallurgy as entirely export sector. Bearing in mind the sales at exchange prices, the final indicators and the financial results greatly depend on the prices at the global exchanges, mainly the London Metal Exchange. Despite the frequent crises and changes of prices, the external commercial operations with non-ferrous metals annually form significant positive balance. For 2024 it amounted to 6 billion BGN and for **2025 5 billion BGN**. (table 3.13 and table 3.14).

3.2.4. CONSUMPTION OF NON-FERROUS METALS AND R/P PRODUCTS

The real internal consumption (RIC) of metals and the individual products is the aggregate of the quantities marketed at the internal market and their import for the same period.

To this end, **table 3.16** presents data from the Bulgarian producers about the production marketed by them at the internal market and the quantities of import of

the same products according to the official statistics of the “Customs” Agency and the National Revenue Agency.

In view of the individual groups, the ratio between these sources is different and changes throughout the years. In view of the block metals, according to the established practice the necessary quantities are greatly procured from the national production processes. Usually this share is close to 50% yet in recent periods we observed a decline.

Regarding R/P metals and finished products, this ratio is inverse whereas the quantities of the imported products exceed the ones of internal realization multi-fold. The reasons behind this are numerous and versatile. Yet one of the main reasons is the absence of own production for some of these needs.

In 2025 41 % of the RI Consumption was covered by own production of electrolytic copper whereas in 2024 this share amounted to 60 %. Throughout the years it was over 50 % and the lowest value was in 2025.

Table 3.16

Real Internal Consumption (RIC) of non-ferrous metals and R/P products, tonnes

Commodities	Origin	2021	2022	2023	2024	2025
Electrolytic copper	Internal marketing	34 636	54 135	42 090	44 648	32 213
	Import	28 049	29 320	32 891	28 328	46 292
	RIConsumption	62 685	83 455	74 981	72 976	78 505
Lead	Internal marketing	26 588	20 907	26 362	22 769	21 119
	Import	16 509	21 354	39 267	35 984	35 163
	RIConsumption	43 097	42 261	65 629	58 753	56 282
Zinc	Internal marketing	7 503	7 166	9 734	5 946	6 125
	Import	4 768	4368	2 585	9 194	5 135
	RIConsumption	12 271	11 534	12 319	15 140	11 260
R/p HNFМ	Internal marketing	958	1165	1 300	1 041	1 029
	Import	24 091	30 377	32 993	32 018	34 596
	RIConsumption	25 049	31 542	34 293	33 059	35 625
R/P Aluminium	Internal marketing	4 214	13 217	13 603	17 487	20 376
	Import	51 820	58 023	60 120	59 113	56 765
	RIConsumption	56 034	71 240	73 723	76 600	77 141

Source: Customs statistics and National Revenue Agency (about import) and company data (about marketing in the country).

The share of Bulgarian production in lead consumption in recent years was around 40 %, whereas for 2025 it was 37.5 %. Higher share is attributable to zinc whereas

for the past years the Bulgarian production was around and over 50 %. For 2025 it reached 55 %.

In the case of products and items made of non-ferrous metals the internal realization is low, correspondingly the participation of Bulgarian production in consumption is low. In the case of R/P aluminium it approximates 25 %, whereas for 2025 it reached 26 %. Yet in the case of copper and copper alloys it is exceptionally low – only 2-3 % of the actual needs are covered by Bulgarian production. Almost the whole production is being exported (up to 99 %).

Of all the non-ferrous metals the highest and of equivalent volumes is the consumption of two metals – copper and aluminium. Their quantities already exceed 70 thousand tonnes annually. Yet in the case of all metals except for zinc we establish increase of the annual consumption.

The visible consumption (VC) is an indicator that is being frequently used and calculated according to the following formula:

$$VC = C + I - E,$$

Being the aggregate of the produced and imported quantities of the commodity group minus their export. The data about the VC of non-ferrous metals and R/P products for 2025 are shown in table 3.17.

Table 3.17

Visible consumption of non-ferrous metals and R/P products in 2025, tonnes

Commodities	C	I	E	VC
Electrolytic copper	224 319	46 292	209 560	61 051
Lead	156 965	35 163	136 105	56 023
Zinc	72 036	5 135	66 723	10 448
R/P HNFM	95 213	34 596	104 374	25 435
R/P Aluminium	102 627	56 765	93 477	65 915

Source: Customs statistics (about import and export); company data about production

The data according to both methods do not fully overlap that could be easily explained. The use of customs data about export when defining the VC could result in significant deviations since these do not reflect the export only of the produced production during the current year. This export could contain quantities of warehouse available quantities, re-export etc. The reworks with client's own materials impact this too. These factors change the data about the visible consumption.

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