



STEEL CONSUMPTION IN THE VIETNAM ECONOMY

In recent years, the Vietnam economy has made good progress and come to its stage of industrialization and modernization. In this stage, the steel industry provides a base not only for engineering and construction industries but also for many others.

The steel industry is also considered as the base for industrialization and plays an important role in the development of infrastructure.

In the transition from the centrally - planned economy to the market mechanism, the Vietnam steel industry has made many achievements:

- The merger between the Metal Company and the Steel Company forming the Vietnam Steel Corporation has enabled a rearrangement of personnel, including many well-trained managers, and a reorganization.

- The production capacity is enhanced by new investments and cooperation with local and foreign companies.

As a result, its output increased year after year, from some 200,000 tonnes in 1992 - 1993 to some one million tonnes this year. However, the steel industry has met with difficulties in producing and distribut-

ing its products.

These difficulties didn't come from the market demand for high-quality products, because many big steel mills, such as Thái Nguyên Rolling Mill, Vieasa Factory, Vikimco Factory, Bà Rịa Steel Mill (a Japanese - Vietnamese joint venture), Đà Nẵng Steel Mill, etc. have been equipped with modern production lines.

The industry has also met with no difficulty in satisfying the market demand, because in 1995 and 1996, nearly one - third of the steel output was unsaleable.

The problem to the steel industry is to identify the structure of its output in each development stage of the economy with a view to supplying what the market needs and avoiding waste.

In any country, the market demand for steel is very diverse. Studying the structure of steel products consumed in industrialized countries, we saw that their steel output was diversified into the same structure. In the industrialization period, those countries gave top priority to infrastructure development, and in each development stage, certain industries were encouraged, such as textile, shipbuilding and

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electronics industries in South Korea; or plastic, electricity, shipbuilding, electronics, metallurgy and information industries in Taiwan, etc.

Those countries, by exploiting their comparative advantages, have selected and developed different industries in order to facilitate the industrialization. From this reality, we could draw the following remarks:

- Key and prominent industries are based on well-upgraded and improved infrastructure.

- Top priority is usually given to light or engineering industries.

Studying the structure of steel products consumed by those economies during their industrialization, we saw the following remarkable changes:

- In the first stage of development, the construction and transportation industries consumed 60 - 70% of steel output.

- After the period of infrastructure development, engineering and light industries became main steel consumers. Manufacturing industries, during the industrialization, consumed 60 - 70% of steel output, while communications industry used 2-5% and construction 20 - 30%.

It's easy to see that in developed countries, the amount of alloy steel consumed has increased to a certain extent:

- From 1960 to 1972, the consumption of alloy steel shot up during the industrialization in many countries.

- From 1993 to 1995, although industries developed well but the amount of alloy steel consumed made no remarkable increase because scientific achievements had made it possible to replace alloy steel with new materials. At that time, the percentage of alloy steel is nearing its upper limit.

The upper limit percentage is the ratio of quantity demanded of a product to another, for example of sheet steel to shaped steel. This percentage tends to increase to a certain extent as the economy develops, and then, stays somewhere about this upper limit.

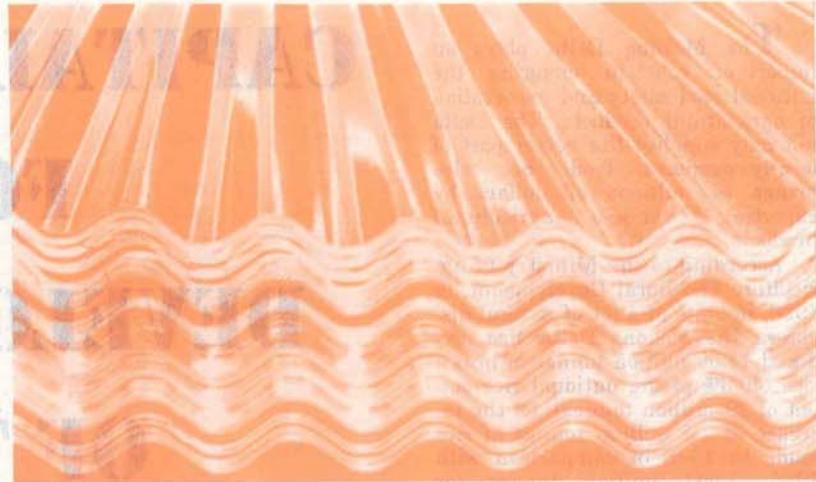
Studying the consumption of sheet steel and shaped steel in such nations as the US, Japan, the UK, France and Germany, we gathered the following data:

- In the 1960s when the industrialization was carried out in some countries, the shaped steel represents a high percentage compared with sheet steel in steel output, and then the amount of sheet steel produced started to increase and reached 50 - 60% of steel output. Its production could keep on increasing if the development of other industries needs more sheet steel. In developing countries, sheet steel usually represents some 20% of steel output.

In the first stage of development of steel industry, many countries produce simple steel products such as rod, tube or squared rod because the production of these products demands small investments and simple technology, and moreover, these products are much needed in the first stage of industrialization.

In the next stages of development, the demand for sheet steel will increase and sheet steel will represent 50 - 60% of the steel output because many industries such as engineering, shipbuilding, automobile, agricultural machine...will develop and need a lot of sheet steel. They usually produce two kinds of sheet steel: the thin one (3mm or thinner) and the thick one (over 3mm).

The percentage of each kind of sheet steel varies according to the development level and industrial development policy of each nation, but



generally, the sheet steel usually represents from 60% to 75% of the national steel output.

In the period between 1990 and 1995, the production of thick sheet steel in the US and EC members increased remarkably, because of an increase in demand for military supplies and equipment resulting from their involvement in the Gulf War and many civil wars in Africa. Meanwhile the production of this product in Asian countries, South Korea for example, was on the decrease because these countries concentrated on producing consumer goods (car, washing machine, fridge, air - conditioner, etc.)

By gathering and analyzing information about the development of foreign steel industries and about reality in Vietnam where the economy has just started to industrialize and modernize we could estimate the structure of steel consumption in Vietnam today:

shaped steel) will represent 60 - 70% of the steel output. This estimate is similar to results worked out by UN experts.

The Vietnam manufacturing industry is backward, its size is small or medium, its equipment isn't modern and most of its products are consumer goods for local markets, so percentages of thin sheet steel and thick sheet steel (23% and 10.3% respectively) in the steel output are reasonable.

In the future when the industrialization goes smoothly, this structure will change:

- The percentage of sheet steel will increase in comparison with shaped steel.

- The amount of steel products consumed by manufacturing and engineering industries will increase while the amount consumed by communications and construction businesses will decrease.

Studying and analyzing the steel

Table 1: Steel Consumption in the Vietnam Economy

Steel products	Engineering industry	Construction	Communications	Others	Total
Shaped steel	10.5%	34%	18%	1.5%	64%
Thin sheet steel	14%	4%	3%	2%	23%
Thick sheet steel	5%	2%	3%	0.3%	10.3%
Alloy steel	1.5%	0.4%	0.5%	0.3%	2.7%
Total.	31%	40.4%	24.5%	4.1%	100%

Source: Công Nghiệp Nặng (Heavy Industry Magazine), 1995
Ironmaking and Steelmaking, 1996.

At present, the infrastructure in Vietnam is improved, communications and construction businesses are developing, so the market demand for steel products, especially shaped steel, is very great. That is why the shaped steel (U-, I-, or L-

consumption in developed countries will be of great help to researchers, policy - makers and businesspersons who want to find out business opportunities and develop the steel industry in Vietnam.