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ISSN 0543-5846
METABK 52(3) 421-424 (2013)
UDC – UDK 65.01:669.013.003:658.5:658=111

THE ROAD OF POLISH STEELWORKS TOWARDS MARKET SUCCESS –CHANGES AFTER RESTRUCTURING PROCESS

Received – Prispjelo: 2012-07-19
Accepted – Prihvaćeno: 2012-11-20
Review Paper – Pregledni rad

This publication presents the program assumptions of restructuring and achieved effects. The range of tests on restructuring effects was broadened by analysis of enterprise situation in the surrounding, pointing at conducted strategies of actions. Presented publication is a result of own research which aimed at possibly complex analysis of the restructuring processes course in metallurgical enterprises in Poland.

Key words: restructuring process, strategy, metallurgical enterprise

INTRODUCTION

At the beginning of the analysis of restructuring assumptions of metallurgical sector in Poland and the achieved effects, an assumption was made that the success of metallurgical enterprises in the process of market economy development (after system transformation) is dependent on complex changes introduced in all assets and in all functions of the enterprises. Program restructuring in Poland began in 1992 (approving the restructuring assumptions by the government of the Republic of Poland) and was subject to modifications and updating which took into account new external conditions, policy of European Union towards metallurgical sector and internal conditions (situation in each of particular steelworks). The last restructuring program of metallurgical sector comprised the assumptions for years 2003-2006. In 2007 the report of European Commission stated that Polish metallurgical industry successfully conducted the key repair assumptions.

EFFECTS OF RESTRUCTURING IN POLISH METALLURGY SECTOR

First area of restructuring was the issue of ownership. Before political system transformation, in times of command-and-quota system economy, the characteristic feature of metallurgy sector was concentration of production in big, state-owned (nationalised) enterprises, so-called "combines" in the 80s of 20th century. The biggest were: Metallurgical Combine named after W. Lenin in Cracow created in 1954 (later called T. Sendzimira Steelworks) and Metallurgical Combine Katowice Steelworks (created in 1976). Metallurgical sector (producers of steel) in 1989 before economic transformation in Poland included 26 enterprises [1]. First privatised metallurgical enterprise was Warszawa Steelworks (in 1992). A foreign investor, Lucchini became the owner of the steelworks (Lucchini Warszawa, Limited liability company) [2]. At present, it is called ArcelorMittal Warszawa. The most important event on the Polish steel market was consolidation of four steelworks: Steelworks Katowice, Steelworks Sendzimira, Steelworks Celder and Steelworks Florian and creation of the entity called Polish Steelworks (in 2002). A year later the enterprise was bought by foreign capital LNM Group. Consolidations of capital groups conducted on the world marked finally led to a situation when capital group ArcelorMittal became the owner of Polish Steelworks. During the analysis of the Polish metallurgical market after restructuring it was found that the biggest enterprises producing steel are owned by foreign capital (Figure 1).

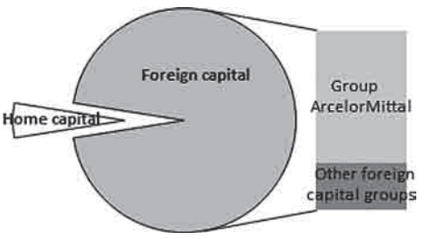

Figure 1 Steel market in Poland after ownership transformations (criterion of manufacturing power)

The ownership transformations were followed by legal changes connected with conducting economic and business activity. New legal entities after restructuring became commercial law companies. Currently the metallurgical sector in Poland (dated 31 December 2011) consists of 29 companies, including: 11 joint stock companies and 13 limited liability companies (Figure 2).

Another area of steelworks restructuring is restructuring of their assets and restructuring of the used tech-

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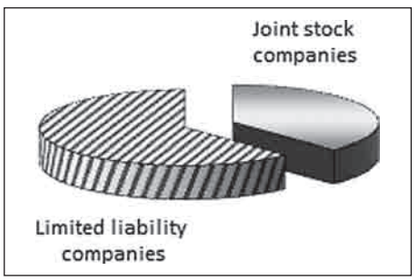

Figure 2 Metallurgical sector in Poland after legal changes in ownership transformations

nologies of production. Before restructuring the property of each of steelworks was very complex and besides production property assets, steelworks owned social and living quarters infrastructure (flats and workers' hostels, holiday resort accommodation, workers' health centres, canteens), areas around the steelworks (protected zones), buildings of administration which were very complex. Steelworks maintained repair staff, transportation companies and other companies which provided services for production or protection of properties, etc. Non-core business of the steelworks was systematically being separated from the steelworks themselves. The activities connected with production were conducted by the mother company and transport companies, repairs, services, social related and those which dealt with metallurgical processing were serving the function of daughter companies. Daughter companies, besides providing services for the production enterprises (the mother companies) could also conduct business with other external entities [3]. The assets connected with the production needed to be modified. Before restructuring, the gross value of production capital assets in metallurgical sector in nationalised state-owned companies was dropping. One of the main reasons was the consumption of fixed assets (calculated as the percentage of consumption value / amortisation/ to the gross value). In 1989 the degree of assets consumption in metallurgy system was 77,8 %, which is 32,3 % more than in state-owned industry in total [4]. Production assets of steelworks was characterised by a drop in productivity dynamics before restructuring. In 1988, the rate of productivity dynamics in reference to the year before treated as 100 % in metallurgy equalled 99 % and in 1989 dropped to 91,6 %. Each ratio was lower than general rate for industry in Poland as a whole (Figure 3).

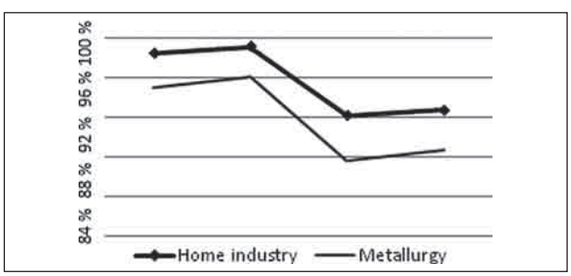

Figure 3 Productivity dynamics before restructuring of Polish steel industry

In restructuring period the open-hearth furnaces for production of pig iron were eliminated and instead of them electric steelworks and converters were installed. In the 90s of 20th century, 47 open-hearth furnace were closed in Poland. In 2002 the open-hearth furnace was used for the last time in Polish steelworks (Table 1).

Table 1 **Manufacture of crude steel by process in Poland from 1990 to 2011 [5]**

Year	Process (M mt)		
	Converters BOFs	EAFs	Open-hearth furnaces
1990	7,2	2,5	3,9
1992	6,3	1,7	1,8
1993	6,0	1,4	1,7
1994	7,0	2,4	1,6
1995	7,6	2,6	1,5
1996	6,7	2,7	1,1
1997	7,4	3,0	1,1
1998	6,2	3,2	0,5
1999	5,4	3,0	0,4
2000	6,8	3,3	0,4
2001	5,8	2,8	0,2
2002	5,8	2,5	0,1
2003	6,1	3,0	0
2004	6,9	3,7	0
2005	4,5	3,8	0
2006	5,8	4,2	0
2007	6,2	4,4	0
2008	5,2	4,5	0
2009	3,2	3,9	0
2010	4,0	4,0	0
2011	4,4	4,4	0

An investment was made in continuous casting of steel production lines (COS). In 1992, 0,8 million tonnes of steel underwent processing with the use of continuous casting of steel production lines, which was almost 6 %. In years 1993-1997 ten production lines of continuous casting of steel type were started in Polish steelworks with annual processing power of 8,8 million tonnes [2]. It can also be concluded from data presented in Table 1 that production of steel in Poland decreased from 13,6 million tonnes in 1990 (before restructuring) to 10 million tonnes in 2006 after completion of the last governmental program of restructuring steelworks [1]. In 2011, 8,77 million tonnes of steel were produced in all steelworks in Poland [6].

Together with assets and technologies restructuring, there was also a restructuring process conducted in the range of products (Table 2). In the structure of manufactured products in steelworks in Poland there are mainly long products (about 60 %) Table 3. National steelworks produce too small amounts of flat products including those which are cold-rolled. Poland also does not produce stainless steel. More than 95 % is plain-carbon steel, 4,8 % is alloy steel and only 0,03 % is steel resistant to corrosion. There is still too little amount of special products (i.e. highly processed products or products with specific parameters).

Table 2 **Breakdown of metallurgical product in Polish steelworks plants [5,6]**

Year					
1990	1995	2000	2003	2008	2010
Tubes (M mt)					
0,567	0,559	0,484	0,310	0,409	0,384
Seamless tubes (M mt)					
0,299	0,254	0,200	0,142	0,193	0,158
Welded tubes (M mt)					
0,267	0,306	0,284	0,167	0,216	0,226
Cold rolled sheets (M mt)					
1,047	1,023	0,953	0,864	0,689	0,835
Cold rolled strips (M mt)					
0,192	0,159	0,066	0,050	0,018	0,015
Cold rolled flat product (M mt)					
1,239	1,183	1,019	0,914	0,707	0,851
Zinc sheets (M mt)					
0,280	0,377	0,491	0,390	0,437	0,455
Hollow sections (M mt)					
0,220	0,276	0,321	0,459	0,408	0,455

Table 3 **Breakdown of the hot rolled long and flat products (M mt) [5,6]**

Year	Flat products	Long products
2000	3,048	4,483
2001	2,415	3,953
2002	3,190	3,173
2002	2,316	4,485
2004	2,781	4,726
2005	2,316	4,484
2006	2,389	4,735
2007	2,606	4,923
2008	2,474	4,775
2009	1,918	4,102
2010	2,113	4,534
2011	2,590	4,930

Besides the discussed areas of steelworks restructuring, there is also the question of employment reduction and improvement of work efficiency. Before restructuring (in 1990) Polish steelworks industry employed 147 thousand workers, out of whom 70 % had vocational education, more than 27 % secondary education and only about 3 % higher education. Work was conducted in 3 shifts, 60 % of employees worked in first shift, about 27 % worked in second shift was and 12 % of workers in third. Age structure of employees before restructuring was the following: 20 % of all staff were workers aged up to 30 years old, 30 % of staff were workers between 31 and 40 years old and workers aged 41 to 50 were the biggest group (35 % of staff), workers aged 51 to 60 were 15 % of staff and there was only a 0,9 % of workers over 60 years old. Efficiency calculated per one employed person was about 90 tonnes of steel a year. After restructuring the employment in Polish steelworks industry was on the level of 25 thousand people. The number of workers with higher education increased. Such workers are currently 12 % of the staff (about 10 % increase). There is also an increase observed in secondary educated workers, who are currently 38 % of staff (10 % more than the state before restructuring). Changes are also observed in age groups, but they are not beneficial for the enterprises because more than 45 % of staff are workers aged between 51 to 60 years old. Such situation is caused by policy of reducing employment and stopping the process of hiring new employees. It should be underlined, however, that the mentioned age group of workers has biggest work experience and such experience should be used in passing on knowledge to younger, new workers. In ArcelorMittal Poland there are the following programs conducted: Talent management and Active 50+ in which workers with longer work experience are mentors for newly employed workers [7]. Efficiency of workers after restructuring, as a result of employment reduction, increased to above 300 tonnes of steel per year per 1 employed person.

STRATEGIES OF METALLURGICAL ENTERPRISES AFTER RESTRUCTURING IN POLAND

Metallurgical enterprises in restructuring period have come a long way from "fighting for survival", through restructuring of assets and functions, up to restructuring of processes [8]. Assuming the strategy of "fighting for survival", steelworks strived for being on the market and privatisation shaped the new, independent legal entities. In repair restructuring period, steelworks wanted to maintain profitability and financial liquidity through technological changes and product changes, selling the unnecessary properties and outsourcing, as well as through reduction of employment and improvement of work efficiency [9]. After repair restructuring steelworks were taking up strategies of competitive advantage. On the basis of conducted research among the steelworks functioning on Polish market, it was concluded that strategies applied by metallurgical enterprises after repair restructuring were mainly based on using the market tides (increase of the demand for steel in years from 2004 to 2008). In the analysis of strategic behaviours of the metallurgical enterprises on steel market in Poland it was found that an attempt was made to order the types of strategies. Tested metallurgical enterprises were divided depending on their owners' capital into two groups: 1) metallurgical enterprises taken over by foreign capital 2) national metallurgical enterprises or ones with mixed capital. In the first group of metallurgical enterprises there were the following strategies applied: market expansion, increase strategy, leader strategy, leadership in costs and diversification. Enterprises in the group exposed also the strategy of purchasing other enterprises within horizontal and vertical consolidation. Capital groups were taken over by entities which provided competitive advantage in added value chain, for example ArcelorMittal took over from State Treasury (purchase of shares) coking plant Zdzieszowice, incorporated Rolling Mill of Thick Metal Plates "Batory" and "Królewska" Steelworks in Chorzow. Metallurgical enterprise

ArcelorMittal created also its own network of products distribution (ArcelorMittal Distribution Solutions). The enterprises of the second group, on the other hand, conducted the strategy of stabilisation and services for given market niche. In the second group consolidation strategies were realized too (capital group Alchemia). After the effects of world economic crisis (the end of 2008) started to affect the market, metallurgical enterprises applied the strategy of cutting (reduction of stocks, freezing the investments, reduction of employment, shutting down the unnecessary production capacity, etc.). Conduction of strategy of cutting allowed the steelworks to survive the first four years of crisis and now the enterprises take up active actions called risk management [10, 11] (active attitude towards changes on the market). Active strategies of the enterprises in crisis (which is in progress now) are first of all: looking for ways to decrease processes costs (re-engineering – re-building the business processes) [12] and achievement competitive advantage over other steelworks with higher costs of manufacturing.

CONCLUSIONS

After restructuring, steelworks in Poland concentrate on improving the functions and processes, both on strategic and operational level. The concept of re-building business processes is being implemented in reference to: level of customer service, costs of activities, time of order completion, expectations of customers and quality. Steelworks after restructuring in former communist countries have learned to function in conditions of market economy.

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Note: The responsible translator for English language is D. Grachal, Katowice, Poland