



BULGARIAN ASSOCIATION OF THE METALLURGICAL INDUSTRY

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METALLURGY IN BULGARIA IN 2010

SOFIA, 2011

Introduction

The Bulgarian Association of Metallurgic Industry (BAMI) was founded in 1992 as Branch Chamber of Ferrous and Non-Ferrous Metallurgy. At the General Assembly in 2007 changes in the Statute were passed including in its name. BAMI is a non-commercial association of employers of the companies producing and/or trading in metals and metal products and articles, refractory products and materials, as well as carrying out scientific research, engineering and repair activities in the field of metallurgy.

As on 31.12.2010 the total number of BAMI's regular members, which the Association represents, is 44 /forty-four/ companies. Three technical universities are also associated members of BAMI: University of Chemical Technology and Metallurgy – Sofia, Technical University – Sofia, and Ruse University “Angel Kanchev” – Ruse.

The annual edition of “Metallurgy in Bulgaria” issued regularly since 1994 aims to inform the members and a large number of specialists in Bulgaria and, through the English edition – also abroad, about the development of the branch, the results from the production activities and indices during the year in reference of both its members, and the whole metallurgical sector.

Traditionally, the Annual consists of three parts. In the first part a short review (based entirely on statistic and customs data) is made of the Bulgarian economy during the respective year. The trend of its development and basic macroeconomic indices are presented. Based on the available information, the place, importance and share of the metallurgical industry are specified in the country statistical data for energy consumption, wage level, sales on foreign markets, total foreign trade balance of metallurgical products, etc.

The other two parts include a short description of the Bulgarian manufacturers from the ferrous and non-ferrous metallurgy respectively. Basic indices and annual results from the activity are presented. A comparison of the customs data on import and export of metals and that of the producer companies is made, and wherever possible the reasons for the discrepancies found out are pointed out.

Bulgaria is a country where the metallurgic capacities for production of ferrous and non-ferrous metals, of pressed/rolled metal and products out of them were built in the sixties of last century. In the past years a major part of them have been renewed in technology and production and new capacities, both in mining and manufacturing metallurgical industry.

The data about the quantity of ferrous and non-ferrous metals produced related to the population of Bulgaria shows that they can be compared to both the average EU level, and world per capita production. For the sake of objectivity it must be pointed out that the indices are much higher for the production volumes in non-ferrous metallurgy. With 0.119 % of world population, the basic types of non-ferrous metals produced in our country (copper, lead, zinc and by products) as a share of world production are many times higher. The relative share of Bulgarian production in the European

Union is high. By several technological and qualitative indices the achievements of Bulgarian companies match the best practice in the world.

*The Bulgarian Association of the Metallurgical Industry is a member of two European organizations: the organization of producers of ferrous metals - **EUROFER**, and the one of the producers of non-ferrous metals – **EUROMETAUX**. The chairman of the Board of BAMI is a member of the Executive Committee of **EUROMETAUX**. We also have a representative in the Strategical Development Group, and in the Energy and Climate Change Committee as well.*

Having in mind the accession of Bulgaria in the European Union, the outlook of this paper had to be changed. More and more attention is paid to the indices in the metallurgical industry that can be compared with these in the other member-states or with the average for the Community.

The editing team apologizes to the members and everybody using the yearbook for any omissions or data clashing with the official statistics. Our aim every year is to limit them and bring them to a minimum.

All opinions and recommendations aiming to improve the annual will be accepted with gratitude and taken into consideration in the preparation of the next editions.

The editing team expresses a particular gratitude to all leaders and specialists from the member-companies of BAMI for the data they made available about the production and sales, for the information received about the investments made and the development of capacities.

We are truly thankful to external organizations and persons who assisted us in finding other important information, necessary for the compilation of “Metallurgy in Bulgaria in 2010”.

FULL MEMBERS OF BAMI

“Kremikovtzi” JSC	“Aurubis Bulgaria” JSC
“Tepro Metal” PLC	“KCM” JSC
“Stomana Industry” JSC	“Intertrust Holding” JSC
“Sofia Med” JSC	- “OCK” JSC
“Stilmet” JSC -	- “Interpipe” JSC
“Promet Steel” JSC	- “Steel Commodities Corp.”
“Helios Metalurg” Ltd	“Alkomet” JSC
“PIH Industry” JSC	“Klöckner Metalsnab” JSC
“Evrometal” JSC	“Monbat Recycling” PLC
“Jiti” JSC	“Shamot El Pe” JSC
“Trud” JSC	“RMO-Metalurgremont” JSC
“KG” Ltd	“EL BAT” JSC
“Bamex” JSC	“Refran” PLC
“IPO” Ltd	“Stam Trading“ JSC
“Rimpex” Ltd	“Extraction of Non-ferrous Metals” JSC
“Polimet Import-Export” Ltd	“Sofia Metal” Ltd
“Kometech” Ltd	“Armex Trade” Ltd
“Rudmetal” JSC	“Komotech-Ko” JSC
“Industrialna Toplotócehnica” JSC	“Il Met” PLC
“Ressurs Management” JSC	“Refrakem” PLC
“Mulit” Ltd	“Anils” JSC
“Ognyanovo K” JSC	“Konvintrade Bulgaria” Ltd
“Berg Montana Fittings”PLC	“Ecometal Engineering” Ltd

ASSOCIATED MEMBERS OF BAMI

University of Chemical Technology and Metallurgy, Sofia
Technical University, Sofia
Ruse University “Angel Kanchev”, Ruse

MEMBERS OF THE EXECUTIVE BOARD

Corporate bodies:

“Aurubis Bulgaria” JSC	“Monbat” JSC
“Evrometal” JSC	“PIH Industry” JSC
“Tepro Metal” PJSC	“KCM” JSC
“Klöckner Metalsnab” JSC	“Alkomet” JSC
“Intertrust Holding” JSC	“Promet Steel” JSC
“RMO-Metalurgremont” JSC	“Shamot El Pe” JSC
“Helios Metalurg” Ltd	

Chairman of the Board – ANTON PETROV /“Tepro Metal” PLC/

Executive Director – Politimi Paunova

The following abbreviations have been used in the Annual:

GDP – Gross domestic product by prices of the year in reference.

GVA – Gross value added at base prices

EFTA – European Free Trade Association

CEEC – Central and Eastern European Countries

CIS – Commonwealth of Independent States (formerly the USSR)

OECD – Organization for Economic Cooperation and Development

RFM – Rolled ferrous metals (rolled steel)

HR – Hot-rolled (rolled steel)

CR – Cold-rolled (rolled steel)

KCM – “Plant for non-ferrous metals” JSC, Plovdiv

OCK- “Tin-zinc plant” JSC, Kurdjali

HNFM – Heavy non-ferrous metals (R/P copper and brass)

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SECTION ONE

BULGARIAN ECONOMY IN 2010

(SHORT REVIEW)

1.1. POPULATION, LABOUR MARKET, SALARY

At the end of 2010 the population of Bulgaria totalled 7 504 868. This figure takes into account the migration, so it refers to the number of persons with Bulgarian citizenship with a permanent address in this country. **Compared to the preceding year the population dropped by 42 841 /0.56%/.**

The population structure during the last three years is shown on **Table1.1.**

Table 1.1

Breakdown of population by categories, thousand people

Population groups:	2008		2009		2010	
	'000	%	'000	%	'000	%
	5 408.3	71.1	5 401.2	71.4	5 375,1	71,6
City/town population	2 198,3	28.9	2 162.5	28.6	2 129,8	28,4
Village population	77.712		80.956		75.513	
Born alive	110.523		108 068		110.165	
Deceased	-32.811	-0.43	-27.112	- 0.35	-34.652	-0.46
Population growth	1 100.0	14.5	1 099.0	14.5	1 032.4	13.8
Under working age	4 806.0	63.2	4 773.9	63.1	5 141.1	68.5
At working age	1 700.6	22.3	1690.7	22.4	1 331.3	17,7
Over working age	7606.6	100.0	7 563.7	100.0	7 504, 8	100.0

Source : Statistical data of NSI, 201.

The population in cities and villages goes down in 2010, but the relative share of people living in cities shows a steady upward trend. This is due not only to the migration from the villages, but also to the higher birth rate and lower mortality rate in bigger towns and cities. In 2009 the relative share of urban population is 71.4 %, and in 2010 – 71,6 % or growth of 0.2 %.

In the last two years a slight trend of increase of the birth rate and a decrease of the absolute values of the negative percentage of population growth was reported, even though the population continued to decrease. Unfortunately, in 2010 this positive trend stopped and compared to 2009 the number of people born alive is by 5 thousand less, and the deceased – by 2 thousand people more, which means the negative percentage of population growth goes up by 0,11 %. As a result of all the ongoing processes related to changes in the population of the country, last year the latter decreased by 58,9 thousand people.

After a year of a halt, the worrying trend of decreasing the number of children /under working age/ is reported again. **The number of people at working age went up by 367 thousand in the last year, which is due to the fact that the average age of the population goes up.** Whereas it was 40.4 years in 2001, in the past years it has reached 41.8 – 41.9 years. There is a big drop in the number of people above working age; their share decreases by nearly 5 %.

For some years, Bulgaria registered the highest negative population growth among all EU(27) countries.

Data about the average annual **employment figures** by labour/employment contracts, about the income of employees and some social parameters are presented on **Table 1.2**.

The comparison of the indices for employees in 2010, compared to 2009 and 2008 reveals the following:

- **the number of employees** / according to National accounts / compared to the two preceding years goes down **constantly**, by 670 thousand people compared to 2009 and 783 thousand people compared to 2008 respectively, and only last year the number of registered unemployed people went up by 70 thousand people

- the average annual **unemployment rate /according to NSI data/ is 10,2 %** or by 3,4 % higher than in 2009.

These figures show the permanent /for two years in a row/ impact of the world economic crisis on some sectors of the Bulgarian industry, the drop in which started back in the second half of 2008. In spite of that there is an increase in the income of people employed under labour/employment contracts, and the average salary in the country is by 61 leva higher compared to the previous year /110 %/. The growth in the public sector is higher than that in the private and the average salary is by 141 leva higher.

This increase of the average salaries is partly due to the fact that companies (mainly in the private sector) lay off employees with lower level of education and qualification.

The average salary in metallurgy, compared to the average for the country is higher in 2010 as well but marks a drop of 123 leva or 12 %. Despite this drop **the metallurgical branch, which includes production of metals, rolled/pressed metal and finished products, takes one of the first places of**

all economic activities regarding the average salary and insurance income of the employees. In the industry of the country only in the sectors for production of oil and gas, the production of refined oil products, and the production and distribution of energy as well, payment is higher.

According to operational NSI data during the first half of this year the average insurance income in the sector has gone down again – to 1010 leva. A determinant for that negative trend is the reduced production in a lot of metallurgical companies, mainly in ferrous metallurgy, which led to some changes in work organization, including reduced working hours, but keeping the staff.

Table 1.2

Average annual number of employees, unemployment rate, inflation

Indices	2008	2009	2010
Average annual number of employees (national accounts).	3 835 569	3 722 789	3 052 800
Average annual number of registered unemployed people	233 719	280 980	350 944
Average annual unemployment rate (NSI), %	5,6	6,8	10,2
Average monthly salary of people employed by labour/employment contracts for the country, leva	544,8	591,2	652
- public sector	650,8	711,2	755
- private sector	509,5	547,2	614
Average monthly salary in the activity “Production of basic metals”, leva	1 020,8	1 152,3	1 029

Source: NSSI and NSI, Report by NCEA, 2010

1.2. PRODUCTIVITY, GDP, ENERGY CONSUMPTION

During the last few years in Bulgaria a constant growth in the volume of the **gross domestic product – GDP and the gross value added – GVA** is reported. In 2009 only, in time a severe economic crisis, a drop of 472million leva for GDP compared to 2008 is reported.

The data about the last four years are presented on **Table 1.3**.

Table 1.3

GDP and GVA by sector and groups, million leva

Indices:	2007	2008	2009	2010
GNP at current prices, million leva, incl.:	56 520	66 728	66 256	70 474
- agriculture and forestry			3 341	3 190
- industry, energy			12 072	14 044
- construction			4 763	4 904
- trade, nutrition, transport and communications			12 675	14 303
- finance, insurance, real estate and other business services			13 659	14 317
- government			8 992	9 888
- taxes			10 755	9 829
Gross added value /GVA/, million leva	46 401	54851	55 502	60 646
- agrarian sector	2 898	4 001	3 341	
- industry	14 985	16 752	16 835	
- services	28 518	34 098	35 326	

Source: Ministry of finance, NSI

Industry, including the production and distribution of electricity, gas and water, for two years now no longer forms the highest Gross Domestic Product /GDP/. Some activities in services report higher values. Such are the groups “finance, real estate and insurance”, “as well as trade, nutrition and transport”.

The Gross value added /GVA/ is also mainly formed by the employees in the service sector, followed by industry, and the lowest figures are for the employees in the agrarian sector.

According to OECD data the gross domestic product generated in Bulgaria is nearly eight times lower than that in Greece, more than 10 /ten/ times than in Poland, more than 4 /four/ times lower than in the Czech Republic, about 3 /three/ times the GDP in Hungary and twice smaller than in Slovakia. The highest GDP in the EU /27/ is reported in Germany, followed by Great Britain and France.

The last energy balance, published by NSI, is for the year 2009. According to the data reported in it, the **total final energy consumption** in the country is 8 745 Ttoe, being 9 419 Ttoe in or a drop of 7.2 %. The consumption in industry is 2 428 Ttoe or 28.6 % of the total consumption, whereas these figures are 3 357 Ttoe and 35.64 % respectively. In a year of crisis industry reports a drop of 929 Ttoe or 28 %.

The energy **consumption in metallurgy goes down from 630 Ttoe in 2008 to 381 Ttoe in 2009, and the distribution is 56 % for ferrous and 44 % for non-ferrous metallurgy. Whereas in 2008 the share of the sector represents 18,8 % of the industrial consumption (795 thousand tons and a share of 21.5 % in 2007), now it drops to 15,7 %. With this drop, from second place in energy consumption, the sector now ranks third – after the chemical industry and the production of non-metal mineral raw materials. The share of metallurgy in the final energy consumption in the country is 4,5 % in 2009, 6.7 % in 2008, and in 2007 it was 8.2 %.**

These indices reflect the reduced metal production in 2009 as well as the ceased activity of “Kremikovtzi” JSC.

Regarding energy consumption of natural gas, **ferrous metallurgy** held first place as an industrial consumer **with 27 %** until 2009. The consumption of natural gas for this activity has sharply decreased since 2009 – to 16 %.

Other large industrial consumers of natural gas are respectively the sectors “Non-metal mineral products” with a share of 32.2 % of the total consumption and “Chemical industry” – with 17 %.

1.3. FOREIGN TRADE EXCHANGE, IMPORT AND EXPORT OF GOODS

The foreign trade exchange of goods which Bulgaria has reported over the past five years is presented on **Table 1.4**.

After the large drop in import and export in 2009, in 2010 **growth is reported** again, of **33 % in export and 13,1 % in import** of goods **respectively**. The foreign trade balance keeps its present trend of being negative, but it is the lowest for the last few years. Compared to 2009 nearly a double decrease of the negative balance of the trade turnover is reported.

Table 1.4
Foreign trade balance of the trade exchange, billion leva

Indices:	2006	2007	2008	2009	2010
Import of goods, incl. - metal products	36,1 2,6	42,8 3,3	49,5 4,2	33,0 1,8	35,1 2,2
Export of goods, incl. - metal products	23,5 5,7	26,4 5,9	29,9 6,1	22,9 3,6	30,4 5,3
Total trade exchange	59,6	69,2	79,4	55,9	65,5
Foreign trade balance, incl. - metal products	- 12, 6 + 3,1	- 16,4 + 2,6	- 19,6 + 1,9	- 10,1 + 1,8	- 4,7 + 3,1

Source: NSI, Standard foreign trade classification, 2011.

Customs data

Almost half of the EU (27) countries have a negative foreign trade balance, and Germany is the biggest exporter and with a positive trade balance.

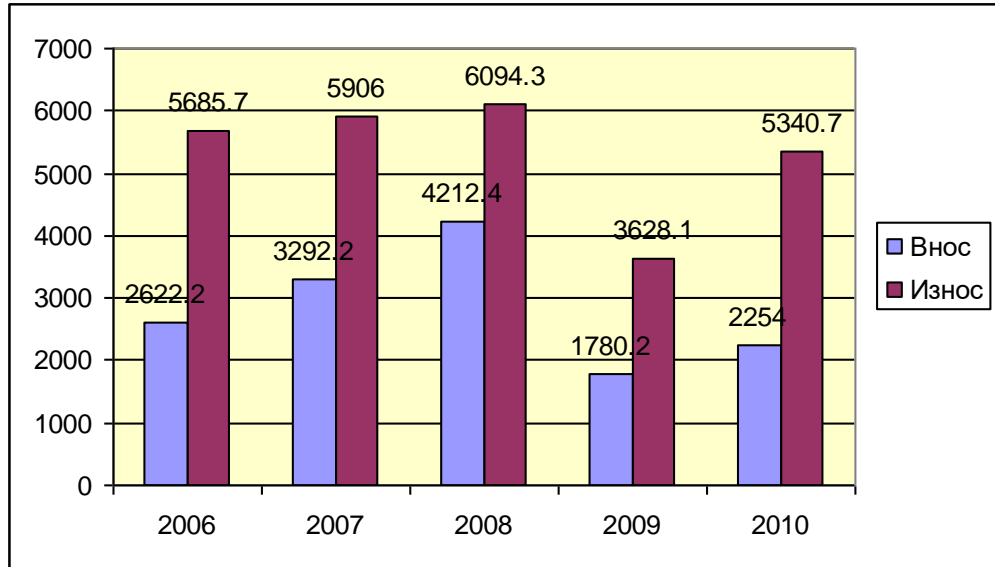
During the whole period in reference, the relative share of metals (primary and secondary) and metal production in the export of goods from the country is high – above 16 %. Despite the drop in total production, in the export of the metallurgical companies and particularly of “Kremikovtzi” JSC, in 2010 the metal branch, compared to other industrial activities has the biggest relative share in the export of goods of the country – 18 %.

The value of the exported ferrous and non-ferrous metals and metal products marks an increase of 145 % compared to 2009, in value with 1,7 billion leva respectively, but it is still below the 2008 level – by about 700million leva.

The trade balance, formed by the volume of import and export of the metal production manufactured has been negative since 2006 (the import is higher than the export). Over that period a drop in both the export and import of steel products and rolled metal is reported.

Ferrous metallurgy, from a net exporter, for four years now has become mainly an importer, and this trend will continue at least in a middle term period, until new capacities for steel products are put into operation.

The data about the **foreign trade turnover of non-ferrous metals, rolled metal and finished products** show that this activity is highly export-oriented, with a big positive balance in value and physical production volume.



Import and export of metal products, million leva

The production of non-ferrous metals is essential not only for our country and its economy, but it contributes to European economy and supplies industry with strategic for its development raw materials.

Due to the positive balance, formed in non-ferrous metallurgy, the data about the whole branch are positive. After a drop of about 30 % in 2008 and 2009 compared to the two precedin years, the foreign trade balance of the sector in 2010 marks 167 % growth. These values strongly depend on metal prices on world markets, but the steady trend for a positive balance is irreversible. For the time being, restructured and developing non-ferrous metallurgy has major contribution to this.

SECTION TWO

FERROUS METALLURGY IN BULGARIA

2.1. PRODUCTION OF FERROUS METALS AND ROLLED FERROUS METALS

The production of steel and steel products in Bulgaria is a strategic sector of industry represented basically by 7 companies – members of BAMI: – “Kremikovtzi” JSC, “Stomana Industry” JSC, “Promet Steel” JSC, „Helios Metalurg” LTD, “PIH Industry” JSC, „Jiti” JSC, and „Interpipe” JSC.

In May 2010 the largest enterprise in ferrous metallurgy – “Kremikovtzi” JSC was adjudged bankrupt and suspended its production activities. This Annual includes data about the production and sales of that company until that month. This fact has a negative impact on the total volume of production and sales of steel and metal products in the country.

2.1.1. CRUDE STEEL PRODUCTION

Producers of liquid steel (only in electric furnaces) in Bulgaria in 2010 are “Kremikovtzi” JSC and “Stomana Industry” JSC.

The quantities of crude steel produced during the last few years by type of process and by companies are shown in Table 2.1 and on Figures 2.1. and 2.2.

The total production of crude steel in the country in 2010 is 739.9 thousand tons, which shows insignificant growth of 14.2 thousand tons or 1.9 % compared to 2009. This is due to the increased steel production at “Stomana Industry” JSC – 115.3 thousand tons or by 19.8 %. Nearly the whole quantity of crude steel is produced through continuous casting – 99.6 %.

Steel produced in Bulgaria in 2007 makes up 0.165 % of world production, 0.100 % in 2008, 0.059% in 2009, and 0.052 % in 2010. Compared to the EU these figures are respectively 0.962% in 2007, in 2008 – 0.671 %, in 2009 – 0.521 %, and 0.428 % in 2010.

Compared to world production, the share of steel produced in Bulgaria remains the same, but it goes down in comparison with EU countries.

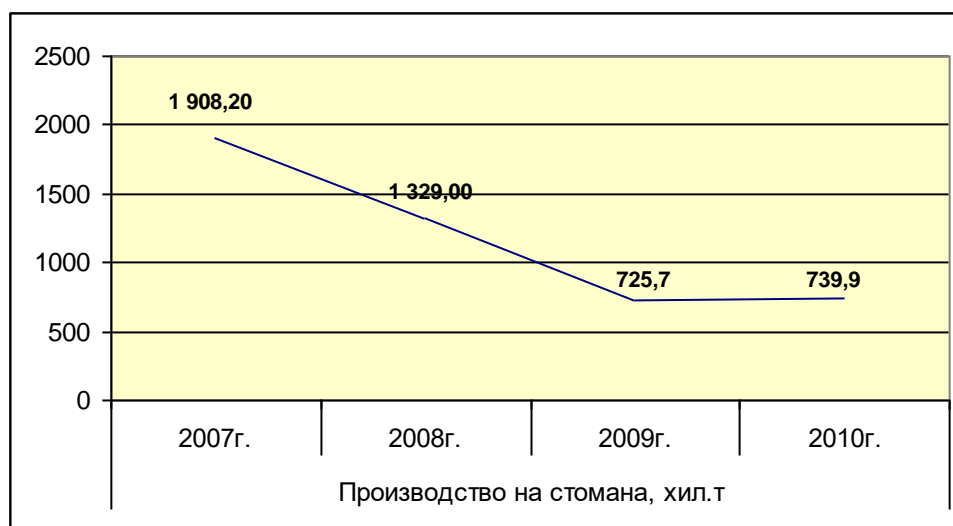
Table 2.1

Steel production in Bulgaria, thousand tons

Process:	Companies:	2007	2008	2009	2010	2010/2009	
						+/-	%
OC	“Kremikovtzi” JSC	1 027.0	428.0	-	-	-	-
EF	“Stomana Industry” JSC	689.4	839.2	580.9	696.2	115.3	119.8
	“Kremikovtzi” JSC	191.8	61.8	144.8	43.7	-101.1	301.8
	Total EF	881.2	901.0	725.7	739.9	14.2	101.9
Total by companies	“Kremikovtzi” JSC	1 218.8	489.8	144.8	43.7	-101.1	301.8
	“Stomana Industry” JSC	689.4	839.2	580.9	696.2	115.3	119.8
Total for the country			1 329.0	725.7	739.9	14.2	101.9
Continuous casting	“Stomana Industry” JSC	689.4	839.2	580.9	696.2	115.3	119.8
	“Kremikovtzi” JSC	874.3	463.2	131.4	40.8	90.6	310.5
	Total	1 563.7	1 302.4	712.3	737.0	24.7	103.5

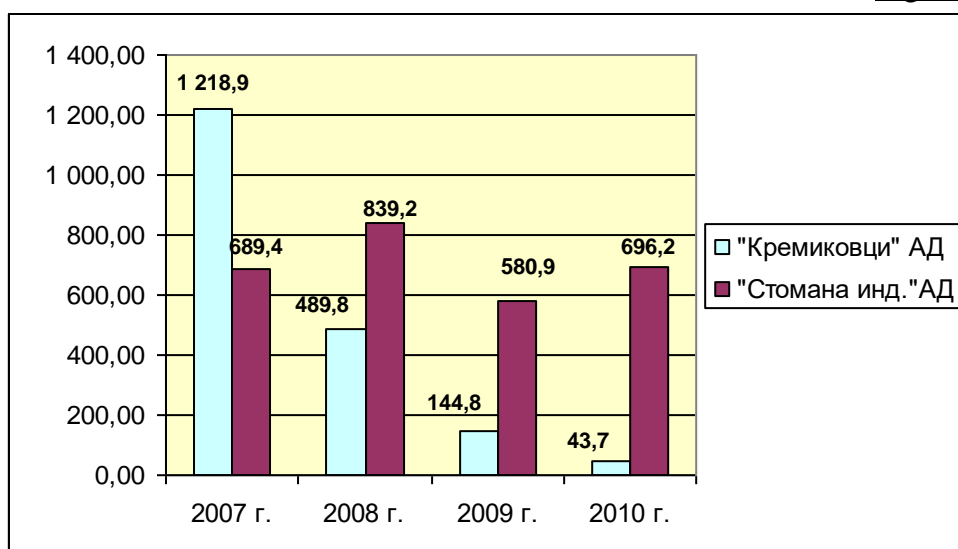
Source : Company data

Fig. 2.1



Steel production, thousand tons

Fig. 2.2



Steel production at "Kremikovtzi" JSC and "Stomana Industry" JSC

The utilization of the capacities, producing electric steel in 2009 is 48.7%, and in 2010 it is 49.6 % (having a total capacity of 1 490 thousand tons in the two companies). The level of utilization of the electric furnaces in "Stomana Industry" JSC only is 72.5% during the year in reference.

Mainly non-alloyed carbon steel is produced in Bulgaria, and, occasionally, single casts of alloyed steel.

2.1.2. PRODUCTION OF ROLLED FERROUS METALS AND FINISHED PRODUCTS

The production of rolled ferrous metals (RFM) in Bulgaria during the last four years by types of production and producer companies is shown on Table 2.2 and Figures 2.3 and 2.4.

The analysis of the data in the table indicates the following:

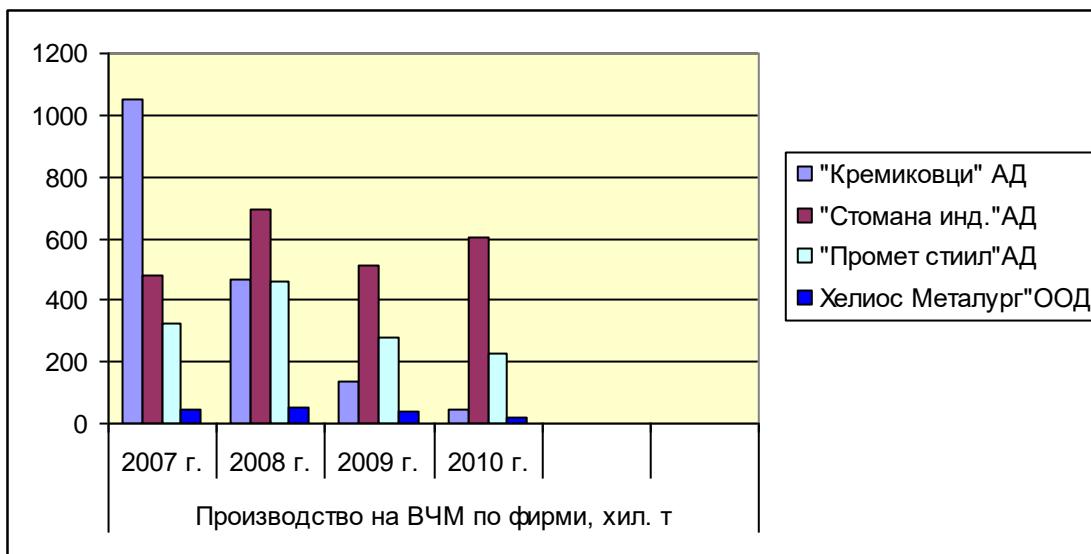
- The trend of reducing the production of RFM from the last two years (2008 and 2009) continues in 2009 as well, which is explained with the global economic crisis and the reduction of consumption of rolled ferrous metals in the country. The total quantity of these products in 2010 is by 7.5 % lower than in 2009.
- There is a drop in the production of rolled ferrous metals in all four companies. "Kremikovtzi" JSC suspended production of flat rolled metal in the second half of 2010.
- A drop in the production of mainly flat HR ferrous metals is observed in 2010 due to the abovementioned reasons. Despite that fact, during the year in reference a significant increase of the production of thick steel is observed in "Stomana Industry" JSC, by 44.2 % compared to the previous year.

- In both 2008 and 2009 the production of long products exceeds that of flat ones. An increase of this kind of production is reported only by “Stomana Industry” JSC, while “Promet Steel” JSC and “Helios Metalurg” Ltd report decrease. In 2010 the total volume of the manufactured long products marks an insignificant drop of 8%.

- The relative share of produced flat RFM in the total quantity of RFM amounts to 73.4 % in 2007, 47.4 % in 2008, 31.3 % in 2009, and 31.7 % in 2010; for long RFM it is 26.5 %, 52.6 %, 68.7 % и 68.3 % for the respective years.

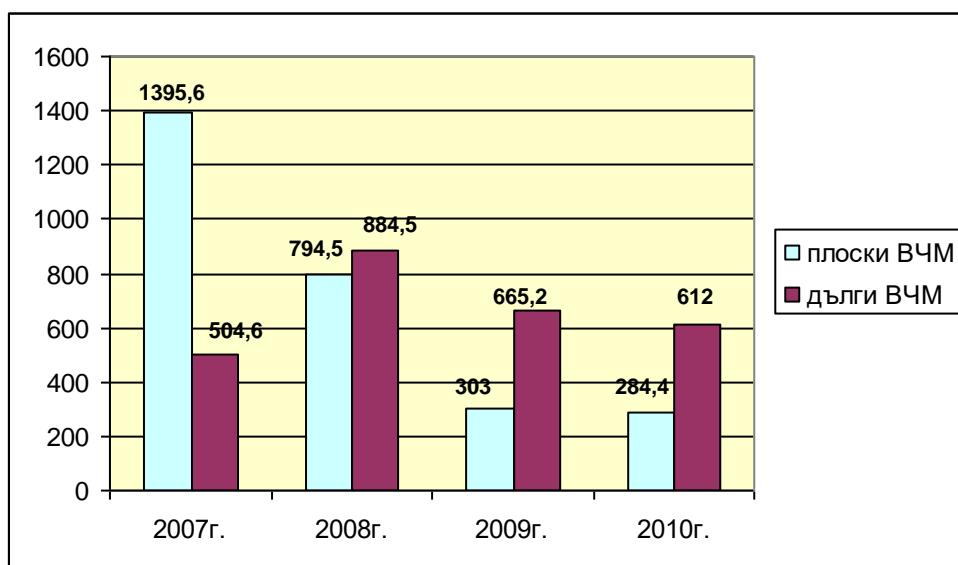
- In 2010 there is no change in the capacities of processing aggregates (for flat and long products) in all companies.

Fig. 2.3



Production of rolled ferrous metals by companies, thousand tons

Fig. 2.4



Production of flat and long RFM, thousand tons

Table 2.2

Production of rolled ferrous metals (RFM) rated by assortment, thousand tons

Type of rolled metal:	Companies:	2007	2008	2009	2010	2010/2009	
						+/-	%
Blooms, slabs and blanks	“Kremikovtzi”JSC	142.6	-	-	-	-	-
	“Stomana Industry” JSC	143.7	92.1	33.4	19.6	-13.8	58.7
	Total	285.3	92.1	33.4	19.6	-13.8	58.7
HR long	“Promet Steel” JSC	321.1	462.9	278.3	225.3	-53.0	80.9
	“Stomana Industry” JSC	135.0	368.4	348.9	364.7	15.8	104.5
	“Helios Metallurg” Ltd	48.5	53.2	38.0	22.0	-16.0	57.9
	Total	504.6	884.5	665.2	612.0	-53.2	92.0
HR flat	“Kremikovtzi”JSC	1 006.4	466.2	137.4	45.2	-92.2	32.9
	“Stomana Industry” JSC	347.6	328.3	165.9	239.2	73.3	144.2
	Total	1 354.0	794.5	303.0	284.4	-18.6	93.9
HR metal (total)	“Promet Steel” JSC	321.1	462.9	278.3	225.3	-53.0	80.9
	“Kremikovtzi”JSC	1006.4	466.2	137.4	45.2	-92.2	32.9
	“Stomana Industry” JSC	482.6	696.7	514.8	603.9	89.1	117.3
	“Helios Metallurg” Ltd	48.5	53.2	38.0	22.0	-16.0	57.9
	Total	1 858.6	1 679.0	968.5	896.4	-72.1	92.5
CR flat	“Kremikovtzi”JSC	41.6	-	-	-	-	-
Total by companies	“Kremikovtzi”JSC	1 048.0	466.2	137.4	45.2	-92.2	32.9
	“Stomana Industry” JSC	482.6	696.7	514.8	603.9	89.1	117.3
	“Promet Steel” JSC	321.1	462.9	278.3	225.3	-53.0	80.9
	“Helios Metallurg” Ltd	48.5	53.2	38.0	22.0	-16.0	57.9
Rolled metal	Finished products	1 900.2	1 679.0	968.5	896.4	-72.1	92.5

Source: Company data

The Bulgarian hot-rolled metal production in 2009 represents 0.095% of the total world production, whereas in 2010 it is 0.095 %. This indicator for 2009 represents 0.964 % of the EU (27) production, and in 2010 it is 0.743 %.

Regarding only the HR flat metal the data show that in 2009 and 2010 Bulgaria produced 0,056 % and 0.043% respectively of the total world production and 0.532 % and 0.414 % of the EU (27) production.

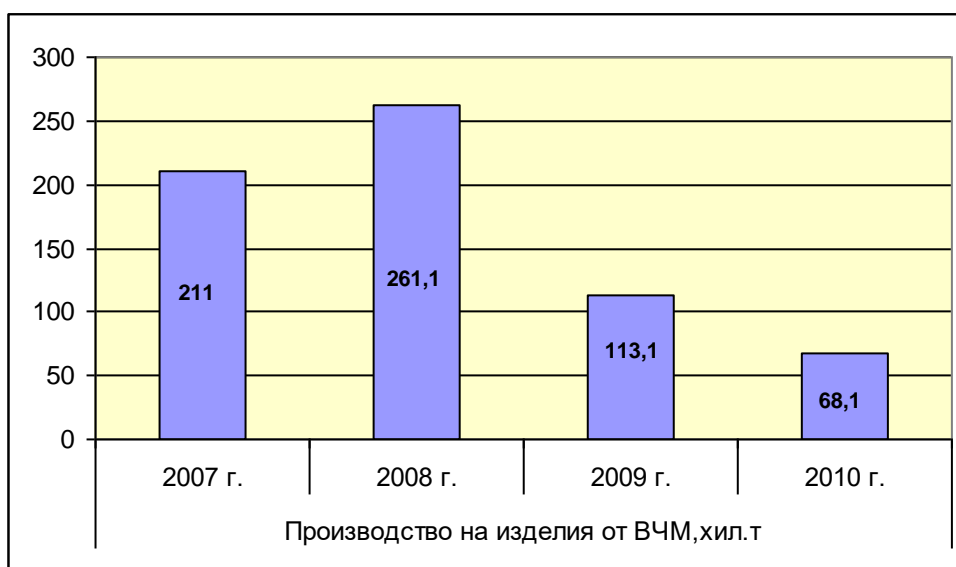
The production of HR long metal in 2008 and 2009 is respectively 0.140 % and 0.121 of the total world production, and 1.531 % and 1.200 % of that production in the EU (27).

The relative share of both long and flat products goes down.

The production of articles from HRM – total and by producer companies is shown on Table 2.3 and Figure 2.5.

- In 2010 the total production of articles from rolled ferrous metals reports a decrease of 45 thousand tons or 39.8 % compared to the 2009 level.
- In “Kremikovtzi”JSC, while it was still functioning, basic articles for the company such as sheet steel with zinc and organic coating, as well as cold-rolled strip were not produced .
- Unlike in 2009, in 2010 there is a slight decrease of the production of steel balls for mills by 27 % at “Stomana Industry” JSC and an increase of mine reinforcement profiles by 6.2 %.
- In 2010 a considerable drop in the production of steel pipes is recorded – by 60 % totally. This is due to the suspended production in “Inter Trust Holding” JSC, as well as to the reduced production in “PIH Industry” JSC compared to 2009.
- Main producer of wire and wire products in the country is “Jiti” JSC – Russe. In 2010, compared to 2009, a decrease of 9 % in their production is reported.

Fig. 2.5



Production of RFM products, thousand tons

Steel pipes (seamless and welded) produced in Bulgaria in 2009 and 2010 represent respectively 0,095% and 0.032 % of the total world

production of this product and 0.852 % and 0.194 % of that production in the EU (27).

Table 2.3

Production of rolled ferrous metal (RFM) products by companies and assortment, thousand tons

Products	Фирми:	2007	2008	2009	2010	2010/2009	
						+/-	%
Steel pipes	“PIH Industry” JSC	85.0	133.0	64.0	25.5	-38.5	39.8
	“Inter Trust Hold” JSC	23.3	25.8	4.4	2.1	-2.3	47.7
	Total	113.7	164.5	68.7	27.6	-41.1	40.1
Incl. welded	“PIH Industry” JSC	85.0	133.0	64.0	25.5	-38.5	39.8
	“Inter Trust Hold” JSC	9.7	10.2	1.3	-	-1.3	-
	Total	100.1	148.9	65.6	25.5	-40.1	38.8
Seamless	“Inter Trust Hold” JSC	13.6	15.6	3.1	2.1	-1.0	67.7
	Total	13.6	15.6	3.1	2.1	-1.0	67.7
Zinc-coated sheet	“Kremikovtzi” JSC	40.6	1.1	-	-	-	-
Organic-coated coils	“Kremikovtzi” JSC	1.0	-	-	-	-	-
CR strip	“Kremikovtzi” JSC	0.2	-	-	-	-	-
Steel balls for mills	“Stomana Industry” JSC	15.2	10.0	11.1	7.0	-4.1	63.0
Wire and wire products	“JITP” JSC	18.5	47.2	12.3	11.2	-5.9	91.0
Mine profiles	“Stomana Industry” JSC	18.7	30.8	21.0	22.3	1.3	106.2
RFM	Finished products	211.0	262.1	113.1	68.1	-45	60.2

Source: Company data

2.2 TRADE EXCHANGE AND CONSUMPTION OF RFM AND FINISHED PRODUCTS

2.2.1. IMPORT OF SCRAP, RFM AND FINISHED PRODUCTS

The total import volume of scrap, rolled ferrous metals and finished products from them in 2010 amounted to 1 279.2 thousand tons. The increase is by 46.1 thousand tons or by 3.7 % compared to 2009.

The import in 2010 calculated in US \$ marks an increase of 5.9 % or 780.5 million dollars (1 153.1 m leva) compared to 2009. The import data for the last four years are shown on Table 2.4.

Pig iron for foundry needs is traditionally imported mainly from Ukraine (83.5 % of the total imported quantity).

In 2010 compared to 2009 the quantity of imported **scrap** rose by 33.2 % or by 67.2 thousand tons. During the year in reference the share of imported scrap in the total import volume goes up and it is about 21.0 %. The needs of Bulgarian companies are covered basically by their own scrap or bought from the country. In 2010 again, as in the last few years, the biggest quantities are imported from Romania (64.9 % of the total quantity), but the share of other two Balkan countries also increases – Greece (19.0 %) and Serbia (15.3 %).

The import of **semi-products** in 2010 год. Preserves the 2009-trend and decreases by 57.1 thousand tons, the deliveries being mainly from Ukraine (50.1 %) and Serbia (20.4 %).

In 2010 import of **flat RFM** from non-alloyed steel marks an increase of 86.0 thousand tons compared to the previous year. This is especially true for hot-rolled metal (coils and sheet). As far as alloyed steel is concerned, an increase of 16.8 thousand tons in the quantity of imported metal is reported as well.

As Table 2.5 and Fig. 2.6 show, in 2010 the import of **flat rolled metal** went up by 45.8 %. Import from EU countries remains nearly the same in quantity, with an increase of 26.7 % compared to 2009. A bigger increase is observed in the import from other countries in Europe and mainly the Balkans – Macedonia, Serbia, and Turkey; the import from CIS countries also goes up. The largest share is that of Ukraine – 49.5 % of the total volume of imported flat rolled metal.

Table 2.4

*Production of rolled ferrous metal (RFM) products by companies and assortment,
thousand tons*

Products:	2007	2008	2009	2010	2010/2009	
					+/-	%
Non-alloyed - total	2 084.1	1 855.5	1 032.7	1 046.2	13.5	101.3
Pig iron, ingots, granules, powder	26.2	30.4	15.6	14.8	-0.8	94.9
Ferroalloys	17.0	14.4	9.0	11.4	2.4	126.7
Scrap	296.6	237.1	202.3	269.5	67.2	133.2
Semi- products	461.9	567.7	306.0	248.9	-57.1	81.3
HR metal (coils & sheets)	400.5	245.1	132.8	191.2	58.4	143.9
CR metal (coils & sheets)	99.4	105.2	70.6	98.2	27.6	139.1
Rolled wire	175.4	222.8	99.5	86.6	-12.9	87.0
Bars	485.5	306.0	144.0	89.9	-54.1	62.4
Profiles	111.6	126.8	52.9	35.7	-17.2	67.5
Alloyed - total	80.9	83.3	31.1	56.7	25.6	182.3
HR and CR coils & sheets	40.3	46.4	21.0	37.8	16.8	180.0
Bars and profiles	34.2	32.9	10.1	18.9	8.8	187.1
RFM Products	392.4	252.7	169.3	176.3	7.0	104.1
Seamless pipes	43.0	40.0	18.1	21.1	3.0	116.6
Welded pipes	207.3	48.4	29.1	29.9	0.8	102.7
Coated sheets	112.4	135.3	97.7	106.6	8.9	109.1
Wire	29.7	29.0	24.4	18.7	-5.7	76.6
Total	2 557.4	2 191.5	1 233.1	1 279.2	46.1	103.7
Value in m US \$	1 455.4	2 178.6	777.6	780.5	2.9	100.4
Value in m leva	2 066.7	2 906.0	1 088.6	1 153.1	64.5	105.9

Source: Customs statistics

Table 2.5.

Import of flat rolled metal, tons

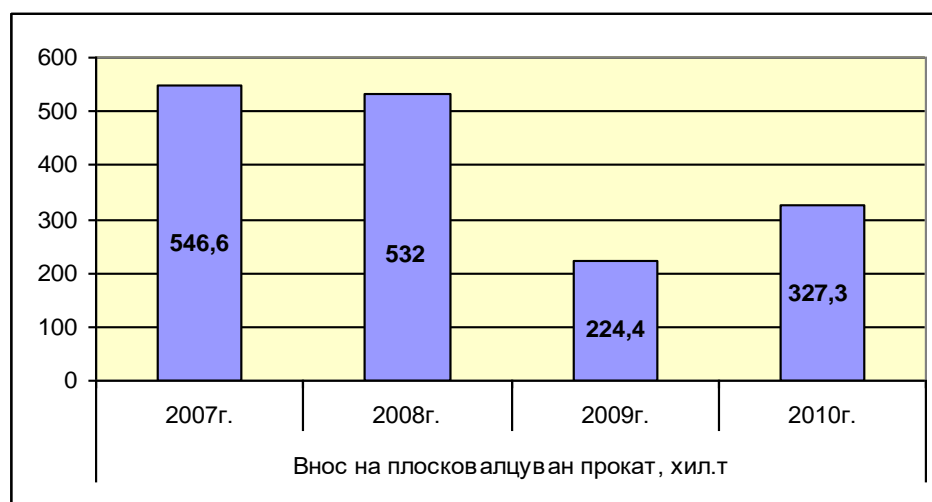
Regions:	2007	2008	2009	2010	2010/2009	
					+/-	%
European Union (27)	121.0	125.0	33.0	41.8	8.8	126.7
Other European countries	231.4	211.6	64.8	121.5	56.7	187.5
CIS	151.7	154.7	126.3	155.4	29.1	123.0
North America	0.3	0.1	-	-	-	-
Others	42.2	40.6	0.3	8.6	8.3	286.7
Total	546.6	532.0	224.4	327.3	102.9	145.8

Source: Customs statistics

The share of import of flat rolled metals in Bulgaria in 2009 and 2010 compared to the total volume of import of this product to the countries of the EU (27) is 0.536 % and 0.058 %, and compared to that of the world during the same years – 0.222 % and 0.025 %.

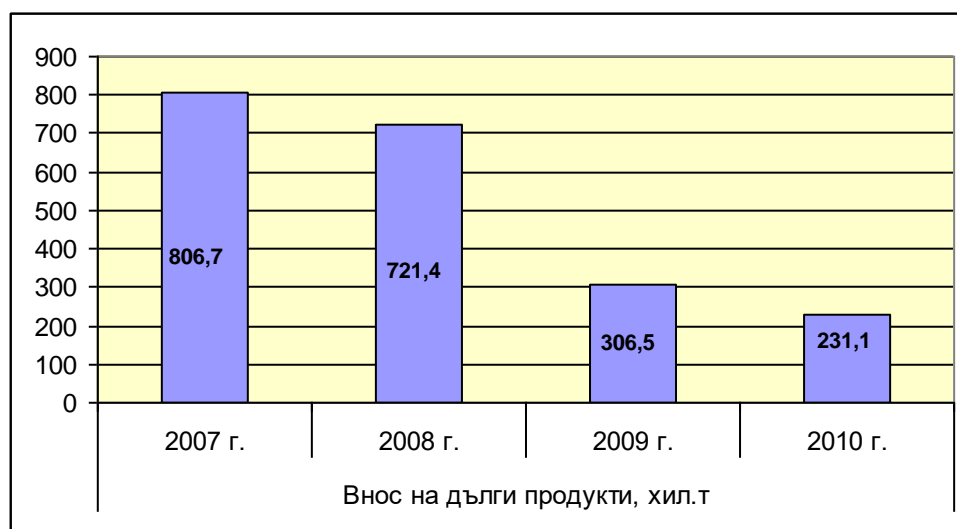
The total import volume of **long products** of regular steel brands reports a significant drop of 84.2 thousand tons or by 71.6 % in 2010 compared to 2009. There is an insignificant increase of 8.8 thousand tons, as far as bars and profiles of alloyed and stainless steel brands are concerned (Fig. 2.7).

Fig. 2.6



Import of flat rolled metal, thousand tons

Fig. 2.7



Import of long products, thousand tons

In 2010 Romania (42.7) continues to be the biggest importer of **bars** of non-alloyed steel brands, followed by Ukraine (23.9 %) and Greece (16.7%). For **profiles** the import in 2010 is from Luxembourg (28.2 %), Greece (17.7 %) and some other EU countries.

In 2010 a decrease in the import of **rolled wire** of regular steel brands is observed – by 12.0 %. Major importers are Ukraine – 51.0 %, and Greece 42.3 %.

As to **alloyed bars and profiles**, no significant changes are recorded in the directions for import. In 2010 again the main importer is the Russian Federation – 37.5 %. It must be noted that during the year in reference an increase of the import of these products from Japan is observed.

The share of import of long rolled metal to Bulgaria in 2009 and 2010 makes respectively 1.58 % and 0.804 % of the total import of these products into the EU (27) countries, and 0.81 % and 0.436 % of world import figures.

During the year in reference the import of coated sheet (**galvanized, plastic-coated, tin coated sheet**) goes up by 8.9 thousand tons. The main importers in 2010 again main importers are Balkan countries – Macedonia, Turkey, and Serbia. The reason for the increased import is the suspended production of these products in “Kremikovtzi” JSC.

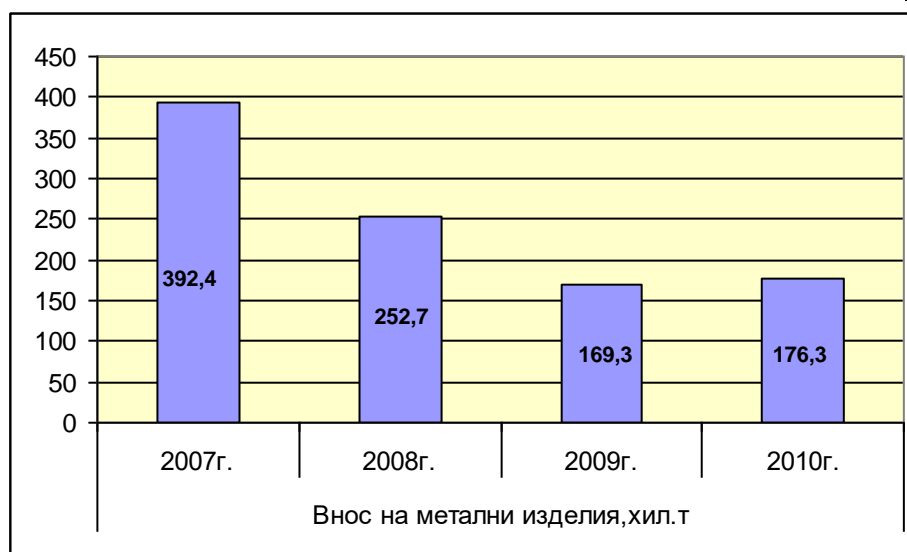
The import of **seamless and welded pipes** in 2010 marks an increase of 19.3 %. This is due to the reduced production of pipes in Bulgarian plants.

In 2010 the direction for import of **seamless pipes from carbon steel** remain the same as in the previous years. They are Germany – 20.8 %,

Romania – 20.4 % and Ukraine – 15.2 %. As to **welded pipes** the highest import is from Macedonia – 47.5 %.

Compared to 2009, in 2010 the import of metal products (Fig. 2.8) is slightly up by 4.1 %.

Fig. 2.8



Import of metal products, thousand tons

2.2.2. EXPORT OF SCRAP, RFM AND FINISHED PRODUCTS

Information about the quantities of scrap, ferrous metals and finished products exported during the last four years is presented on Table 2.6.

In 2010, compared to 2009, the total volume of export in the sector marks growth of 20.6%. In quantitative aspect it is 1 827.1 thousand tons or by 311.8 thousand tons more than the previous year. This chiefly due to the relatively big share of export of scrap (51.9 %) in the total export volume. The lower consumption of scrap in the country defines its high export (85.7 %) compared to 2009. The export of pure ferrous metals production reports a drop.

In terms of value the 2010 export also reports increase of 36.9 % or 248.2 million dollars compared to 2009 - 418.7 million leva respectively.

The share of export of rolled ferrous metals from Bulgaria in total for 2009 and 2010 in the total export of the EU countries (27) is 1.21 % and 0.88 % respectively, and in the world total – 0.45 % and 0.36 %.

Due to the suspension of the production of ferroalloys in “Kremikovtzi” JSC in 2010 the export of different types of **ferroalloys** significantly went down – by 78.6 %. The export comes from this production in some small companies and it is mainly directed to Turkey (48.2 %).

Table 2.6

Export of scrap, RFM and finished products, thousand tons

Сток:	2007	2008	2009	2010	2010/2009	
					+/-	%
Non-alloyed total	2 498.6	1 931.7	1 423.0	1 745.7	322.7	122.7
Pig iron	66.7	32.2	1.4	1.1	-0.3	78.6
Ferroalloys	13.6	2.9	12.8	3.1	-9.7	24.2
Scrap	676.1	740.4	511.0	949.0	438.0	185.7
Semi-products	135.7	85.4	48.9	19.5	-29.4	39.9
HR coils & sheets	1 281.9	549.2	270.0	266.0	-4.0	98.5
CR coils & sheets	38.1	8.3	5.6	6.9	1.3	123.2
Rolled wire	6.1	20.1	19.8	24.9	5.1	125.7
Bars	237.2	437.8	489.7	411.5	-78.2	84.0
Profiles	43.2	55.4	63.8	63.7	-0.1	99.8
Total Alloyed	0.1	3.6	1.4	2.4	1.0	41.7
Bars & Profiles	0.1	3.6	1.4	2.4	1.0	41.7
RFM products	147.5	136.3	90.9	79.0	-11.9	86.9
Seamless pipes	10.2	11.0	5.2	5.1	-0.1	98.1
Welded pipes	97.5	108.7	79.0	66.5	-12.5	84.2
Coated sheet	33.5	8.9	5.8	7.2	1.4	124.1
Wire	6.3	7.7	0.9	0.2	-0.7	22.2
Total	2 646.2	2 071.6	1 515.3	1 827.1	311.8	120.6
Value, m US\$	1 541.7	1 530.3	673.2	921.4	248.2	136.9
Value, m leva	2 189.2	2 041.3	942.5	1 361.2	418.7	144.4

Source: Customs statistics

The export of **semi-products (blanks)** in 2010 significantly decreased compared to that in 2009. During the year in reference it is exported mainly to Greece (76.1 %) by “Stomana Industry” JSC.

In 2010 the total volume of **flat products** export (table 2.7, fig. 2.9) is directed mainly to Romania (18.7 %) and Germany (16.5 %). It must be noted that the total share of export to EU countries went down by about 6 %. A drop is

observed also in the export to other East European countries – by 14.7 %, but the export to African and Middle East countries goes up.

The share of Bulgarian export of flat rolled metal in 2009 and 2010 is 0.626 % and 0.405 % respectively in the total export of the EU (27) countries and in world export – 0.222 % and 0.153 %. This comes to show that a small part of the European and world trade turnover belongs to the export of metal products originating Bulgaria.

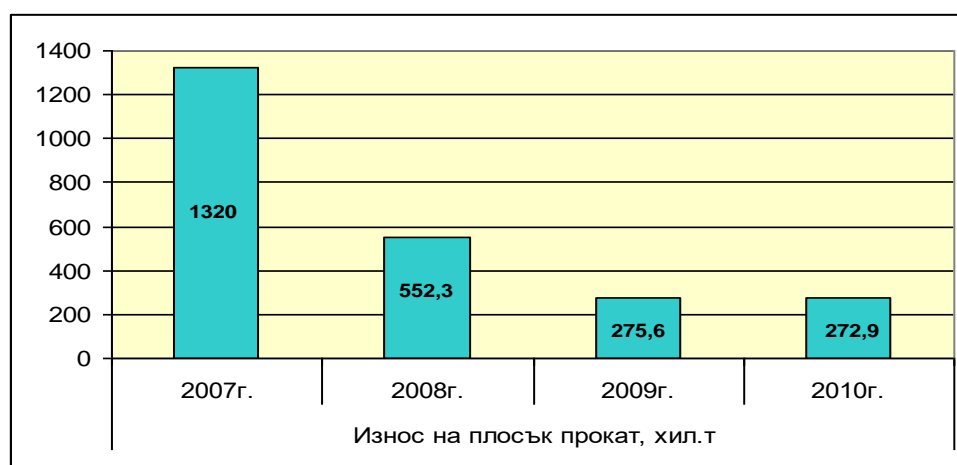
Table 2.7

Export of flat rolled metal, thousand tons

Региони:	2007	2008	2009	2010	2010/2009	
					+/-	%
EU (27)	662.8	402.8	200.9	189.1	-11.8	94.1
Other European countries	562.5	140.0	73.7	62.9	-10.8	85.3
CIS	0.6	0.1	0.3	2.0	1.7	666.6
Asia	8.7	6.3	0.1	2.3	2.2	230.0
Others	82.5	-	0.6	16.6	16.0	276.7
Total	1 320.0	552.3	275.6	272.9	-2.7	99.0

Source: Customs statistics

Fig. 2.9



Export of flat rolled metal, thousand tons

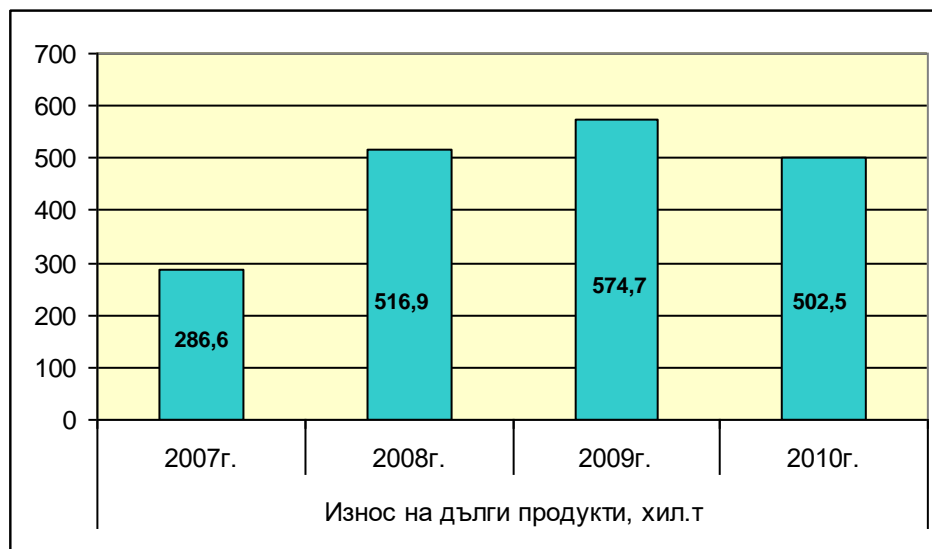
The total export volume of **long products** in 2010 (Fig. 2.10) compared to 2009 decreases by 72.2 thousand tons or by 12.6 %. This is due to the less manufacturing of these products in the country.

The directions for export in 2010 remain the same as in the last few years. For long products the biggest export is that of **bars** to Romania (44.7 %). The export to Lebanon, Ghana, Algeria, Egypt and other African countries is on the increase which shows that the Bulgarian companies are looking for new markets for their production.

The export of **profiles** is directed to the EU countries, primarily to Greece (40.0 %), Spain (26.9 %), and Romania (9.3 %).

Bulgaria's share in 2008 and 2009 in the total volume of export of long rolled metal to the EU (27) countries amounts to 2.21 % and 1.24 % respectively, and in world export – to 0.313 % and 0.518 %.

Fig. 2.10



Export of long products, thousand tons

The total export volume of **steel products** (Fig. 2.10) reports a drop of 45.4 thousand tons in 2010 compared to 2009. This is due to the reduced output of welded and seamless pipes from our factories.

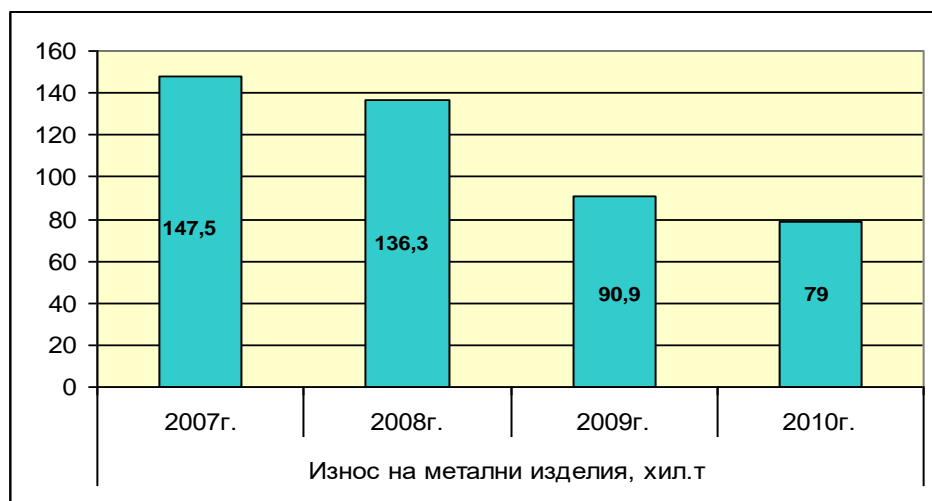
Export of **welded pipes** decreases by 13.1 %, and that of **seamless pipes** – by 1.9 %.

The directions for export of **welded pipes** are the same as in the previous years – mainly Germany (47.1 %) and Romania (19.7 %).

Seamless pipes are exported mainly to Italy (77.7 %).

The export of **coated sheet** in 2010 marks an increase of 24.1 % compared to 2009.

Fig. 2.11



Export of metal products, thousand tons

The negative trend for considerably decreased export of **wire products** is preserved in 2009. In 2010, compared to the previous year, it is 77.8 % down.

The data about scrap export are shown on Table 2.8 and Figure 2.12.

Table 2.8

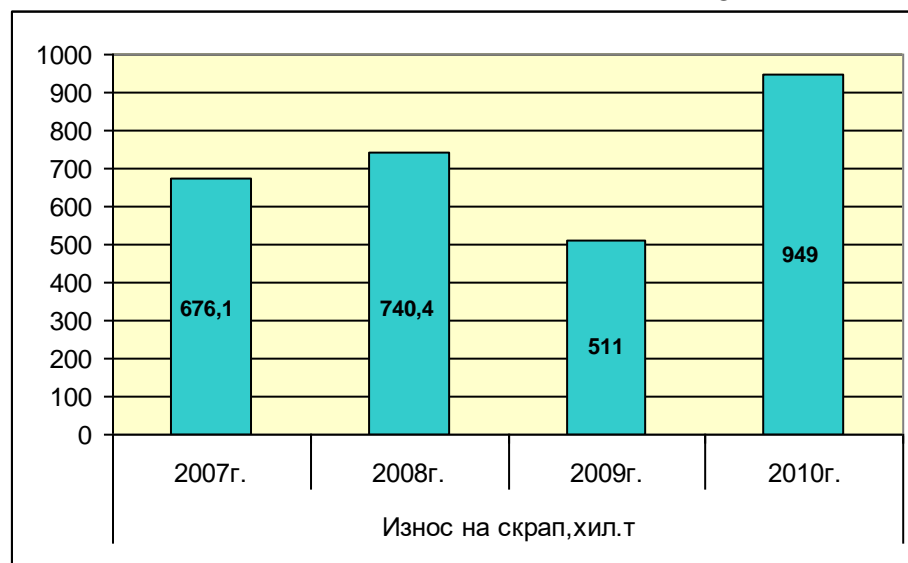
Export of scrap, thousand tons

Regions:	2007	2008	2009	2010	2010/2009	
					+/-	%
EU (27)	445.4	150.5	137.5	183.3	45.8	133.3
Other European countries	222.7	578.8	367.4	760.7	393.3	207.0
Asia	7.7	9.1	6.0	4.3	-1.7	71.7
Other countries	0.3	2.0	0.1	0.7	0.6	700.0
Total	676.1	740.4	511.0	949.0	438.0	185.7

Source: Customs statistics

The analysis shows that the export of **scrap** from the country goes up in 2010 by 438.0 thousand tons or 85.7 % in comparison with 2009, which is explained basically with the suspended production of the electric furnaces in “Kremikovtzi” JSC and the increased sales of scrap from the factory after it was adjudged bankrupt and suspended its production activities. During the year in reference the export to Balkan countries increases. The share of the export to Turkey remains the biggest – 60.3 % of the total volume, Greece – 17.3 %, and Macedonia – 17.7 %. Regarding EU countries, the highest price of scrap (mostly alloyed) is of that exported to Great Britain and Germany, and the lowest – to Italy. The price of scrap exported to other EU countries is relatively low.

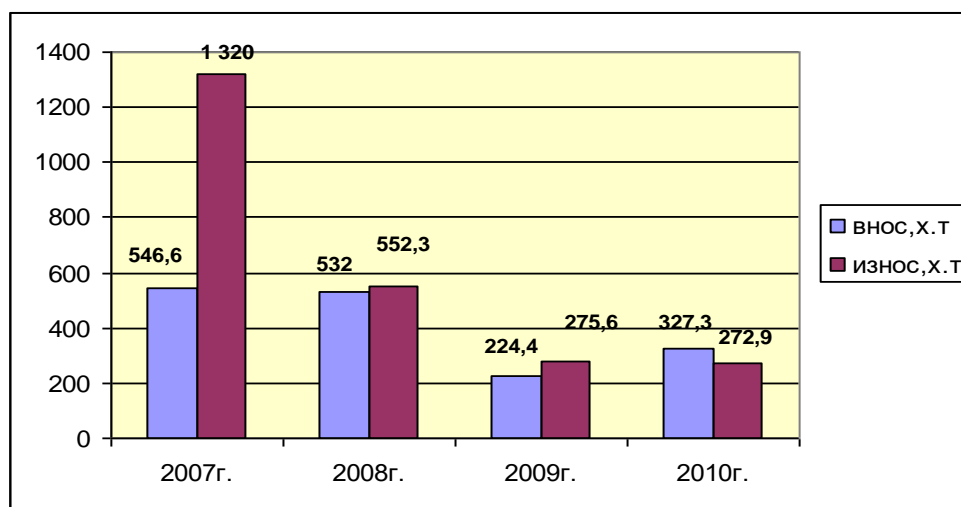
Fig. 2.12



Export of scrap, thousand tons

Comparative data about the import and export of flat and long products, and metal products are shown on the following three Figures 2.13, 2.14, and 2.15.

Fig. 2.13



Import and export of flat metal, thousand tons

The data on the figure show a gradual increase in the total import and export volumes of flat metal in 2010 and almost keeping the 2009-level of export.

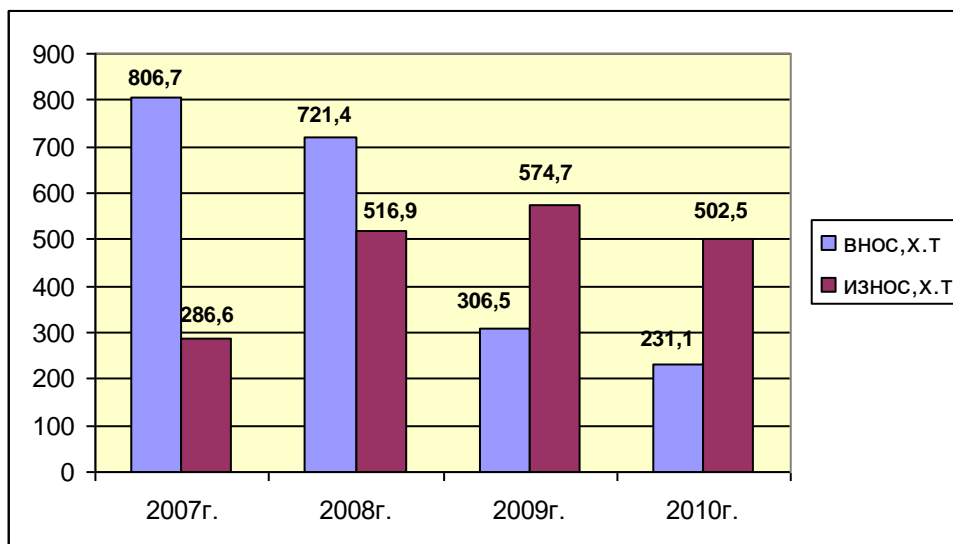
While in 2008 (the beginning of the economic crisis) an insignificant drop of import was observed of about 11.6 % compared to the preceding year, in 2009 this drop is too big – 42.2 % compared to 2008.

In 2010 the level reached in 2009 is preserved which indicates stabilization in the sector and signs of coming out of the economic crisis.

The export of **long rolled products** in 2009 keeps its trend from the last years and marks an increase of 10.2 % compared to 2008, and in 2010 it almost reaches the 2008 level.

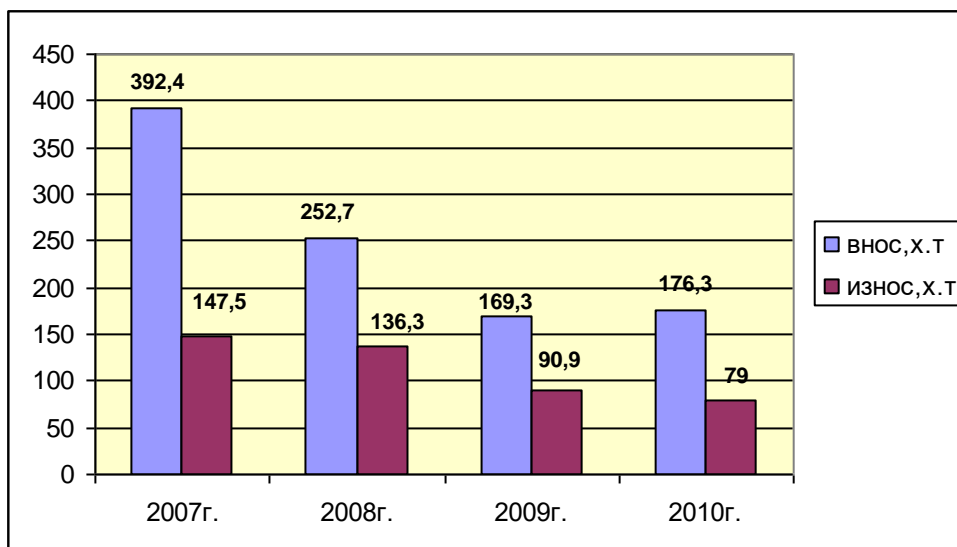
In the last 4 years (2007 – 2010) the export of long products exceeds their import and in quantitative aspect it is twice higher than the import.

Fig. 2.14



Import and export of long rolled metal, thousand tons

Fig. 2.15



Import and export of metal products, thousand tons

In 2008, compared to 2007, a sharp reduction of the import of **metal products** was observed, and this indicator preserved the same trend of going down in 2009 as well. In 2010 an increase of 4.1 % is registered.

A gradual decrease in the export volumes in 2007 is observed and during the year in reference it is the lowest. При износа̀т от 2007 год. се наблюдава постепенно спадане на обемите и през отчетната година той е най-малък.

Foreign trade balance of some types of products in 2009

Type of Products:	Export	Import	Differnece
	Thousand tons	Thousand tons	Thousand tons
Semi-products	19.5	248.9	-229.4
Flat RFM	272.9	327.2	-54.3
Long RFM	502.5	231.1	271.4
Products	79.0	176.3	-97.3
Scrap	949.0	269.5	679.5
Total	1 822.9	1 253.0	569.9

Source: Customs statistics

The analysis of the total 2010 foreign trade balance of the basic rolled metals and scrap shows that the export exceeds the import in quantitative aspect (Table 2.9). This balance is different for the different types of products. For semi-products and metal products the import significantly exceeds the export. Our country is still a net importer of these products. For flat products the import exceeds the export, which is due to the suspended production of these products by the main manufacturer – “Kremikovtzi” JSC. For long products the export exceeds the import by 271.4 thousand tons. The main reason for that is their increased production in “Stomana Industry” JSC and other factories. Typical for 2010, compared to 2009, is the highly increased export of scrap from ferrous metals. The import remains relatively the same as in the last four years.

The total volume of import and export in 2010 makes a positive trade balance. Excluding the export and import volumes of scrap, which is not in fact metal production, the trade balance of pure metal production is negative (import exceeds export). This is due to the considerable decrease in home consumption in particular sectors of the country’s economy such as construction, machine building and others.

The practice of Bulgarian companies to export metal production with lower value added at lower prices and to import such with higher value added at higher prices is preserved. This results in a negative trade balance in terms of value.

2.2.3.FOREIGN TRADE TURNOVER OF ROLLED FERROUS METALS AND FINISHED PRODUCTS

Comparative data about the foreign trade turnover of rolled ferrous metals and products of ferrous metallurgy in the last four years in terms of quantity are shown in Table 2.10.

Table 2.10

Foreign trade turnover of rolled ferrous metals and finished products, thousand tons

RFM and products	2007	2008	2009	2010	2010/2009	
					+/-	%
Rolled ferrous metals:						
- import (incl. semis and alloyed)	1 815.2	1 821.1	836.9	807.2	-29.7	96.4
- export (incl. semis and alloyed)	1 736.2	1 176.4	899.2	794.9	-104.3	88.4
Total turnover	3 551.4	2 997.5	1 736.1	1 602.1	-134.0	92.3
Balance (export-import)	-79.0	-644.7	62.3	-12.3	-50.0	19.7
RFM products:						
- import	392.4	252.7	169.3	176.3	7.0	104.1
- export	147.5	136.3	90.9	79.0	-11.9	86.9
Total turnover	539.9	389.0	260.2	255.3	-4.9	98.1
Balance (export-import)	-244.9	-116.4	-78.4	-97.3	-175.7	124.1

Source: Customs statistics

The group of RFM includes the semi-products, HR steel (coils, sheet and strip), rolled wire, rods and profiles (including alloyed rolled steel) and products, but excluding pig iron, ferroalloys and scrap.

The data show that in 2010 a decrease of the export and import is observed but that drop is considerably lower than that in 2009 compared to 2008. We can assume that the trade with ferrous metal products is gradually returning to normal. The quantity of export of RFM in 2010, including semi-products is by 104.3 thousand tons down (11.6 %) in comparison with 2009, and the import – by 29.7 thousand tons. The total turnover goes down by 134.0 thousand tons or by 7.3 %. The total balance is negative, i.e. the import exceeds the export.

Unlike in 2009, the import volume of RFM products increases by 7.0 thousand tons or 4.1 %, and that of the export decreases by 11.9 thousand tons or 13.1 %. A slight drop in the foreign trade turnover of these products is reported in 2010 compared to the preceding year – by 4.9 thousand tons or 1.9 %. In 2010 the trade balance is negative.

2.2.4.SALES OF RFM AND FINISHED PRODUCTS ON THE HOME MARKET

The consumption of steel products on the home market by types of products and the distribution by producing companies in 2010 are shown on tables 2.11 and 2.12.

In 2010 a decrease in the quantities of metal products sold on the home market by 296.9 thousand tons compared to 2009 is observed. This is due to the economic crisis and the reduced total home consumption. Consumption long rolled products on the home market remains at the same level as in 2009, whereas for flat products a considerable drop of more than 100 % is observed. For metal products there is some stabilization of the sales at the 2009 levels.

The production of the metal industry is completely sold. There is no increase of the stocks in the companies.

Table 2.11

Sales of ferrous metal products in 2008 and 2009 by types, thousand tons

Types of production:	Export		Home market		Total sales	
	2009	2010	2009	2010	2009	2010
Semi- products	48.9	19.5	4.0	0.2	52.9	19,7
Long products	574.7	502.5	362.0	263.0	936.7	765.5
Flat products	275.6	272.9	128.2	52.8	403.8	325.7
Incl. HR	270.0	272.9	128.2	52.8	398.2	325,7
CR	5.6	-	-	-	5.6	-
Total rolled metal	850.3	775.4	490.2	315.8	1 389.4	1091.2
Products	90.9	79.0	37.7	35.2	128.6	114.2
Total	990.1	873.9	531.9	351.2	1 522.0	1 225.1

Source: Company data and Customs statistics

While in 2009 65.0 % of the production was sold on the foreign and 35.0 % on the home market, in 2010 these figures are 71.3 % on the foreign and 28.7 % on the home market respectively. This comes to show that ferrous metallurgy is an export-oriented sector. During the year in reference all Bulgarian companies record a drop in their production sales on the local market, unlike the preceding year. The biggest decrease in sales is in the companies manufacturing metal products.

Table 2.12.

Consumption of metallurgic and finished products in 2009 and 2010 on the home market by assortment and companies,

thousand tons

Companies and types of products:	“Kremikovtzi” JSC		“Stomana Industry” JSC		“Promet Steel” JSC		„Helios Metalurg” JSC		“Jiti ” JSC		„Interpipe” JSC		„PIH Industry” JSC		Total	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Semi-products	-		4.0	0.2	-	-	-	-	-	-	-	-	-	-	4.0	0,2
Rolled long metal	-		157.2	127.4	171.0	108.6	33.8	27.0	-	-	-	-	-	-	362.0	263,0
Rolled flat metal	107.4	35.3	20.8	17.5	-	-	-	-	-	-	-	-	-	-	128.2	52,8
Incl. HR	107.4	35.3	20.8	17.5	-	-	-	-	-	-	-	-	-	-	128.2	52,8
CR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Rolled Metal	107.4	35.3	182.0	144.9	171.0	108.6	33.8	27.0	-	-	-	-	-	-	494.2	315,8
Products	-	-	16.9	15.2	-	-	-	-	4.3	4.2	3.4	6.8	12.0	9,0	37.7	35,2
Total	107.4	35.3	198.9	160.3	171.0	108.6	33.8	27.0	4.3	4.2	3.4	6.8	12.0	9,0	531.9	351,2

2.2.5. REAL HOME CONSUMPTION OF STEEL PRODUCTS

The real home consumption of steel products (RFM and related products) is formed from the sales of the companies on the home market and from the import. The data for 2009 and 2010 are presented on Table 2.13 and Figure 2.16.

Table 2.13

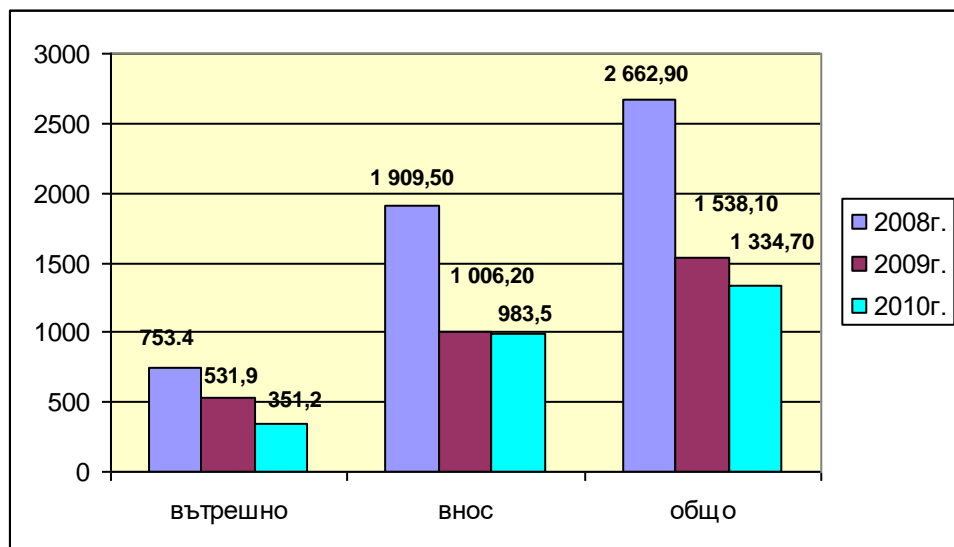
Real home consumption of steel products on the home market, thousand tons

Products:	2009			2010			2010/2009	
	Home consum.	Import	Total	Home consum.	Import	Total	+/-	%
Semis	4.0	306.0	310.0	0.2	248.9	249.1	-60.9	80.3
Long RFM*	362.0	306.5	668.5	263.0	231.1	494.1	-174.4	73.9
Flat RFM *	128.2	224.4	352.6	52.8	327.2	380.0	27.4	107.8
Incl. HR	128.2	142.8	271.0	52.8	327.2	380.0	109.0	140.2
CR	-	81.6	81.6	-	-	-	-81.6	-
Total RFM	494.2	836.9	1 331.1	315.8	558.3	874.1	-457.0	65.7
Products of RFM	37.7	169.3	207.0	35.2	176.3	211.5	4.5	102.2
Total	531.9	1 006.2	1 538.1	351.2	983.5	1 334.7	-203.4	86.8

Source: Customs data (import) and company data (marketing on the home market).

* including alloyed from import

Fig. 2.16



Real home consumption in 2008, 2009 and 2010, thousand tons

The analysis of the data from Table 2.14 indicates the following:

In 2010 the real home consumption of steel products id by 203.4 thousand tons down or 13.2 % compared to 2009. For RFM the drop is 34.3 %, but regarding finished products a slight increase of 2.2 % is observed.

This shows that in 2010 like in 2009, due to the crisis there is drop in home sales of production, as well as in import.

The consumption of steel products is also expressed by means of the so-called apparent consumption calculated by the formula:

$$AC = (M + I) - E, \text{ where}$$

AC – apparent consumption (in thousand tons)

ApCC – apparent per capita consumption, (kg)

M – manufactured steel products (in thousand tons)

I – imported steel products (in thousand tons)

E – exported steel products (in thousand tons)

(excluding pig iron, ferroalloys and scrap)

The apparent consumption of steel products (RFM + products) is presented by the figures on Table 2.14.

Table 2.14

Apparent consumption of steel products, thousand tons

Years	M	I	E	AC	ApCC
2005	1 870.7	1 870.7	1 633.5	1 577.6	204.4
2006	2 215.9	1 713.8	1 843.7	2 086.0	272.0
2007	2 254.9	2 207.6	1 883.7	2 578.8	337.5
2008	1 957.9	1 909.5	1 296.1	2 571.3	338.0
2009	1 114.7	1 006.2	990.1	1 130.8	149.5
2010	984.1	983.5	873.9	1 093.7	145.5
Incl.: Semi-products	19.6	248.9	19.5	249.0	33.1
HR long	612.0	231.1	502.5	340.6	45.3
HR flat	284.4	327.2	272.9	338.7	45.1
Products	68.1	176.3	79.0	165.4	22.0

Sources : Company data (for production) and customs data (for import and export)

The analysis of the figures in Table 2.14 reveals a decrease in the apparent consumption in 2010 compared to 2009 by 37.1 thousand tons which

is an insignificant drop of 3.3 %. The apparent consumption per capita in 2010 almost keeps the same level as during the preceding year. For the different products it is different compared to 2009, for long products the drop is by 14.3 %, for flat products there is an increase of 8.4 %, and for finished products – a drop of 13.1 %. This can be explained with the suspended construction projects in the country, where long rolled metal is most used.

In 2009 the difference between the apparent and the real (1 538.1 thousand tons) consumption is 407.3 thousand tons.

The real and apparent consumption per capita in Bulgaria compared to these figures for the European Union (real – 297.1 kg/person and apparent – 293.2 kg/person) is 59.8 % and 49.6 % respectively from the EU figures.

The conclusion is that during the year in reference Bulgarian industry reduced the apparent consumption of steel products compared to the previous year. This is the reason for less production and lower export and import volumes.

2.3. PRODUCTION AND CONSUMPTION OF REFRACTORY AND OTHER MATERIALS

The metal industry uses refractories and refractory materials to lag its metallurgical furnaces and aggregates. The basic producing companies, members of the Bulgarian Association of the Metallurgical Industry are “Trud” JSC – Russe, “Shamot EL PE” JSC – Gara Elin Pelin, , “Rimpex” Ltd – Sofia and “Refran” PLC - Sofia.

The data about the output and sales of these companies are presented on Table 2.15 and Fig. 2.17.

The analysis of the data shows that in 2010 a slight drop in the production of refractories and refractory materials of about 8.5% compared to 2009 is observed. This reduction is reported by all plants without “Shamot EL PE” JSC – Gara Elin Pelin, the latter reporting a significant increase of 2 592 tons of production. The biggest drop is in “Rimpex” Ltd – by 486 tons or 46 %. „Trud” JSC reports 987 tons down or 11.3 %, and “Refran” PLC a decrease of the total production volume by 294 tons or 17 %.

The home sales of refractoriea in 2010 compared to the preceding year marks an increase of 6 845 tons, which is about three times more. This is explained with the increased production of a number of companies, consumers of this kind of production.

Decreased production volume is also observed for ceramictiles – by about 20 %.

Table 2.15

Production of refractory materials, tons, thousand m²

Types of production:	2007	2008	2009	2010	2010/2009	
					+/-	%
Production output	22 264	14 295	14 554	13 318.4	-1 235.6	91.5
Refractory materials, tons	22 263	14 290	14 551	13 316.0	-1 235.0	91.5
-by “Shamot” JSC	7 988	-	237	2 829.0	2 592.0	1193.6
- by „Trud” JSC	12 095	12 026	9 552	8 565.0	- 987.0	89.7
- by “Rimpex” Ltd	910	650	900	486.0	- 414.0	54.0
- by „Refran” PLC	1 270	1 614	1 730	1 436.0	- 294.0	83,0
Ceramic tiles thousand m ²	1	5	3	2.4	- 0.6	80.0
Export	2 176	2 439	10 621	3 597.0	- 7 024.0	33.9
Refractories, tons	2 176	2 439	10 621	3 597.0	- 7 024.0	33.9
Ceramic tiles thousand m ²	-	-	-	-	-	-
Home consumption, tons	19 438	9 854	3 441	10 284.2	6 843.2	298.8
Refractories, tons	19 437	9 849	3 438	10 283.0	6 845.0	299.1
Ceramic tiles thousand m ²	1	5	3	1.2	- 1.8	4.0

Source: Company data

Fig. 2.17



Production of refractories, tons

Unlike in 2009 when an increase of the export of refractories was reported, in 2010 it goes considerably down – more than twice and it is around the one reached in 2008 and 2007. During the year in reference only “Trud” JSC – Ruse export their production out of the country.

The data show that no matter where the refractories and refractory material were sold – in the country or exported – the whole quantity is sold

and there is no production staying in warehouses. Companies try hard to preserve their market positions both in the country, and abroad.

Ognjanovo –K” JSC is the biggest producer of lime, lime products and crushed limestone in the country, finding a wide application in metallurgy.

Data about the production, its sales in the country and the export are shown on Table. 2.16. They indicate that the lime production in the last three years keeps almost a constant level, increasing by 11.1 % in 2010 compared to 2009. In the production of lime fractions a decrease of 7.6 % is observed.

Table 2.16

Production and sale of production in 2007, 2008, 2009 and 2010, thousand tons

Types of production	2007	2008	2009	2010
Lime production	115.3	114.1	107.3	118.6
Sales, incl.	115.3	114.1	107.3	118.6
- home consumption	98.1	97.3	91.6	103.7
- export	17.2	16.8	15.7	14.9
incl. to the EU	8.7	8.6	6.2	5.0
Production of limestone fractions	1 090	1 276	875	809
Sales, incl.	1 090	1 276	875	809
- home consumption	1 090	1 376	875	809
- export	0	0	0	0
incl. to the EU	0	0	0	0

Nearly the whole produced quantity of lime and limestone fractions are sold on the home market. An insignificant increase of 13 % is observed in home sales. Only lime is exported, and the level of that export is preserved in 2010 as well. Nearly 40% of the export is directed to EU countries.

SECTION THREE

NON-FERROUS METALLURGY IN BULGARIA

3.1. PRODUCTION OF NON-FERROUS METALS

3.1.1. PRODUCTION OF ANODIC AND ELECTROLYTIC COPPER

Anodic and electrolytic copper is produced by “Aurubis Bulgaria” JSC. The technological scheme includes flash smelting of dried batch, converter processing of the obtained copper stone to blister, fire and electrolytic refining into cathode (electrolytic) copper with 99.95-99.99% purity. In parallel, sulphuric acid and intermediate products containing precious metals are produced. The metallurgical slag is enriched by floatation to copper concentrate containing 20 – 30 % copper.

The quantity of copper produced during the last four years is shown on Table 3.1 and Fig. 3.1

Table 3.1

Production of anodic and electrolytic copper, tons

Product	2007	2008	2009	2010	Разлика 2010/2009	
					+/-	%
Anodic copper	242 639	281 199	300 790	268 668	- 32 122	89.3
Electrolytic copper	69 634	126 853	197 234	215 942	+18 708	109.5

Source : Company data

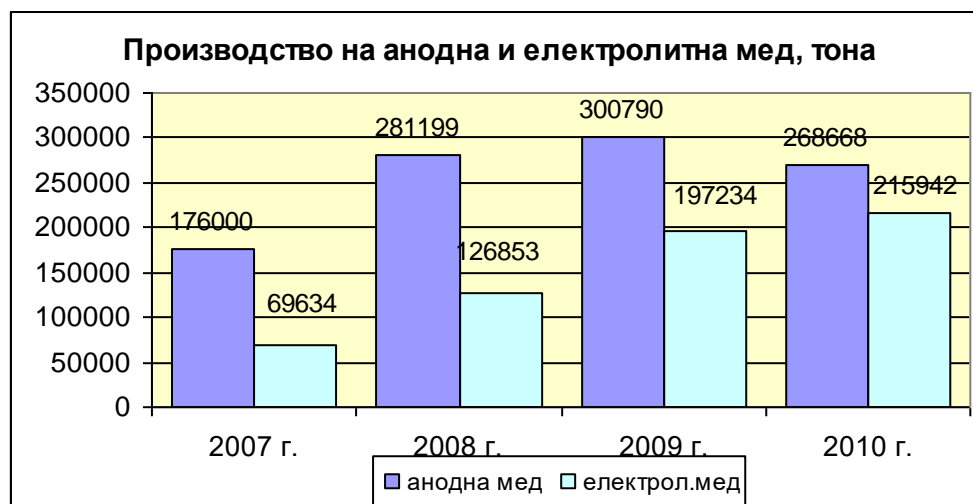
The production volume of anodic copper in 2010 is 268 668 tons (10.7 % less than in 2009)

Due to the increased utilization of the new refinery shop for electrolytic copper in “Aurubis Bulgaria” JSC the quantity of the cathodes produced continues to go up. The increase is by 9.5 % compared to 2009 and by more than 70 % compared to 2008.

Electrolytic copper represents 80.4 % of anodic copper (65.6 % in 2009 and 45.1 % in 2008).

The production of sulphuric acid in 2010 amounts to 932 897 tons (7.8 % less than in 2009).

Fig. 3.1



Production of anodic and electrolytic copper, tons

The share of the electrolytic copper produced in Bulgaria in the world production goes up from 1.07 % in 2009 to 1.13 % in 2010 and represents 8.3 % of that EU (27) production, for 2009 this figure is 7.85 %.

Data about the processed concentrates and scrap in the production of anodic and electrolytic copper during the period 2007 – 2010 are presented on Table 3.2.

Table 3.2

Processed concentrate and foreign scrap for the production of anodic and electrolytic copper, tons

Product	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Processed concentrate.	789 421	937 267	991 677	928 365	-63 312	93.6
- copper content, %	27.01	27.58	25.68	24.76	-0.92	96.4
- metal content.	213 248	258 468	254 662	229 909	-24 753	90.3
incl.: from imported concentrate	143 208	180 822	172 433	148 900	-23 533	86.4
from local concentrate	70 040	77 646	82 229	81 009	-1 220	98.5
Processed foreign scrap	19 835	17 062	25 091	39 321	+14 230	156.7

Source: Company data

928 365 tons of copper concentrates are processed, containing totally 229 909 tons of copper. In 2010 they are by 63 312 tons (6.4 %) less than in 2009. The proportion imported to local concentrates is 64.8 / 35.2. (67.7/32.3

respectively in 2009). The quantity of processed foreign scrap os by 14 230 tons more and represents 14.6 % of the total batch (9 % in 2009).

In 2010 “Aurubis Bulgaria” JSC officially put into operation the Extension of the slag flotation plant. The investment is for 30 million leva and its aim is to increase the production capacity to 800 000 tons of slag per year. Slag is a by-product from metallurgical production and contains between 2.0 and 3.5 % of copper. The new capacity operates with modern machines and technologies (a new self-loading mill , 7.8 m long and 6.5 m wide, three additional flotation cells each with 70 m³ volume, etc.), and all flotation and grinding processes are completely automated.

As a result of the planned overhaul made in October 2010, a number of improvements were made to increase the production capacity, and to improve the environmental performance of the installations.

The total investments in 2010 amount to 20.5 million leva.

3.1.2. RAW MATERIALS BASE AND PRODUCTION OF LEAD

The data about lead production during the last four years are presented on Table 3.3 and Fig. 3.2.

Table 3.3

Production of lead, tons

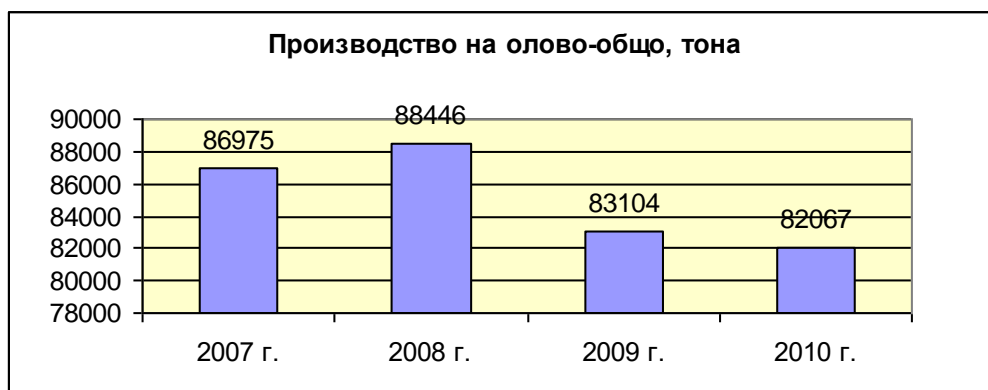
Product	2007	2008	2009	2010	Разлика 2010/2009	
					+/-	%
Lead - total	86 975	88 446	83 104	82 067	- 1 037	98.8
- incl. by“KCM” JSC	61 201	65 000	61 768	65 415	+3 647	105.9
by“OCK” JSC	25 774	23 446	21 336	16 652	- 4 684	78.0

Source: Company data

Total lead production in 2010 goes down insignificantly (by 1.2 %). In “KCM” JSC an increase of 5.9 % is observed compared to 2009, while “OCK” JSC reports a drop of 22 % due to environmental restrictions. The share of “KCM” JSC in the total production increases and it is 79.7 %, and that of “OCK” JSC falls down to 20.3 % (74.3/25.7 % in 2009) even though the proportion is predestined by the capacities of the two companies.

Lead produced in Bulgaria in 2010 makes up 0.857 % of world production and 5.12 % of the EU (27) production. For 2009 these indices are 0.953 % and 5.45 % respectively. The data show that in 2010 the share of Bulgarian production in the total world productionand that of the EU goes down insignificantly.

Fig. 3.2



Lead production - total, tons

Data on the processed concentrates and foreign scrap for the production of lead are presented on Table 3.4.

Table 3.4

Processed concentrate and foreign scrap for the production of lead, tons

Product	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Metal in concentrates	77 045	80 285	72 069	68 190	-3 879	94.6
Incl.: imported	47 685	67 141	59 366	56 054	-3 312	94.4
local	29 360	13 144	12 703	12 136	-567	95.5
Processed foreign scrap	13 919	10 744	13 993	15 444	+1 451	110.4

Source: Company data

In 2010 lead concentrates, containing 68 190 tons of lead were processed. The proportion led in imported/lead in local concentrates is almost the same as in 2009 (82.4/17.6). The share of secondary raw materials in the total input (concentrates and scrap) increases from 16.3 % in 2009 to 18.5 %, and the quantity of processed scrap is by 1 451 tons more (increase of 10.4 %).

3.1.3. RAW MATERIALS BASE AND PRODUCTION OF ZINC

The data about the processed raw materials and the zinc production are shown on Table 3.5 and Fig.3.4.

Total zinc production in 2010 is 91 372 tons and compared to 2009 a slight drop of 1.4 % is observed. It comes from “OCK” JSC where production fell by 21.2 %, whereas zinc production in “KCM” JSC increases by 5.6 %.

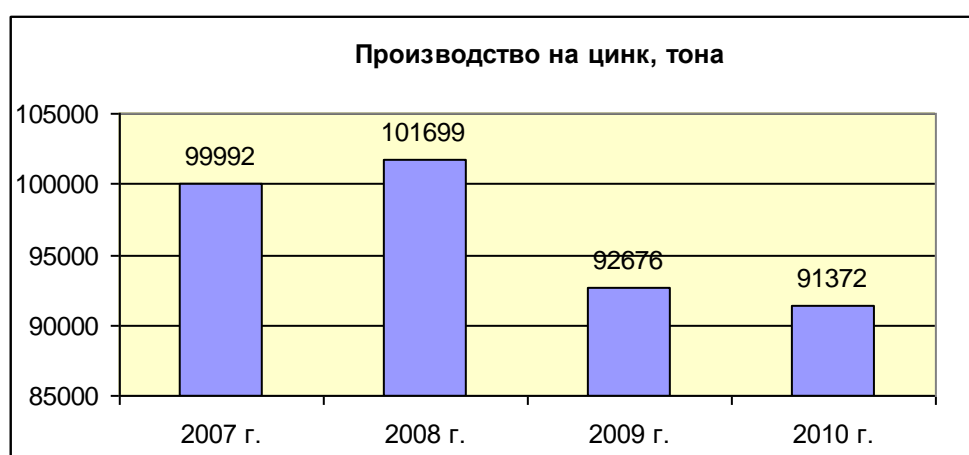
Table 3.5

Production of zinc, tons

Продукт	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Zinc ingots - total	99 992	101 699	92 676	91 372	-1 304	98.6
Incl.: “KCM”JSC	73 153	75 641	68 478	72 309	+3 831	105.6
“OCK”JSC	26 839	26 058	24 198	19 063	-5 135	78.8

Source: Company data

Fig. 3.4



Production of zinc, tons

Zinc produced in Bulgaria represents 0.710 % of world production in 2010 and 4.24 % of that in the EU (27) countries. The corresponding figures for 2009 are 0.821 % and 5.03 %.

The 2010 data show that Bulgarian zinc and lead production decreases its share insignificantly both in world and EU production, so Bulgaria preserves its position of a country-manufacturer of lead and zinc in the world and in the EU.

The data about the processed concentrates and scrap for the production of zinc are shown on Table 3.6.

In 2010 91 544 tons of concentrates were processed – by 5.5 % more than in 2009. The proportion zinc in foreign/zinc in local concentrates is changed and it is 91.1/8.9 % (89.9/10.1 in 2009).

Table 3.6

Processed concentrates and foreign scrap for the production of zinc, tons

Product	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Metal in concentrates	95 079	98 332	86 735	91544	+4 809	105.5
Incl.: In imported	83 212	88 126	77 936	83373	+5 437	107.0
In local	11 867	10 206	8 799	8171	-628	92.9
Processed foreign scrap	8236	5 728	7 620	7797	+177	102.3

Source: Company data

The quantity of processed scrap goes up by 2.3 % but it decreases its share in the total batch to 7.8 % (8.1 % in 2009).

In 2010 the investment activity of “KCM” JSC was focused on the project “**Technological renovation and production expansion**”. Some activities connected with Phase 1 of the project were performed – building of new lead production and a part of the modernization of the zinc plant. Funding for this phase of the project was granted through investment loans, totalling 85 million Euros.

In 2010 “OCK” JSC continued their work on the realisation of the project for **Modernization and expansion of the zinc plant**.

Until 31.12.2010 payments of 28.3 million Euros were made. After the completion of the project, the production capacity will increase by 40 % and the quality of the zinc will be better, guaranteeing production of zinc with 99,995 purity.

Regarding the project “**Modernization of lead plant**” there is a positive decision of the Expert Council in MOEW on the EIA Report.

For maintenance of the existing equipment and ensuring of technological and environmental requirements in 2010 repairs for 499 698 leva were made; the long-term assets acquired worth 226 298 leva and the investments are for 3 795 327.

3.1.4 PRODUCTION OF SECONDARY, PRECIOUS METALS AND BYPRODUCTS, ALLOYS AND CHEMICAL PRODUCTS

Data about the production of secondary, precious metals and byproducts, alloys and chemical products are shown on Table 3.7.

Table 3.7

***Production of secondary, precious and byproduct metals,
alloys and chemical products (tons, kg.)***

Product:	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Cadmium ingots, tons	458.7	467.5	506.8	456.5	-50	90.1
Bismuth ingots, kg.	4 115	3 046	-	2 179	+2 179	
Silver, kg.	51 155	12 774	39 997	27 538	- 12 459	69.9
Silver products kg.	42 676	29 764	No data	11 073		
Gold, kg.	307	263	244	190	- 54	77.9
Gold products, kg.	24	23	No data	25		
Tellurium, kg.	-	281	3000	2 468	- 532	82.3
Lead alloys, tons	6 771	17 524	18 413	18 535	+ 122	100.7
Zinc alloys, tons	9 813	6 803	14 259	17 501	+3 242	122.7
Bismuth lead ,tons	718	830	780	586	- 194	75.2
Tin alloys, tons	7	9	-	4	+4	
Aluminium alloys	7 099	8 630	2 805	7 402	+4 597	263.9
Zinc sulphate , tons	3 057	3 884	3 715	3 636	- 79	97.9
incl. monohydrate	2 674	3 371	3 476	3 372	- 104	97.0
Sodium bisulphate, tons	3 922	6 120	2 560	1 961	-599	76.6
Sulphuric acid, tons	960 774	1 090 936	1 152 580	1 075 617	-76 963	93.3

Source: Company data

The table shows that in 2010 a decrease in the production of by-product (excluding bismuth) and precious metals, as well as of chemical products is observed.

Compared to 2009, the production of zinc alloys is on the increase (by 22.7 %). The total 18 535 tons of lead alloys preserve the level from the preceding year. About 90 % of them are produced by “Monbat” JSC, and they are used for the manufacturing of the finished products of that company – different types of batteries. In 2010 the recycling plant of the enterprise became a separate company – “Monbat Recycling” PLC – 100 % property of “Monbat” JSC.

In “Stam Trading” JSC from the processed aluminium waste 7 402 tons of aluminium alloys were produced. Compared to 2009 the production is more than 2.5 higher.

Data about the processed waste from non-ferrous metals (metal contents) in 2009 and 2010 by companies – members of BAMI are presented on Table 3.8.

Table 3.8

**Waste from non-ferrous metals processed at
the metallurgic enterprises, tons**

Waste	2007	2008	2009	2010	Difference 2010/2009	
	total	total	total	total	+/-	%
Copper	34 472	35 267	33 713	50 057	+16 344	148.5
Lead	24 358	20 903	26 483	31 699	+5 216	119.7
Zinc	6 738	5 873	7 620	7 797	+177	102.3
Aluminium	14 127	13 734	8 933	15 680	+6 747	175.5
Total	79 695	75 777	76 749	105 233	+28 484	137.1

Source: Company data

The table shows that in 2010 the total quantity of utilized waste of non-ferrous metals increases significantly by 37.1 % compared to the previous year. The biggest increase is observed for the aluminium and copper waste, 75.5 % and 48.5% respectively, but lead is also considerably higher – by 19.7 % compared to 2009.

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

Processing of non-ferrous metals and the manufacturing of R/P metals and products thereof takes place at several companies in the country.

Data on the production are presented on Table 3.9

Table 3.9

Production of R/P non-ferrous metals and alloys, tons

Product	2007	2008	2009	2010		Разлика 2010/2009	
					%	+/-	%
R/P HNFM and alloys	49 105	56 606	27920	42 632	35.1	+14 712	152.7
incl. copper	42 885	41 321	24 793	35 608	29.3	+10 815	143.6
brass	6 220	15 285	3 127	6 062	5.0	+2 935	193.9
zinc	-	-	-	962	0.8	962	
R/P aluminium - Total	63 513	61 842	66 063	78 923	64.9	+12 860	119.5
incl. "Alkomet" JSC	46 421	43 599	52 955	63 668	52.4	+10 713	120.2
"Steelmet" JSC	13 892	14 500	10 870	13 525	11.1	+2 655	124.4
"PIH Industry" JSC	3 200	3 743	2 238	1 730	1.4	-508	77.3
Total:	112 618	118 448	93 983	121 555	100.0	27 572	129.3

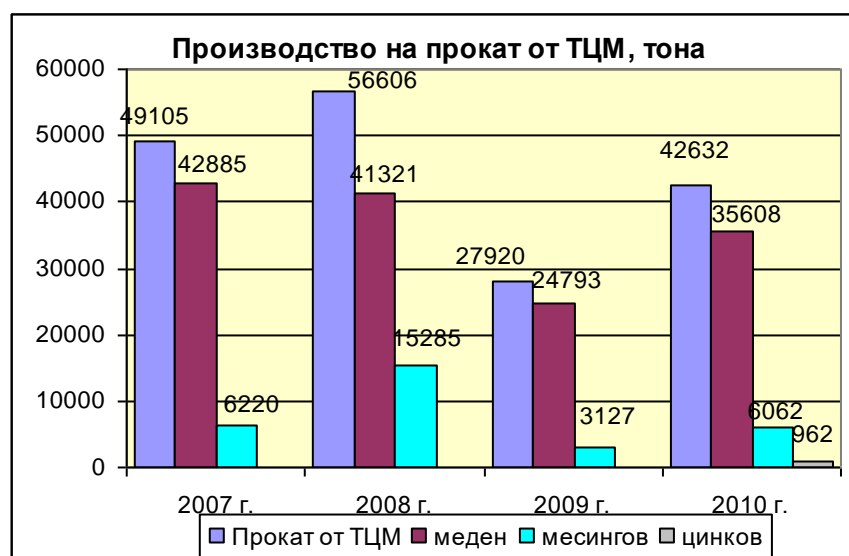
Source: Company data

Table 3.9 shows that in 2010 the production of R/P HNFМ increased by 52.7 %, and that of rolled aluminium by 19.5 % compared to 2009. This results in a higher share of R/P HNFМ – 29.7 % to 35.1 % of the total quantity.

Fig.3.6 and Fig.3.7 present the quantities of produced R/P heavy non-ferrous metals and alloys for the period 2006 – 2009 – total and by kinds.

“Sofia Med” JSC is the main manufacturer of these products. The company produces a wide spectrum of rolled and pressed metal: sheet, strips, discs, bars, rods and profiles.

Fig. 3.6



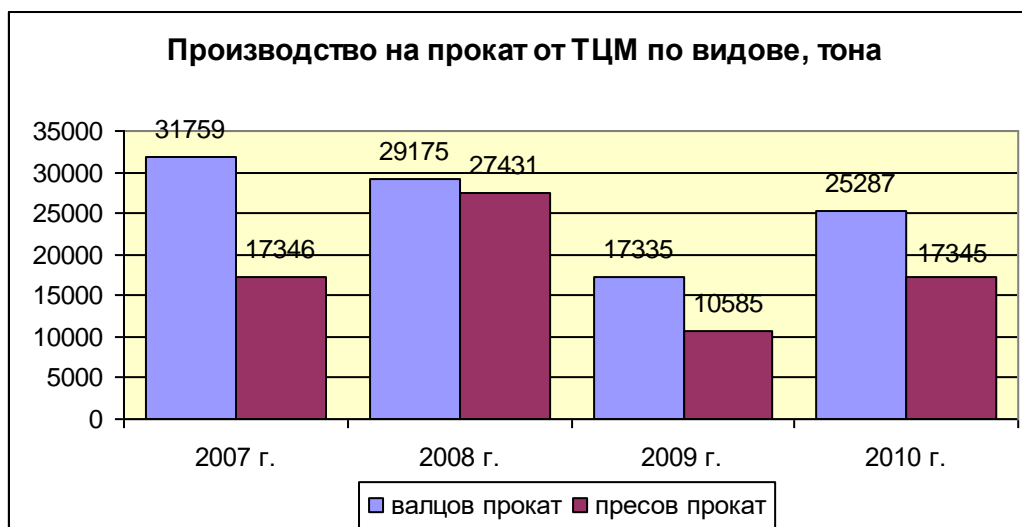
Production of R/P HNFМ, tons

Recovering and growth in the production of R/P HNFМ (by 2.7 %) is observed in 2010 compared to 2009, but the 2008 level (compared to which there is a drop of 24.6 %) has not been reached yet.

The R/P copper produced is 83.5 % of the total quantity, and the R/P brass – 14.5 % (the proportion was 88.8/11.2 in 2009). In 2010 the production of zinc rolled metal was launched and it represents 2.2 % of the total volume.

The predominant part of the copper R/P metal is rolled which is 52.8 %. The same proportion is reported for brass R/P metal – 90.8 % of it is rolled metal. The total rolled metal in 2010 increases by 45.9 % compared to 2009, and the pressed metal produced – by 63.9 %.

Fig. 3.7



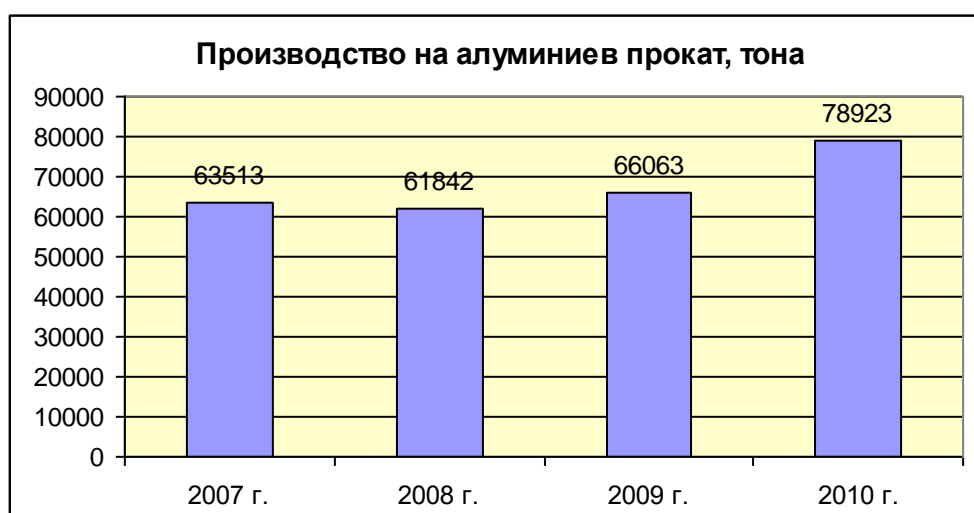
Production of R/P HNFМ by types, tons

10 488 tons of foreign scrap was processed in “Sofia Med” JSC, 34.9 % more than the quantity in 2009.

The produced R/P aluminium by companies is shown on Table 3.9, and the total production and by types appear on Figures 3.8 and 3.9.

“Alkomet” JSC is a company specialized in the production of pressed (pipes, rods and profiles) and rolled (strips, sheet and folio) metal from aluminium and aluminium alloys. The company produces more than 80 % of the R/P aluminium in the country. Last year new machines and equipment for 14.6 million leva were put into operation, including sheet and strip production line, coated foil line, automated line for cutting aluminium foil, etc. 9.1 million leva were invested in 2010 in capacities that are not finished yet.

Fig. 3.8



Production of R/P aluminium, tons

63 668 tons of R/P metal was produced at “Alkomet” JSC in 2010 (20.2 % more than in 2009). The rolled metal was 45 893 tons (72.1 %), and the pressed – 17 775 tons (27.9%). Compared to the previous year the rolled and pressed metal increase by 24.7 % and 10.1 % respectively. The trend for production and sales of products with higher added value continues in 2010. Household foil represents 38.24 % of the total sales and has about 15 % market share on the EU market. Last year the production of sheet for screw caps was launched.

5 791 tons of secondary aluminium were processed in “Alkomet” JSC (34.1% more than in 2009).

“**Steelmet**” JSC manufactures different types of aluminium profiles and architectural constructions – doors and windows and façade elements for construction. They are the only producer in the country of aluminium architectural systems of the brand ETEM Building Systems and of PVC profiles of the brand IDEA.

In 2010 the company invested 15.1 million leva. A new line (worth 13.7 million leva) for extrusion of aluminium profiles was installed.

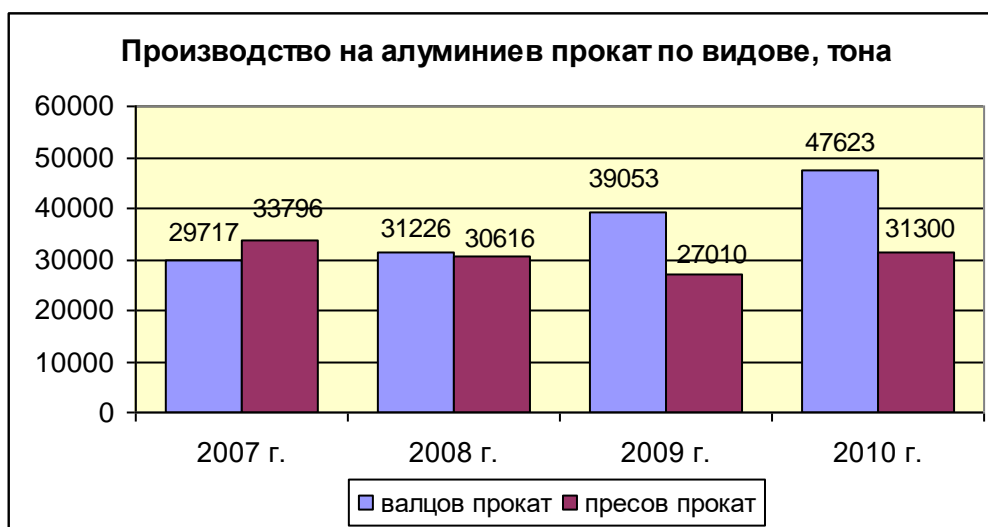
The share of aluminium R/P metal produced by “Steelmet” JSC in the country is 17.1 %. Compared to 2009 the production is by 24.4 % up.

Besides the development of their own production, the company is also engaged in commercial activity in the country. They are the main supplier of aluminium sheet and P/R metal (incl. foil), copper and brass tubes, profiles, fittings, cables, enameled cables, etc.

“**PIH Industry**” JSC produces welded aluminium pipes. In 2010 their production is by 22.7 % less than in 2009.

The total quantity of R/P aluminium produced in the country in 2010 increases by 19.5 % compared to 2009.

Fig. 3.9



Production of R/P aluminum by types, tons

Growth of production is observed both for rolled, and pressed metal, by 8 570 tons (21.9 %) and 4 290 tons (15.9%) respectively. Rolled metal represents 60.3 % of the total production and pressed – 39.7 % .

The total production of rolled metal of non-ferrous metals and alloys in 2010 amounts to 72 910 tons (60 % of the total production), and the production of pressed metal – 48 645 tons (40 %). The proportion rolled/pressed metal (60 / 40 %) is the same as in 2009.

The R/P metal from heavy and light non-ferrous metals in the country in 2010 increases by 27 572 tons (29.3 %) in total. The drop in production of R/P metal from HNFEM is overcome and new products are being produced.

3.2. TRADE TURNOVER AND CONSUMPTION OF NON-FERROUS METALS AND ALLOYS

3.2.1. IMPORT OF NON-FERROUS METALS AND FINISHED PRODUCTS

The quantity of imported non-ferrous metals, alloys and finished products during the last four years is shown on Table 3.10.

Larger quantities of **cathode copper** imported from Russia (39 %), Poland (22 %), and Austria (15 %).

Import of **copper scrap** increases significantly (by 71.1 %) and is supplied mainly from the neighbouring countries – Romania (42.1 %), Greece (20.4%), Turkey (8.5 %), and Macedonia (6.7 %). **Bars and profiles** are imported from Turkey (54.4 %), Greece (24.0 %), and Italy (18.2 %). Major importer of **copper wire** is Turkey with 80.8 % of the import. **Sheet, plates, and strips** come from Spain (53.9 %), Turkey (11.9 %), and Greece (11.1 %), and about 70 % of the **copper foil** is imported from China. The import of **copper pipes** is from Turkey (31.9 %), Greece (21.3%), Italy (16.3 %), and Germany (13.4 %).

Lead ingots comes from Sweden (52.1 %) and Russia (32.1 %). Pure **lead scrap** is imported from Romania (47.3 %), Germany (14.9 %), and Greece (13.9 %). Lead R/P metal comes mainly from Greece (97.4 %).

Zinc ingots is imported from Algeria (60.3%), Poland (20.6 %), and Russia (18.7 %), and zinc R/P metal – from Greece (43.7%) and Romania (22.2 %). The import of pure **zinc scrap** is mainly from Macedonia (47.3 %) and Romania (35.3 %).

Table 3.10

Import of non-ferrous metals, scrap and finished products, tons

Products	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Copper, total, incl.	57 278	70 258	38 529	54 710	+16 181	142.0
Anodes	2 070	920	177	-	-177	-
Cathodes, alloys and blanks	26 111	29 462	7 799	8 202	+403	105.2
Scrap	12 899	23 854	20 729	35 464	+14 735	171.1
Bars and sections	3 252	4 595	3 173	4 130	+957	130.2
Wire	9 032	6 811	4 001	2 830	-1 171	70.7
Sheets and foil	1 851	2 353	1 012	2 534	+1 522	250.4
Pipes	2 063	2 262	1 638	1 550	-88	94.6
Lead, total, incl.	19 616	21 827	22 952	26 077	+3 125	113.6
Ingots and alloys	15 853	15 528	10 181	7 283	-2 898	71.5
Scrap (clean)	3 338	5 830	12 143	17 461	+5 318	143.8
R/P metal	425	469	628	1 333	+705	212.3
Zinc, total, incl.	3 956	5 816	2 978	2 879	-99	96.7
Ingot and alloys	3 330	5 094	2 480	1 761	-719	71.0
Scrap	331	257	194	510	+316	262.9
R/P metal	295	465	304	608	+304	200.0
Aluminum, total, incl.	127 894	115 287	98 342	118 702	+20 360	120.7
Ingots and alloys	59 466	61 295	55 807	71 912	+16 105	128.9
Scrap	3 554	4 027	3 013	6 876	+3 863	228.2
Bars and profiles	22 096	22 501	15 457	12 087	-3 370	78.2
Wire	7 508	4 732	4 772	6 113	+1 341	128.1
Sheets and strips	18 915	15 353	14 591	17 255	+2 664	118.3
Foil	15 605	6 545	3 887	3 619	-268	93.1
Pipes	750	834	815	840	+25	103.1
Total	208 744	213 188	162 801	202 368	+39 567	124.3
Value, million USD	863.0	979.4	494.0	745.1	+251.1	150.8
Value, million leva	1 225.5	1 306.4	691.6	1100.9	+409.3	159.2

Source: Customs statistics

Aluminium holds the biggest share of the import of non-ferrous metals because it is not produced in the country and the consumption of ingot metal is secured only by import. It is imported from Russia (43.5 %), Turkey (30.3 %), and Greece (6.2 %).

Aluminium scrap is imported mainly from Romania (50.5%) and Greece (26.5 %).

The import of **aluminium bars and profiles** goes down and it is chiefly from Turkey (63.7 %), Greece 9.7 %), and Italy (5.7 %) . **Aluminium wire** is imported mainly from Romania (86.6 %). Compared to 2009 the import of

rolled metal – **aluminium sheet, plates and strips** increases. One of the major importers is Germany – 47.5 %, followed by Greece (11.6 %) and Spain (10.4 %). The import of **aluminium foil** falls down by about 7 % (from Germany – 33.9 % of the total quantity, Greece – 28.3 % and Turkey – 12.2 %).

The total import volume of non-ferrous metals and finished products in 2010 increases by 24.3 % compared to 2009.

An insignificant increase is observed in the import of cathode copper – by 5.2 %. The quantity of the imported waste also increases. And the import of some types of R/P metal as well.

Regarding lead and zinc, the import of ingots is down but the quantity of the scrap imported is significantly higher.

In relation to the increased production of aluminium R/P metal and secondary aluminium, the import of aluminium ingots and aluminium waste is also on the increase. However, the import of some types of products decreases (foil, bars, and profiles) *Същевременно намалява вносят на някои видове изделия (фолио, пръти и профили).*

3.2.2. EXPORT OF NON-FERROUS METALS AND FINISHED PRODUCTS

The export of our country during the last four years is presented on Table 3.11.

Anodic copper is exported mainly to Belgium (76.0 %).

The export of **cathode copper** in 2010 increases significantly and its main part is directed to Turkey (29.0 %), Italy (20.4 %), and Serbia (15.0 %).

Copper bars and sections are sold mainly in the EU – Germany (26.3 %), Poland (16.7 %), Italy (14.5 %), and Great Britain (12.1).

Copper wire is exported chiefly to Romania (80.0 %). **Sheet, plates, strips, and foil** are also exported to EU countries – Italy with 24.9 %, Germany with 11.9 %, and France with 7.0 % of the total export. From the other countries – export destinations, the biggest quantities are for Turkey (8.0 %) and Switzerland (6.9 %).

Lead ingots are exported mainly to non-EU countries, the proportion being 64.2 % to 35.8 %.

From the exported **zinc ingots** 58.3 % go to EU countries, mainly Greece (20.2 %), Austria (11.9 %), Romania (11.5 %), and Italy (10.4 %). Among third countries, the main importer of Bulgarian zinc is Turkey (33.7 %).

Table 3.11

Export of non-ferrous metals, scrap and finished products, in tons

Products	2007	2008	2009	2010	Difference 2010/2009	
					+/-	%
Copper, total, incl.	246 422	309 990	268 167	277 279	+9 111	103.4
Anodic copper	139 251	146 271	73 379	29 575	-43 804	40.3
Electrolytic copper	45 760	105 748	152 873	184 658	+31 785	120.8
Scrap	11 590	10 547	10 718	18 225	+7 507	170.0
Bars and sections	15 618	16 084	11 231	16 293	+5 062	145.1
Wire	2 842	2 913	2 384	3 851	+1 467	161.5
Sheets, strips and foil	31 252	28 241	17 496	24 627	+7 131	140.8
Pipes	109	188	87	50	-37	57.5
Lead, total, incl.	67 826	81 375	78 285	79 170	+885	101.1
Ingots	66 384	80 972	77 712	78 977	+1 265	101.6
R/P lead	1 377	259	526	-	-526	0.0
Scrap (clean)	65	144	47	193	+146	410.6
Zinc, total, incl.	92 086	97 993	89 304	84 542	-4 762	94.7
Ingots	90 572	96 678	87 008	81 331	-5 677	93.5
R/P metal	3	22	70	1 262	+1 192	x1.8
Scrap	1 511	1 293	2 226	1 949	-277	87.6
Aluminum, total incl.	92 813	85 375	73 706	98 314	+24 608	133.4
Ingots	11 062	10 206	3 254	6 799	+3 545	208.9
Scrap	23 577	18 478	20 577	31 727	+11 150	154.2
Bars and sections	15 459	16 273	14 191	19 266	+5 075	135.8
Wire	0	384	518	910	+392	175.7
Strips and sheet	10 566	10 442	9 051	13 982	+4 931	154.5
Foil	25 139	20 526	19 172	18 844	-328	98.3
Pipes	7 010	9 067	6 943	6 786	-157	97.7
Total	499 147	574 733	509 463	539 305	+29 842	105.9
Value, million USD	2 617.5	3 038.5	1 918.3	2 693.6	+775.3	140.4
Value, million leva	3 716.8	4 053.0	2 685.6	3 979.5	+1 293.9	148.2

Source: Customs statistics

From the processed aluminium secondary raw materials **aluminium and aluminium alloys** are manufactured and exported. 95.0 % of the sales are in EU countries.

90.5 % of the export of **aluminium bars and profiles** is also directed to EU countries – to Germany (44.6 %), the Czech Republic (10.1 %), and Greece (8.3 %). 92.4 % of the **strips and sheet** are also exported to EU countries, the quantities for Poland (16.9 %), Italy (9.1 %), and Germany (10.1 %) being more significant. **Aluminium foil** is also exported mainly to EU countries –90.0 % and it is directed to Germany (21.4 %), Poland (21.3 %), and Italy (19.3 %). 91.5 % of the **aluminum pipes** are exported to the EU as

well. Germany (43.7 %), the Czech Republic (9.9 %), and Austria (6.5 %) have a more substantial share of them.

Aluminum waste has the biggest share in the export of secondary raw materials, followed by copper scrap. In comparison to 2009 an increase of more than 50 % in the total quantity of exported scrap is observed. The export to non-EU countries holds the bigger share of the export.

42.5 % of the **copper scrap** are sold in the EU, and 57.5 % in other (third) countries, including China with 40.0 %.

Aluminum waste is sold mainly to China (19.3 %), Greece (18.2 %), and India (13.7 %). The share of export to EU countries is 48.9 %.

The metallurgical companies also produce **cadmium**, which is exported as well. According to company data, in 2010 this export is by 9.7 % lower than in 2009.

The average annual prices at which the basic metals were exported during the last three years are shown on Table 3.12.

Table 3.12

Metals	2008		2009		2010	
	USD/t	lv/т	USD/t	lv/т	USD/t	lv/т
Refined copper	6586	8784	5 082	9 940	7 372	10 891
Lead	2272	3030	1716	3 357	2 213	3 269
Zinc	2114	2819	1 709	3 343	2 293	3 388

Source : Customs statistics and NSI data

The data show that in 2010 the average prices of the metals exported (refined copper, lead, and zinc) in USD/t increase compared to 2009 and getting closer to the 2008 levels. The same trend is preserved for the prices in Leva.

The following can be concluded from tables 3.10 and 3.11.:

Compared to 2009, the volume of the exported basic metals, R/P metal, and metal scrap increases by 5.9 % and in quantitative aspect exceeds the import more than 2,5 times.

Export of non-ferrous metals and finished products in 2010 amounts to 3 979.5 million leva and is by 48.2 % up compared to 2009. This increase results from both the higher quantity of exported products, and the higher average prices of export as well.

Import is for 1 100.9 million leva and also increases by 59.2 % compared to the preceding year.

The above data show that despite the bigger increase of import in 2010, in terms of quantity and value the export significantly exceeds the import and the foreign trade balance in non-ferrous metallurgy remains positive.

Bulgarian export of lead ingots represents 5.74 % of world trade in lead, and import – 0.508 %. For 2009 these figures are 5.07 % and 0.62 % respectively.

In 2010 Bulgarian export of zinc represents 2.29 % of world trade turnover (2.30 % in 2009), and import – 0.055 %. (0.054 % in 2009).

3.2.3. FOREIGN TRADE TURNOVER OF NON-FERROUS METALS

The foreign trade turnover of non-ferrous metals in quantity is shown on Table 3.13 and Fig. 3.10.

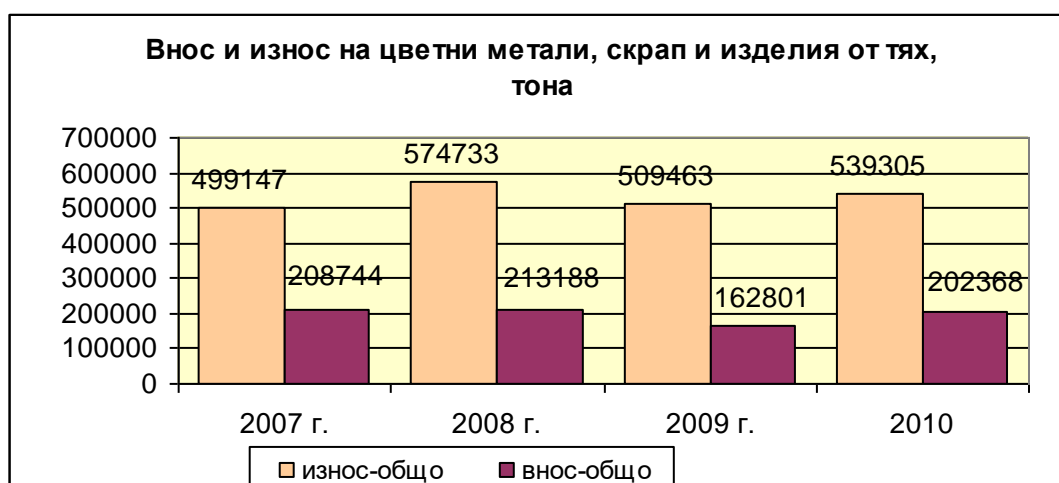
Table 3.13

Foreign trade turnover of non-ferrous metals, in tons

Indices	2007	2008	2009	2010		Difference 2010/2009	
					%	+/-	%
Import	208 744	213 188	162 801	202 368	27.3	39 567	124.3
Export	499 147	574 733	509 463	539 305	72.7	29 842	105.9
Total turnover	707 891	787 921	672 264	741 673	100.0	69 409	110.3
Balance	290 403	361 545	346 662	336 937		-9 725	97.2

Source: Customs statistics

Fig. 3.10



Import and export of non-ferrous metals, scrap and finished products, tons

The data on Table 3.13 and Fig.3.10 show that in 2010 the foreign trade turnover of non-ferrous metals in terms of quantity increases by 10.3 %, and this increase is higher for the import than for the export. One reason for that is the increase import of aluminium ingots – raw material for the increased production of R/P aluminium. On the other side, the import of scrap from non-ferrous metal is higher as well, which is also used as raw material and improves the effectiveness of their production. In spite of that, in 2010 the sector continues to have a significant positive balance (about 2 billion dollars).

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

The total sale of Bulgarian production of non-ferrous metals and R/P metal, incl. on the home market and for export, is shown on Table 3.14.

Table 3.14

Consumption of non-ferrous metals and rolled/pressed metal in 2009 and 2010, tons

Types of production	Export		Home market		Total	
	2009	2010	2009	2010	2009	2010
Anodic copper	75 873	42 294	-	-	75 783	42294
Electrolytic copper	175 000	168 000	25 000	36 000	200 000	204000
Lead ingots	77 248	74 738	3 218	7025	80 466	81 763
Zinc ingots	71 420	62 226	4 278	6 140	75 698	68 366
R/P metal from HNFM	28 400	40 455	2 532	2153	30 932	42 608
incl. copper	25 381	34 413	1 271	819	26 652	35 232
brass	3 019	5072	1 261	1312	4 280	6 384
zinc		970		23		993
R/P aluminum	46 499	56563	7 727	7603	54 226	64 166
Total	474 350	444276	42 755	58921	517 105	503 197

Source: Company data

The data on Table 3.14 show that in 2010 17.6 % of the total sales of electrolytic copper were on the home market, and the exported quantity was 82.4 %, the respective figures for 2009 are 12.5/87.5 %. Compared to the preceding year, the export is by 4 % down, and the production sold on the home market increases by 44 %.

From the same table it is obvious that in 2010 91.4 % of the produced mainly from primary raw materials lead ingots is sold on the foreign market

(96.0 % in 2009) and 8.6 % on the home market (4.0 % in 2009). Compared to 2009 the export is by 3.2 % down and the quantity sold on the home market are nearly twice higher. Lead extracted from disused batteries in “Monbat Recycling” JSC and “El BAT” JSC, **representin about 40 % of the total production of lead ingots, is sold mainly on the home market and satisfies the needs of accumulator plants in the country.**

The distribution of sales of zinc in 2010 is as follows: on the home market 9.0 % (5.7 % in 2009) and 91.0 % – for export (94.3 % in 2009). The data show that the quantity of zinc ingots exported decreases by 12.9 % compared to 2009, and for the home market it increases by 43.5 %.

The sales of R/P HNFМ on the home market in 2010 represent 5.1 % (8.2 % in 2009) of the total quantity and the export – 94.9 % (91.8 % in 2009).

The total quantity of R/P aluminium sold on the home market by the three producing companies is 11.8 % and export has 88.2 %. In 2009 this proportion was 14.2 % to 85.8 %. Home sales remain at the 2009 level, and the export goes up by 21.6 %.

The total export of basic non-ferrous metals (copper, lead, and zinc), according to company data, represents 87.6 % of the sales (92.5 % in 2009) and it falls down by 13.1 % compared to the preceding year. 12.4 % of the total sales are on the home market and an increase of 4.9 %, compared to the previous year, is observed.

The comparison of export data from the companies and the official customs data reveals the following:

1. The export of copper (electrolytic and anodic) according to data from the producers amounts to 210 294 tons, whereas the customs report 214 233 tons. The difference is 4 000 tons (1.9 %).
2. The export of lead by the producers amounts to 74 738 tons, the customs data report 78 977 tons. The difference is 4 239 tons (5.4 %).
3. Company data report export of 62 226 tons of zinc, whereas customs data report 81 331 tons of unwrought zinc exported, incl. 62 683 tons with high purity.
4. The export of R/P HNFМ is 40 455 tons according to data from the producers and 44 821 tons according to the Customs The difference is 4 366 tons (9.7 %).
5. For R/P aluminium these figures are 56 563 tons and 59 788 tons respectively, or a difference of 3 376 tons (5.6 %).

The differences pointed out result from a numver of factors, but they cannot change the overall picture and the conclusions made for particular products significantly.

3.2.5 REAL CONSUMPTION OF NON-FERROUS METALS AND ALLOYS

The home consumption is formed by the sales of production of our factories and the import. The data for the last four years are shown on Table 3.15.

Table 3.15

Home consumption of non-ferrous metals and rolled/pressed metal, tons

Products	Origin	2007	2008	2009	2010	
						%
Electrolytic copper	Locally produced	37 455	31 260	25 000	36 000	81
	Import	26 111	29 462	7 799	8 202	19
	Consumption	63 566	60 722	32 799	44 202	100.0
Lead	Locally produced	11 050	7 787	3 218	7 025	49
	Import	15 853	15 528	10 181	7 283	51
	Consumption	26 903	23 315	13 399	14 308	100.0
Zinc	Locally produced	6 666	5 508	4 278	6 140	78
	Import	3 330	5 094	2 480	1 761	22
	Consumption	9 996	10 602	6 758	7 901	100.0
Rolled/pressed HNFM	Locally produced	4 424	5 639	2 532	2 153	16
	Import	16 197	16 021	9 824	11 652	84
	Consumption	20 621	21 660	12 356	13 805	100.0
Rolled/pressed aluminum	Locally produced	12 484	12 390	7 727	7 603	16
	Import	64 874	49 965	39 522	39 914	84
	Consumption	77 358	62 355	47 249	47 517	100.0

Source: Customs statistics (for import) and company information (for home sales)

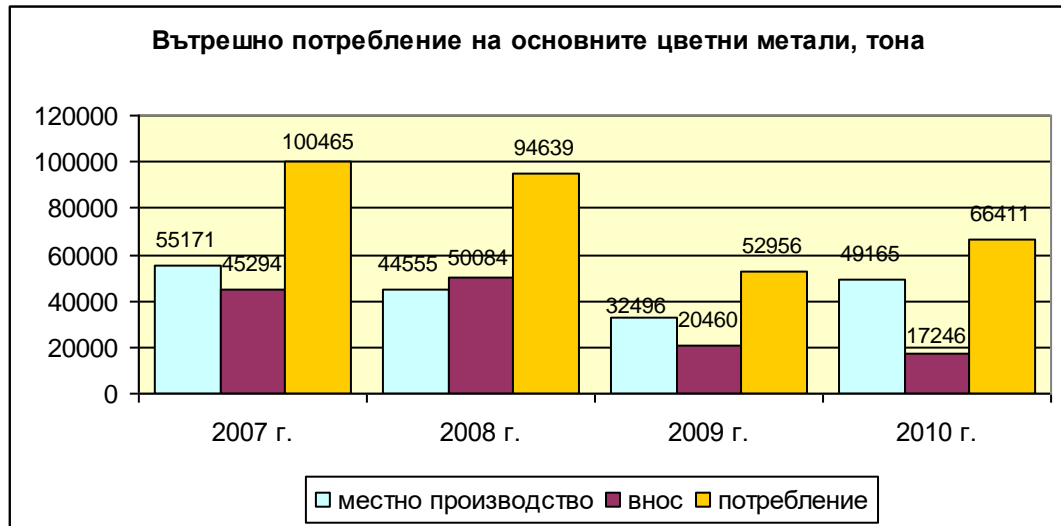
Note: The data about lead consumption do not include the quantities produced by the companies processing only accumulator waste

The figures show that in 2010 the real home consumption of basic non-ferrous metals /produced mainly from primary raw materials/ increases by 25.4 % compared to the preceding year.

According to company data 74 % of the home consumption of electrolytic copper, lead and zinc (61.4 % in 2009) is covered by Bulgarian production and the other 26 % are provided from import (38.6 % in

2009). The share of home consumption of electrolytic copper increases from 76.2 % to 81 % , for zinc - from 63.3 % to 78 %, and for lead from 24 % to 49 %.

Fig. 3.12



Home consumption of the basic NFM, tons

The home consumption of the two types of R/P metal in 2010 is 59 503 tons in total and is almost the same as in 2009.

The real home consumption of R/P HNFМ increases by 11.7 %. The share of local production goes down from 20.5 % in 2009 to 16 % in 2010, but the import is higher.

The share of local production of R/P aluminium preserves its level from 2009 and it is 16 %. Home consumption is 47 517 tons and it is almost the same as in 2009.

The consumption of non-ferrous metals and R/P products is also expressed by means of the so-called apparent consumption calculated by the formula:

$$AC = (M + I) - E, \text{ where}$$

AC – apparent consumption, tons

ApCC – apparent per capita consumption, kg

M – manufactured non-ferrous metals and R/P products, tons

I – imported NFM, R/P products, tons

E – exported NFM, R/P products, tons

The apparent consumption (VC) of non-ferrous metals and rolled/pressed products in 2008 in tons, and the per capita consumption (VPCC) in kilograms are presented on Table 3.16.

Table 3.16

*Apparent consumption of non-ferrous metals and rolled/pressed products in 2010,
tons, kg*

Products	M	I	E	AC	ApCC
Electrolytic copper	215 942	8 202	184 658	39 486	5.26
Lead	82 067	7 283	78 977	10 373	1.38
Zinc	91 372	1 761	81 331	11 802	1.57
R/P HNFM	42 632	11 652	46 083	8 201	1.09
R/P aluminium	78 923	39 914	59 788	59049	7.87
Total	510 936	68 812	450 837	128 911	17.18

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

The data on Table 3.16 show that in 2010 the total apparent consumption of the basic non-ferrous metals and R/P metal /copper, zinc, lead/ falls down by 6.7 % compared to 2009 and by about 6 % per capita. Based on that we can conclude that in 2010 Bulgarian industrial sectors / construction, transport, machine building, etc./ which use non-ferrous metals and R/P products have not yet overcome the consequences of the economic crisis.