NEU-JICA Joint Research Project

# Second Intensive Steel Seminar Minutes

As an important part of research activity and policy dialog of the NEU-JICA joint research project, a one-day seminar to discuss the current and future policy of Vietnam's steel industry was held in Hanoi on October 25, 2001. This was a second such meeting. The seminar was hosted by Mr. Pham Chi Cuong, our project member and Deputy General Director of Vietnam Steel Corporation, and attended by concerned ministries, Japanese and Vietnamese steel experts, and project members.

The steel industry master plan was approved by the Prime Minister in September 2001 (No.134/2001/QD-TTg). It was considered very important at this time to evaluate this Decision and make suggestions for concrete implementation. The contents of the Decision were explained by VSC and discussed extensively by the panel. Japanese experts noted ambiguities and potential problems in the master plan and advised on the technical and managerial choices that VSC was about to make. Concrete technical options and product targeting were proposed to meet the shifting market demand. MOF presented its views on protection on the steel industry in the future, which was also lively discussed.

The contents of the entire discussion are reported below. All statements are on the record.

**Date:** October 25, 2001 (8:30-16:35)

**Place:** Conference Room in the head office of Vietnam Steel Cooperation (Hanoi)

**Participants (Vietnamese):**

(*) indicates co-chairperson

Active participants
Nguyen Kim Son (General Director, VSC) (*)
Pham Chi Cuong (Deputy General Director, VSC)
Tran Minh Huan (Director, International Relation Dept, Ministry of Industry) (*)
Nguyen Thi Lan (Import-Export Tax Division, Ministry of Finance)
Bui Van Muu (Dean, Iron and Steel Making Department, Polytechnics University)
Hoang Duc Than (Research Member, NEU) (*)

Tran Van Hoe (Research Member, NEU)
Pham Hong Chuong (Project Coordinator, NEU)
Truong Chi Trung (MPI, in charge of steel industry)

Other participants
Nguyen Huu Tho (Director, Planning and Investment Dept, VSC)
Nguyen Phuc (Deputy Director, Planning and Investment Dept, VSC)
Nguyen Van Thong (Director, Engineering Dept, VSC)
Truong Dinh Viet (Acting-Director, Im-export Dept, VSC)
Dang Thuc Khang (Director, Accounting and Financial Dept, VSC)
Vu Truong Xuan (Deputy Director, Engineering Dept, VSC)
Dinh Van Tam (Deputy Director, Office Cabinet, VSC)
Trinh Khoi Nguyen (Staff, Planning and Investment Dept,VSC)
Nguyen Van Nghiep (Dean, Integration-Material Technology Faculty, Polytechnics University)
Than (Vice-Dean, Integration-Material Technology Faculty, Polytechnics University)
Nguyen Minh Ngoc (Research Member, NEU)
Hang (Cong Nghiep [Industry] Newspaper)
Reporter (Tap chi Khoa hoc [Science Journal])

**Participants (Japanese):**

Active participants (*) co-chairperson
Kenichi Ohno (Professor, GRIPS) (*)
Nozomu Kawabata (Associate Professor, Tohoku University)
Nobuyoshi Tanaka (JICA expert)
Toshiki Yabuta (JICA expert)
Yoshiyuki Sakaguchi (Nippon Steel Trading Co.)

Other participants
Hitomi Asano (Attache, Embassy of Japan)
Koji Nishimiya (JICA)
Chiaki Konuma (JICA)
Kuniaki Amatsu (JICA)
Taro Hamada (GRIPS)

**Interpretation:**

Translation Dept, Ministry of Foreign Affairs

## Morning Session

Opening remark by Nguyen Kim Son (Omitted)

Presentation by Pham Chi Cuong: "The Real State and Future of the Steel Industry in Vietnam"

The development stages of the Vietnamese steel industry in the past are explained according to the presented paper. Since 1990, the steel industry has achieved strong development. The Vietnam Steel Corporation plays a key role in the industry. Even so, the steel industry faces a number of serious problems. Its technology is obsolescence, capacities of each furnaces and machines are too small, and production cost is higher than the world average.

The industry's Master Plan is based on the JICA Plan and revised further by domestic experts and various ministries. In August 2001, the Vietnam government approved the Master Plan up to 2010, outlining key directions for future development of the Vietnamese steel industry. This was subsequently issued as the Prime Minister's Decision. However, the Master Plan will be revised as necessary to reflect a new situation in the international and domestic markets in the next 10 or 20 years. It is not something fixed permanently.

The major targets of the Master Plan include the following.

1. The steel industry must maintain stable growth to meet the requirements of the national industrialization and modernization, gradually becoming a pillar of Vietnam's industry.

2. Closely coordinate the use of domestic and foreign resources. Opportunities for international cooperation and labor division should be fully exploited.

3. Balanced development between steel making and steel rolling is essential for reducing billet imports.

4. Product diversification and establishment of standards are needed to meet the market demand.

5. Investments should be directed to VSC (which now has a 31% share) to become a leading corporation in domestic steel production while encouraging other economic sectors also to participate in steel production.

6. Exploitation of domestic natural resources, especially iron ore, should be considered.

7. Taking rational steps to develop the industry in the current difficult condition for fund mobilization. Mobilize different sources including state investment

loans, which will be the main source in the first period, and foreign loans with government guarantee.

8. Development of human resources and technology should be paid more attention.

The detailed investment plan for 2001-05 was shown in the table. The total targeted investment from 2001 to 2005 is approximately 1 billion USD in the Master Plan, and this does not include any investment for new integrated steel works. The financial source remains unclear. Since the government must also invest in other projects, it has only limited funding for the steel industry. Finding the remaining balance will be the responsibility of VSC.

Nozomu Kawabata

I would like to ask three questions about the Master Plan.

First, the Master Plan includes investment in the production of long products. However, under the current oversupply of long products, more investment would surely make the future situation worse. Why does Vietnam want to do this?

Second, did the government decide to exploit Thach Khe iron ore mine, which is already included in the Master Plan (450 billion VND)? Also, has the detailed construction plan for an integrated steel works been proposed with respect to location and material procurement?

Third, the table in the Cuong paper indicates that the location of the first hot strip mill (HSM1) will be in the South (Phu My), which is appropriate from the viewpoint of efficiency, while the Prime Minister's Decision leaves it blank. Has the location of HSM1 been decided?

Cuong

Construction of the new long product mills is to replace the old, inefficient mills. That will not add to the nation's capacity but will make VSC more competitive.

As to Thach Khe mine, the Vietnamese government is now conducting a pre-feasibility study (pre F/S) in cooperation with Russia, especially regarding future processing and using high-zinc ore. This will be completed in two years. If the result is favorable, the government will assign the VSC to carry out a full F/S with the Russian partner. The amount included in the M/P is the cost of F/S, but it may not be used if the pre F/S turns out to be negative.

The location of HSM1 has not been decided officially. The table in my paper reflects my personal view. The Japanese experts have already raised the issue, and we need to consult with more international experts before the final official decision is made.

Kawabata

The location of HSM1 should be decided as soon as possible. Otherwise the construction plan to meet the domestic demand will be delayed.

Tran Minh Huan

The Ambassador of South Africa asked me about the Thach Khe situation. They are also interested in the possibility of exploitation.

Hoang Duc Than

Mr. Cuong presented four missing links in the Vietnamese steel industry: capacity, market-orientation, management and skills and human resources. May I ask two questions?

First, in the resolution of the 9th Party Congress, very ambitious goals are presented for the steel industry, including 1-2 integrated steel works, producing flats and sheets, and domestic rolling capacity. These targets are quite high. By what concrete measure do you achieve them?

Second, the domestic market share of VSC has declined from 95% previously to a mere 31% today. With this background, what is the roll of the non-state sector in the construction of the new integrated steel works and other investments?

Nguyen Kim Son

The four shortcomings mentioned above are permanent. But we cannot stop here. There is no way but to go forward and develop steel; there is no other choice.

It is true that the targets of the Master Plan in its first phase, including billet production, are ambitious and will be a very heavy burden on us in financing, human resources, infrastructure, etc. Even so, I am sure we can meet this challenge. The billet centers in the North and South are already approved.

Difficulties we now face are largely global. International competition is very tough. Even without exporting, strengthening competitiveness is necessary to meet the requirements of the domestic market under stiff international competition. But some protection, as shown in the Ohno paper last year, is needed. Even in the process of integrating into the WTO regime, some level of protection is permitted.

As to the role of the non-state sector, the government does not make any preference for or discrimination against any sector within any particular industry, including steel. Although the share of the non-state sector is increasing, it cannot develop the steel industry alone. Since capital requirements are very high, many sectors, including VSC, must participate in its development.

Nobuyoshi Tanaka

The new rolling plant in Da Nang listed in the Cuong paper is not included in the Master Plan of the government. Under the situation of overcapacity in rolling nationwide, how is the market to be divided among VSC, joint ventures and the private sector?

I would also like to hear more details on the proposed F/S of the Thach Khe mine to be conducted by the Russian team.

Son

You are right, the Da Nang rolling plant is not included in the official Master Plan. But in order to improve competitiveness and raise output of VSC to meet the future demand, we believe new rolling plants need to be constructed, raising the market share of VSC to 54% by 2005. The old plants in Thai Nguyen must be rehabilitated and a new Da Nang plant must be built to keep our presence in the market. Otherwise, VSC will be marginalized. The proposed Da Nang plant will be in the center of the Vietnam, 700 km away from the steel production centers. This distance will be an advantage to the new plant.

Russia's first F/S on Thach Khe dates back to the 1960s. They made a thorough study of it and other teams also conducted similar studies. The ground was dug and samples were collected. Russia has two steel mills using ore with high-zinc content of 0.07-0.1%. Russia can make use of their own experience and technology in conducting the Thach Khe F/S. It is also less costly to ask Russia to do an F/S. The pre-F/S will make an assessment of the mine's feasibility, including infrastructure, topology and processing technology. If we receive a favorable result, we go on to the F/S.

Kenichi Ohno

I wonder what is the role of the public sector in the development of the steel industry. If VSC tries to participate in all branches of steel production for fear of marginalization, including long products which are now in oversupply, it will aggravate the problem. The role of the public sector should be precisely to avoid such wasteful investment by issuing proper warning signs to the private sector and execute investment coordination. To join the race for overproduction is not the right target. The proper role of the public sector is to initiate the production of flat products and to increase billet production which no private firms are willing to undertake because of uncertainty and the lack of capital, in order to adjust the imbalance in steel supply.

Cuong

Now I come back to the question Mr. Kawabata and Mr. Ohno raised. VSC's plan is to replace many existing old rolling mills by new investment. This is true both for Thai Nguyen and Da Nang. The total production capacity of long products will not be increased. The Prime Minister also instructed not to increase the capacity of long products especially by local authorities. For now, no more licenses will be issued for the production of long products.

As to Thach Khe, I personally took part in the bilateral talk where Russia agreed to do the pre F/S. They proposed to study the following two aspects, namely the exploration of the mine and the processing of ore to reduce the zinc content to less than 0.04%. But we still need high quality ore for the blast furnace. As we said before, whether this pre F/S will lead to a full F/S is uncertain at this moment.

(Coffee break)

Presentation by Nobuyoshi Tanaka: "The Selection of the Most Appropriate Process for Steel Production"

As a JICA expert, I worked daily with VSC top management for three years. This is my first return to Hanoi after six months.

It is not unreasonable to expect Vietnam's steel demand to continue to increase vigorously in the future. Regarding long products, the target of supplying 80-90% of domestic demand is desirable. Large-size section, wide flange, large-diameter bar and other special steel had better be imported, because domestic demand is too small and investment to produce them is too large.

To increase capacity by new investment, the gradual, two-track approach is recommended.

Regarding flat product, 30-50% of market demand for cold rolled (CR) steel should be supplied domestically. It is not wise to enter into the market of low quality CR products, since such a market is being flooded by cheap Russian steel and a new investment will not produce any profit. One-stand reverse CR mill is recommended for ease in quality control and handling thin materials. Here again, special steel should not be produced for the same reason.

As to hot rolled (HR) steel, domestic demand for thin HR coil is likely to rise. A compact tandem HR mill with 6 stands and finishing which can handle from thin to heavy materials is recommended.

Electric arc furnaces (EAFs) for long products with state of the art technology, including the ladle furnace (LF), will shorten time for making steel. Continuous continuous casting (CCC) will improve productivity.

With regard to the choice between blast furnace-blow oxygen furnace (BF-BOF) versus other technology, we must consider the global shortage of coke in the future. As the life spans of many existing coke ovens will expire in 2010-2030, it is essential to consider whether to build new coke ovens or to adopt an entirely new smelting process. In either case, there are both merits and demerits. New smelting technology is developing, but its speed is uncertain. It is also possible to produce flat products with EAF-made steel with much lower cost (about half), but the quality is low and products are limited. Only the US has succeeded in commercializing this method, but the US market is huge.

As to blast furnaces (BF) proposed for a future integrated steel works, we can learn from international experience. BFs in landlocked areas are uncompetitive; all such BFs in EU have been shut down or replaced by EAFs. In Japan, BFs have large capacity, with the average size of 3,580$m^3$. Meanwhile, bars and wirerods are all produced with EAF only, no BF-made steel is used for these products.

In Korea, POSCO has many BFs of the same size (3,800 $m^3$), which reduces investment and maintenance costs. Their Corex technology is more efficient than a small BF but less efficient than a large BF. EAFs are efficient but their product prices are low.

Taiwan faces a shortage of crude steel; their BFs are inefficient. We can also draw many other lessons from the experiences of China, India, Brazil and South Africa (see paper).

In conclusion, I would like to repeat the two key recommendations. First, produce flat products with good quality, in order to avoid head-on competition in the poor quality market. Second, Vietnam must be very careful in the use of domestically available resources. High zinc ore is unsuitable for BFs. Even if you increase the coke rate, productivity will be low and BF life will be shortened. I understand VSC is currently contemplating an F/S on domestic ore. Even if it yields a positive result technically, we still have the question of cost effectiveness.

Presentation by Toshiki Yabuta: “Technology Transfer by Technical Cooperation in Steel Industry”

In technology transfer in steel, Japan has been a net exporter since 1994. In steel products, Japan has been an net exporter since the 1970s. There are four types of technical cooperation: diagnosis, consultation, training and information. All these are known as “software know-how transfer” and not patent licensing.

The steel industry is a heavy industry, but it is quite unique because it needs a large amount of know-how type technical cooperation for efficient operation. Through-process improvement and flat rolling improvement are the two major areas of technical cooperation in the steel industry.

There are seven secrets for a successful production of flat products:

1. Selection, design and installation of necessary and sufficient equipment
2. Systematic and continuous training of operators
3. Theoretical and practical training of maintenance crew and regular monitoring of equipment
4. Securing material coil of good quality
5. Strict policy and appropriate organization for quality control
6. Accurate market research and quick action
7. Optimal production control system

Technology is influenced significantly by human factors. This is a major difference between technology and science. Therefore, technology is affected by the cultural feature of each country.

The following points are typical patterns of failure in installing new equipment: (1) lack of equipment capability; (2) long delay and poor performance in the startup period; (3) use of an unsuitable mathematical model; (4) wrong selection of the manufacturing process; (5) insufficient survey on quality requirement of the market. These failures are frequently observed in the introduction process of new technology especially in the field of flat rolled products.

The problem almost always arises with technological know-how and not equipment itself. Production of cold rolled products is quite different from iron making, steel making or hot rolling. In the cold rolling process, quick response, beauty of the product, and the sense of “area” are the key factors.

Cuong

Mr. Tanaka recommends that VSC produce long products to meet 80-90% of the domestic market, and flat products to meet a lower percentage of demand, i.e. 30-40%. One of the practical reasons why Vietnam cannot produce all its steel is lack of investment funds.

According to his advice, Corex and Romelt may have a better chance than a big EAF. But these processes also have limitations. They require better quality coal and lump ore, which is difficult to supply in Vietnam. These methods are not implemented in many countries. Russia does have these, but its production is only in small amounts.

Tanaka

It is not wise to meet all domestic demand for flat steel, because a large part of this demand is of poor quality. While there are many customers who want to get only low price and low quality, such a market does not bear any profit for a newly constructed rolling mill, with a very stiff competition from Russia and Ukraine offering ultra low prices. Vietnam must aim at higher quality flat products.

Efficient smelting reduction will be realized perhaps in 10-30 years; it will take a long time. This method was first implemented by South Africa and India. They did so because their iron ore and coal are not of best quality, so they cannot be used for normal steel making. Three years ago at the IISI meeting, these countries announced their plans to shift from BF to smelting, step by step. They claim this would also reduce pollution. India may adopt Romelt in the near future too.

Some EAFs are very efficient and these will continue to exist in the future. Small BFs in landlocked areas in EU have been already replaced by these EAFs. If Vietnam improves efficiency of the existing EAFs through rehabilitation and consolidation, two efficient EAFs in the North and three in the South should be sufficient and be operated to produce necessary billets. Continuous operation of continuous casting (CCC) is desirable.

Bui Van Muu

If Japan has already studied the Romelt process, please let us know its results. Can Vietnam, which has no high-quality coal but only anthracite, apply this process?

Tanaka

It is a difficult question, but let me try.

Romelt is possibly a good idea for reducing the initial investment because its investment cost is lower in comparison to other steel making processes. But in operation, BF is more efficient; it uses only half the coal compared with Romelt. The key for a successful Romelt operation is how to efficiently utilize a huge amount of generated gas as a by-product. One way is to use it for a power plant, but then the investment cost for that plant will have to be considered. In South Africa, ISCOR has already constructed Corex combined with DRI a few years ago. In order to improve quality of products by using low quality materials, such as high zinc proportion, this combination might be appropriate for Vietnam. But overall, the technology still belongs to the future.

The domestically available anthracite can be utilized for the commercial coal-base DRI plant. Japan already uses special coal produced from the rotary hearth method. Anthracite can also be used for injection into the BF.

Cuong

You say that small BFs have been mostly shut down in the world. What proportion of steel do BFs produce in Japan?

Tanaka

In Japan, BFs produce 68-70% of steel. We have a small capacity of EAFs relative to demand, so scrap is exported. In EU, EAFs produce 40% of steel. In Brazil, EAFs produce only 20%.

Ohno

With all respect to Russian scientists and engineers, we must be careful. Russia is a transition country like Vietnam. It is not famous for economic efficiency or international competitiveness. As we know, Russia exports steel at extremely low prices ignoring cost. I am certain that Russian experts can solve technical problems of high zinc content etc. but Japanese experts are more concerned with demand side and international cost competitiveness, not just technical possibility. In evaluating the Russian reports, VSC must also add this perspective.

Cuong

Not only Japanese experts but experts from other countries also warn against the Russian studies. Because Russia recently moved to the market mechanism, the country may not be good at building efficient projects. The Russian pre-F/S might not fully evaluate market factors such as demand for iron ore. So we will be very careful. With regard to market research, we have to do it ourselves.

Ohno

When a developing country establishes a new domestic industry, it is customary to start with low quality, mass produced products. As the country accumulates experience and technology, step by step, the product mix moves up to more high-tech products. However, in the case of the steel industry, I do not think you can do this. If you go to low quality, mass produced steel products, you will have to directly compete with unreasonably low prices of Russia and Ukraine. Your project will incur huge losses in the initial years, and it will be judged a failure.

Your first cold rolling mill (CRM1) should not directly compete with Russia and other CIS countries. If you fail with CRM1, there will be no money or investors for a hot strip mill (HSM). That will be the end of the modern steel industry in Vietnam.

Investment in steel is very expensive. Naturally, the government tries to economize on the investment cost. It wants to buy the cheapest equipment. But if you do this, your competitor will be Russia and the project will fail, with all money wasted. It is

difficult to make a jump in technology, but in the case of Vietnam's steel industry, a medium-sized jump is called for. You must produce not low quality but medium quality from the beginning. This is a big challenge for a country like Vietnam at the premature stage of industrial development.

Son

Japan has extended much assistance to VSC. We at VSC also examined various technical options. Non-coke technology is not yet put to practical use. We believe the best technology for steel making is BF-BOF. As to Romelt, there will be a 10-30 year wait.

My desire in the next five years is as follows. After the pre-F/S on Thach Khe is completed, there should be an F/S for the new integrated steel works (NISW). We hope to receive JICA assistance on both mines and NISW, possibly beginning in 2004 or so. JICA has extended much assistance, but it still remains an unborn baby. If the baby is not born, it is very painful to the mother.

Yoshiyuki Sakaguchi

I have been in the steel trading business in Vietnam for five years. I go to the actual market every day throughout this country. Market research is crucially important.

In my opinion, Vietnam's demand for steel will reach 8-9 million tons in 2010, not 6 million tons as forecast by VSC. Imports of Japanese steel are also increasing. 700,000 tons will be imported this year, of which 200,000 tons are billets and 250,000 tons are hot coil. This is a "catch-up" demand and is going to rise further.

The key question are: how will VSC operate, even with new plants, in this increasingly competitive market? And how and whether to establish upstream processes?

Son

Last year, the actual demand was 2.8 million tons against projected 2.5 million tons. This year also, the actual demand is already higher than projected in the Master Plan. If the demand continues to increase like this, it will reach 5 million tons by 2005, much higher than projection.

Regarding the upstream issue, the Master Plan aims to strengthen both upstream and downstream. Demand in 2010 may well reach 8-9 million tons. In that case, the integrated steel work will be able to meet only half that amount.

Afternoon Session

Presentation by Nozomu Kawabata: "Steel Market and Investment Strategy in NIEs and ASEAN Economies: Sheets and Strip Case"

Development of the domestic market with vertical linkage is a key factor for the steel industry. It is difficult for a developing country to establish an export-oriented steel industry, so most demand must be found domestically. Regarding the domestic market, the first point to be noted is that Vietnam's market is relatively small compared with other developing countries, but it is expanding rapidly. The second point is relative intensity of steel use. Developing economies like Vietnam are steel intensive economies. The third point is that a large part of domestic demand is for products with low levels of processing. In short, not only quantitative expansion but qualitative upgrading is important.

For the construction of CRM and HSM in Vietnam, the experiences of other ASEAN countries are instructive. Most of producers in ASEAN cannot produce high-grade sheets. Two things should be remembered for the Vietnamese industry. First, mills invested by foreign enterprises are showing superior technological performance. Second, technological performance is the necessary but not the sufficient condition for success.

Currently, international steel prices are depressed. Two things can be said about this. First, any producer will have difficulty in competing with cheap products from Russia and Ukraine. Second, with respect to CIS products the price margin between hot coil and cold coil is very narrow. If the new CRM in Vietnam sells cold coil at the same price as the CIS products, it cannot make profits even if it uses CIS-made hot coil as an input.

In Vietnam, we see no market for high-grade products and no profit for low-grade products. Under these circumstances, the middle range market should be the main target for the new CRM and HSM in Vietnam. Vietnamese companies should concentrate their effort to establish clientele in this market. They should listen to both immediate customers and end users. They should promote use of steel for industries as well as households.

If CRM1 succeeds in building customer confidence in the middle range market, its operation will be efficient initially because its supply capacity will be less than domestic demand. However, there is a problem in later years. According to the approved Master Plan, when CRM2 and HSM1 become operational by 2010, the domestic supply of CR is 805,000 tons while its demand is expected to be 501-651,000 tons. Implementation of the Master Plan will create an oversupply. How can this be?

Son

Our investment strategy depends on the market size. The implementation of the investment projects will be revised according to the actual market size, and it can be delayed if oversupply is foreseen. Mr. Kawabata's calculation seems correct, but demand forecast is still uncertain. What we need to do first is to conduct a full F/S with all elements included, especially a further demand research. The basis of investment should be the market, and not political will.

Pham Hong Chuong

I would like to ask two questions to Mr. Kawabata. First, what is the basis of your market forecast in the future? Second, should we not expect a greater oversupply, since Vietnam is not the only country investing in steel?

Kawabata

My forecast of demand for cold rolled products is based on the F/S report by JICA and Nippon Steel Corporation. High and middle grade markets include motorbike assemblers, galvanized sheets, substrate and export-oriented appliance assemblers, etc. I recommend that VSC strengthen its market research activity.

I add one more important comment. If the HSM1 and CRM2 are not constructed by 2010 but delayed to a later date, oversupply of CR will be avoided. I recommend a gradual approach for constructing your new mills.

Than

I have three questions.

First, what is Vietnam's competitiveness relative to the rest of ASEAN?

Second, which country is the competitor for Vietnam?

Third, I would like to know Japan's experience of technical assistance to countries like Vietnam.

Kawabata

As to the first question, my forecast is only about demand and supply quantities. Competitiveness depends on Vietnamese efforts. My forecast assumes full capacity operation. If operational difficulties are encountered, that will make the situation worse.

As to the second question, Korea and Japan will be your main competitors if you produce high and middle quality products. According to a coil center operating in Vietnam, Indonesian and Taiwanese coils were rejected by customers such as appliance assemblers. Only Korean and Japanese coils were accepted. Thailand can also become your competitor. Siam United Steel (SUS) and Thai Cold Rolling Mill

(TCR) export CR to solve their overcapacity problem. If you ever choose to enter the low-end market, Russian and Ukrainian mills will be your competitors with cutthroat competition. As we said before, competition with CIS countries is not recommended.

Yabuta

As to the third question, Japan's technical transfer has been offered to Thailand, India, Indonesia, Vietnam, Taiwan, Korea (POSCO), etc. What we notice is, first, the level of automation and theoretical accuracy is rising recently. Second, a new equipment has greater advantage over an older one, and even a difference of 1 to 2 years also matters. However, equipment alone is not sufficient for productivity, efficiency and cost reduction. Operational and maintenance skills are more relevant for the flat rolling process. According to my experience, the skills of workers and operators will determine whether new technology contributes to competitiveness.

Ohno

Vietnam can decide its competitors; it is not a given thing. One of the key messages from the Japanese experts is that Vietnam should choose your competitors carefully. You also ask if Vietnam's steel will be competitive. Again, it all depends on your strategy. Mr. Tanaka stressed this morning that Vietnam should choose appropriate equipment. Mr. Yabuta just now emphasized the importance of "software," that operational and maintenance skills are equally important. It all depends on your business plan and government policy. We are here to help you make the right choice.

Cuong

A while ago Mr. Kawabata pointed out an inconsistency in the Master Plan, that domestic supply of CR would exceed its demand in 2010. He wants to advise that investment in CRM2 and HSM1 should be delayed, that the timing should be extended into the future. Is my understanding correct?

Kawabata

Yes.

Cuong

When the Master Plan was approved last August, our Prime Minister said that its implementation should be based on market reality and the timing should be adjusted as necessary. Indeed, we shall do so. In the previous Master Plan prepared by the Japanese experts, the operation of NISW would begin in 2017 while VSC's plan puts it some time after 2010. But this timing remains flexible. We will continue to choose and adjust for the right timing.

The Vietnamese market is small. When we permitted joint-venture companies to produce long products in 1995-96, supply increased quickly and created an oversupply. But if we stopped approving further investment in new mills, demand would have overtaken supply again very soon.

Tanaka

I agree with Mr. Cuong completely. It is essential to consider the demand-supply balance. Every mill to be constructed in the future must consider this condition. I recommended last year that the integrated steel works should be operational when the Vietnam's steel demand would reach 10 million tons. At that time, that was forecast to happen around 2017. But if 10 million tons are reached sooner, the target year could be moved forward.

Domestic demand composition is likely to be about 50:50 between flat and long products in the future.

I again stress that normal commercial grade steel with high quality should be produced in Vietnam. If so, Vietnam's CRM and HSM will be sufficiently competitive in the Southeast Asia, even against SUS in Thailand. SUS's capital cost per ton is greater than the proposed CRM1 in Vietnam. SUS has to produce higher grade CR using more expensive Japanese or Korean hot coils to satisfy its customer needs such as sheets for outer panels of automobiles. In addition, transportation cost from Thailand to Vietnam in small shipment is 20-30 USD per ton. This is also a big handicap for SUS. Will SUS be able to export CR to Vietnam? It is very doubtful.

Cuong

I want to ask Mr. Kawabata and Mr. Tanaka. We want to produce cold rolled sheet, but its price is currently depressed globally. The price is so low that it is almost the same as the price of billet or even scrap. Steel manufacturers are very worried about this. Meanwhile, we can protect our products only until 2006 under AFTA. What is your future perspective and opinion?

Kawabata

Price fluctuation is a destiny for the modern steel industry. It is inescapable for all steel manufacturers in the world.

As my data showed, the worst situation is in the price of hot coil. It is too depressed now, and this situation cannot prevail permanently. But in a sense, it is partly a permanent problem with too many developing countries building their own hot and cold rolling mills. In addition, advanced countries already have too many HSMs. It is natural to see a general trend for overcapacity in the hot sheet and strip industry.

The slab-to-HR price margin is very thin all over the world. But as my data shows, the margin between hot and cold rolled coils in Europe is normal ($80-125/ton). European products are for high and middle range markets. If you produce high quality cold rolled sheet for this middle range market, you will possibly have a reasonable margin. But the same margin for CIS products, with low quality, is much narrower ($35-72). No profit can be made in this market.

Regarding trade friction over steel, it is beyond the power of individual companies. It is a problem of the global steel trade system.

Tanaka

The current prices of cold rolled sheets and coils are strongly influenced by Russian and Ukrainian exports. These prices are very mysterious and cannot be justified in any way. Maybe their raw material cost is zero. Maybe these countries do this to earn foreign exchange. No one can produce at such a low cost. But this cannot continue for a long time. Most customers are now aware of the low quality of Russian steel. In the future the market will eliminate such producers. The same can be said about low quality bars produced by tiny private companies in Vietnam. I do not think these mills will survive for long.

Yabuta

My impression of the Vietnamese steel industry is that the quality of operators and maintenance staff is high. They are especially good at Vina-Kyoei. But you still have two defects. The first is lack of market research methods. The second is lack of "customer-first" policy. These problems are responsibilities of the management.

In Argentina, capacity utilization in ETL production was initially very low at 40% and that of HSM was only 65%. However, with technical assistance, these ratios improved to 100% and 90%, respectively. The HSM's pass ratio improved from 73% to 83% and through yield jumped from 77% to 90%. Given the same equipment, technical assistance can be quite effective in improving efficiency. Leading CRMs can achieve even 100% capacity.

Presentation by Nguyen Thi Lan (for Dang Thi Binh An): "Protection policy for steel industry under economic integration"

Vietnam's protection policy for encouraging import substitution worked well over the past years. But in the integration process, domestic companies have to face stiff competition from imports. We must shift policy to a new direction. We now need to encourage export orientation. To do so, protection policy should be applied on the selective basis. We should protect only those industries which contribute large value-added to the national economy such as food processing. Vietnam already has high competitiveness in certain industries like coffee and rice. Protection should be

applied only for limited periods. The candidates and periods for protection should be decided in accordance with ASEAN and APEC tariff reduction roadmaps.

Over the past years, the steel industry has not shown strong competitiveness and good performance. Now, we have some joint ventures producing high grade steel products. But most steel is still imported. Moreover, steel industry requires high technology and big capital but produces low profit. The effective protection ratio of the steel industry is very high. The domestic steel industry does not look competitive according to cost and benefit analysis. We should not invest more to this industry from the viewpoint of economic efficiency. But, strategically speaking, we still have to develop this industry for industrialization of the country.

The following should be a reasonable way to protect steel. For billet, it is our policy to raise its tariff in the future, but the increase will not be very large, i.e. with a maximum of 10%. For ordinary steel for construction, we will lower import tariffs beginning in 2003. According to the CEPT requirement, the tariff for construction steel will be reduced to less than 20% in 2003 and to 0-5% by 2006. For other steel products (sheet, strip and flat products) which are not produced domestically, the current tariffs are very low. The government should raise these tariffs as domestic production begins in the future, but not to a very high level since they are inputs for many industries. The maximum rate should be 20%. According to the CEPT tariff reduction schedule, the tariffs for these products also need to be reduced to 0-5% by 2006. However, this reduction is unlikely to have a strong impact on domestic steel producers because the ASEAN members are not very competitive in these high grade steel products.

Chuong

I have two questions.

First, is it the MOF policy to protect “key” industries, including steel, although they lack competitiveness?

Second, we should encourage domestic industries to export, but they first must meet domestic demand so exportation will be difficult for them. Mr. Son said that Vietnam already has overcapacity in construction steel. In that case, VSC should be encouraged to export this product, should it not? What is the policy on the steel industry regarding the production for domestic market or for export?

Lan

Apart from economic analysis, the socio-economic strategy requires the country to implement a protection policy for those industries which promote the modernization of Vietnam. They tend to be heavy industries with low profitability. Protection must be geared to the national need. These key industries will continue to enjoy policy assistance.

For them, protection for 5-10 years is acceptable. In come cases, to ensure a level playing field, extended protection of even 15-20 years is also permissible. high protection. Manufacture or heavy industries, which deem to be key industries, are put on the temporal list for 5, 10 or 15 years' protection. But after 5, 10 or 15 years this protection has to be removed.

That is my answer to your first question. As to the second question, I will invite Mr. Trung, steel expert at MPI, to answer.

Trung

The government has identified priority areas in which we should produce domestically, i.e. billets, flat products as well as metallurgy and mining industries. VSC should develop construction steel capacity by replacing old mills to improve competitiveness. Private companies should invest in new mills. Investment will come from the state budget, commercial bank loans and the budget for mining. For pre-F/S and F/S for the integrated steel works, preferential state loans at the interest rate of 3-5% will be provided. For mills for flats products and other rolling mills, commercial bank loans and other credits should be sought.

Tran Van Hoe

According to our research on the AFTA roadmap, there are two issues.

The first question is what to do with non-ASEAN countries like Korea. What are we going to do with tariffs with outsiders?

The other issue is that some people argue the government should have not only a plan for cutting tariffs, but it should also have a plan to increase tariffs. What about this idea?

Lan

First, according to the CEPT scheme, tariffs are reduced gradually until 2006 except those commodities on the exclusion list for state security and other reasons. For commodities originating in non-ASEAN countries, normal tariff are levied. But we cannot maintain too big a difference between these two rates if we are to avoid trade diversion effects

Second, a plan for tariff increase is out of question. We will not offset tariff reduction by raising other tariffs! If lost revenues must be covered, we will use other means such as VAT.

Kawabata

I agree with Ms. Lan about tariff cuts for long products. But flat products are a different matter. For hot and cold rolled products, tentative protection should be

applied because any steel mill will need a certain adjustment period at the outset before realizing full capacity utilization. On the other hand, CRM1 will provide only a part of domestic demand. It will have to compete with foreign CRMs. A fine-tuning of Vietnam's trade policy is necessary in this regard.

A trade war is going on in the global steel market. Many anti-dumping and safeguard measures are being applied. This problem cannot be simply solved by tax and tariff policies alone. Vietnam should prepare trade laws. And I recommend that Vietnam to participate in a multilateral forum for steel trade. Now only OECD has such a forum.

Lan

We already have clear roadmaps according to APEC and AFTA. We will also join WTO in the future. We are improving our trade-related institutions so they will be compatible with the WTO/GATT regime. Customs valuation rules are revised. True, tariff protection alone will be impotent against foreign malpractices, but to offset them, we can use anti-dumping and safeguard measures as well as taxes and subsidies. MOF and MOT are jointly mapping out these rules and we are in the drafting them for submission to National Assembly in 2002.

Hoe

New policies to counter foreign trade practices are being introduced. Previously, we had only taxes. Now, measures such as new valuation method and taxation at border are prepared. Tariffs and certificate and licensing systems are being revised. MOT is now preparing to remove licenses but we may still need other non-tariff measures such as certification of origin and standards to replace them. These measures are being prepared to be ready by 2002.

Than

Infant industries also need protection. I think that protection should be based on the use of local resources and inputs. For example, there should be a regulation on local contents for motorbike assembly.

Lan

Our taxation department at MOF is keen to analyze the comparative advantage of our economy. Industries that can create high value-added by using local resources should receive assistance. Employment is a very important issue for us. On the other hand, the automobile and motorbike industries actually are not that important from this perspective.

Ohno

We have to very clearly distinguish between long products, which are already oversupplied, and flat products with no domestic production at present.

For long products, according to Ms. Lan's presentation, the maximum tariff will be 10% and should be reduced to 0% very soon, together with the removal of non-tariff barriers. To me it sounds a bit too fast. I would prefer a little longer adjustment period.

By contrast, for flat steel, the AFTA schedule up to 2006 is inconsequential since Vietnam will not produce very much of it by that time. What really matters is protection after that. According to Ms. Lan, an extended protection of 15 to 20 years is even permissible for these industries. Here, I think she is a bit too generous. In my opinion, protection periods for new hot and cold rolling mills and billet centers should be extended beyond 2006, but only during their start-up periods. This will probably mean 7-8 years, and at the maximum, 10 years. 15-20 years will be too long.

Lan

For most products, the CEPT limits must be observed and tariffs must be lowered to 0-5% by 2006. For long products such as construction steel, supply exceeds demand. For flat products, all are imported. The future situation is that we will reduce tariffs on long products and increase tariffs on flat products. Actually, we do not have to worry too much about flat products in ASEAN because they lack competitiveness. For flat products originating elsewhere, the 20% tariffs will still apply.

Sakaguchi

I would like to report my observation on the current market situation, especially concerning the newly emerging products. Domestic steel demand is now increasing. Imported steel from Japan is processed here to be exported to other countries. Pipes, for example, are exported this way. My company as well as VSC's trading companies export them to Singapore. We are now thinking of exporting Vietnamese steel pipes to the United States.

Concerning Mr. Than's previous question, I think Vietnamese customers will decide who will be Vietnam's competitors. Customers will also decide which grade and which quality are needed. When you build plants, you have to listen to the customers' voice if you want to survive. The market situations are changing day by day. For example, SUS of Thailand was targeting domestic customers, but it now has to export because of the depressed domestic demand. This can happen to any company.

As Japanese companies invest in Vietnam, such as Canon in the north and Toshiba in the south, the market will change. If Toshiba decides to procure domestic flat steel for their refrigerators, the market of flat products will change and expand

dramatically in the next five years. If you plan to build a plant, you should check the market constantly. I even think exporting deformed bar, currently in oversupply, is possible with proper policies.

Closing remark by Pham Chi Cuong (omitted)

[Produced by Nozomu Kawabata and Kenichi Ohno]