INNOVATIVENESS OF METALLURGICAL PRODUCTION ENTERPRISES

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Abstract

Innovation is vital for Polish metallurgical enterprises. As a result of globalization of markets, only companies actively innovative can meet market requirements. The paper identifies areas of innovation, and the potential for their implementation in the metallurgical enterprises, which may result in increasing their competitiveness. This was done both in the area directly related to production and in broadly defined business management.

Keywords: innovativeness, metallurgy, industry, Poland, world economy.

1. INTRODUCTION

The metals industry, one of the most important manufacturing industries, focused on the preparation of ore mined from the earth to obtain one pure metal, metal refining, their heat treatment and chemical-thermal (quenching, etc.), casting in order to give them a specific shape and the manufacturing of alloy. There are two sections of the metals industry\cite{1}:

- iron and steel,
- non-ferrous metallurgy products manufactured by the steel industry are usually rough, which then use the machine industry and metal and electrical industry, some sections.

The most important metallurgical products and manufacturers in the world include \cite{6}:

- steel - Japan, USA, China, Russia, Ukraine, South Korea and the countries of Western Europe;
- aluminium - the U.S., Russia, Canada, Japan, Brazil and Australia;
- copper - the U.S., Chile, Japan, Russia, China and Germany;
- zinc - Russia, Japan, Canada, China, USA and Germany;
- lead - the U.S., Russia, Germany, United Kingdom, and Japan, China and France, as well as tin, mercury and precious metals (gold, silver and platinum).

In Poland, the scale of iron, whose traditions date back to the mid-nineteenth century, is mainly located in the Upper Silesian Industrial District, as well as in single centres (Krakow, Czestochowa, Stalowa Wola, Ostrowiec Swietokrzyski, Warsaw). In addition, non-ferrous metal mines near the smelter were created producing: copper (smelter, Legnica), zinc and lead (Bukowno), while based on imported iron ore is in Konin aluminium plant.\cite{2}

2. INNOVATIONS IN THE METALLURGICAL INDUSTRY

Recession in the metallurgy of steel companies; verified strategies and cleared the industry, although this was not a drastic change. Steel industry, both in Poland and on global scale is driven by the reduction of cost.\cite{4} As for the Polish market Poland is gently going through a crisis and had no negative GDP. However, without any doubt the steel market has shrunk.
In the first six months of 2009 production declined by 40%. At the end of the year consumption was estimated to have declined by 30%. This process of rapid progress, even as the industry in which business indicators are usually very lean.

On the other hand representatives of the sector - implemented saving strategies that enabled companies to survive the worst period. Both producers and distributors have suffered losses, but have been able to cover them. Companies that worked on a speculative basis and whose sole objective were quick profits lost solvency. This was not the right strategy.[3]

In the event of loss of liquidity in the market every swing reflected the negative effect. The entities, which carefully controlled costs and in better times, even with limited demand on the market, have survived. Generally, steel-consuming sectors were based on inventories and cost-effective activity. There was, however, on the side of the main recipients of discharge bankruptcies, acquisitions or mergers. First of all, there has been a rationalization of costs. Both producers and distributors reduced the production and reduced employment.[7]

ArcelorMittal anticipating the negative effects of the crisis The company also limited capacity in other locations around the world almost the whole of last year. Capacity reduction also occurred in the ISD Ironworks Czestochowa.[5]

The crisis also gave its toll on distributors, but led to the rational application of a whole range of business activities. Forced a greater degree of control and supervision over warehouses. Occurred at the same time a clear expansion of the activities (investments in service centres).

Some companies decided to begin production.[6] All this surely pay off when the economic recovery, making the market more mature and resistant to fluctuations. Relationships also changed distributors from insurers. In many cases, companies abandoned their services to insurers and the user assumes the risk of transactions. Overall, there was more control customer solvency due to a legitimate concern for the maintenance of liquidity.

The crisis is not only negative effects. In times of recession entrepreneurs can also earn. The turmoil in the market always encouraged purchases and acquisitions. Some companies have used a more difficult situation on the global market to acquire smaller players who are not coping with the crisis, mainly due to financial problems.

Some global companies have chosen to attract investors, hoping to strengthen the current position in the steel market. Industrial Union of Donbass (ISD) has acquired a new investor. New partners, led by A. Katunin, the owner of an international dealer Carbofer General Trading, bought 50% plus two shares of ISD Corporation.[6]

According to investors, this is an important step in the implementation of previously announced corporate strategy ISD directed at creating a vertically integrated Ukrainian company and reinforce its position as one of the leaders of the global steel industry.[3, 5]

Searching for strategic partners lasted for three years. Selecting a partner in a natural way has been hampered by the decline in investment attractiveness of Ukraine’s metallurgical industry. It is worth noting that the new corporate partners acquired the block of shares during a market downturn.

Main synergies in 2010, the corporation acquired ISD at the conclusion of the relevant financing modernization of main production processes in the Ukrainian steel mills, installation of cogeneration and a whole range of other projects. ISD Corporation is confident that such steps will lead to the leading edge of a major Ukrainian asset after stabilizing trends in the global market. On the other hand the company is stable - despite the crisis - the condition is not relinquished their investment plans. ArcelorMittal has signed an agreement with the Government of Orissa on the construction of a steelworks in the state. Plans to build two steel complexes assume the annual production of 12 million tons of steel.
The company did not give it to invest in Poland. With the investments conducted by the Polish steel company not only equal to the best establishments in Western Europe, but in some aspects of technology are better than them. Opened by the company, ArcelorMittal Poland modernized mill cold strip mill in Krakow uses the latest technology.

The cost of the investment amounted to nearly 98 million zł. The modernized cold rolling mill is a response to growing customer demands for quality products. The target customers are automotive, construction and household appliances. Rolling is an essential element of the five-year investment in ArcelorMittal Poland - part of the investment process, which leads from the company until the acquisition of Polish steel ironworks in 2004. Until today, invested in the technology park 3.8 billion zł.

It turns out that the crisis is not as bad as predicted. Crisis situation with which we dealt predominantly affected the company, which has been restructured much earlier - and therefore before the crisis - according to EU standards. The method of restructuring, which threw the EU, the company adapted to EU standards in the areas of finance, employment, or sphere of production and thus increases their resistance to the phenomenon of crisis. Thus, positive self-verification ahead of the crisis in these cases.

On the other hand does not mean that everything was painless, as these companies also need to cut production or employment. The crisis has therefore revised its production plans for many companies, which in most cases, meant simply to adapt strategies to new market realities, and not trouble or collapse.

Comparing the situation 2010 years should be noted that when it comes to production, it is the smallest decrease in reported hot rolled. But this is not a sign of intensification of infrastructure projects. Significant growth in exports of this product indicates that a large part of this production does not consume the internal EU market. The remaining sectors recorded a decline of about 30%.

Negatively characterized by hot-rolled with more than 45% decrease compared to the same period in 2009. Rails production segment in Poland continues to grow, as exports and - worth mentioning - the lowest recorded apparent consumption of all products in the fall. Analysing the import, you will see a sharp decline. Given that the price level in Poland is low compared to Europe. This causes a total lack of profitability of bringing to our country in particular, rods and profiles. Decline in imports of these products reaches 60-70% according to various calculations.

3. SUMMARY

According to forecasts, MEPS, the 2010 world steel production reached 1.200 million tons. Gradually recovering demand for steel, both on Polish and global steel market. Experts predict growth, also on the Polish market. This will cover housing and infrastructure, whose growth is estimated at 20%.

According to forecasts, Poland will be the leader when it comes to housing and infrastructure. Forecasts - both global and local - are optimistic and point to the growing steel production and higher demand for steel products. This was achieved thanks to the growing demand in the U.S., Japan and Europe.

LITERATURE

a) Monographic publication


c) **Article in professional journal**


