

Case History: Licensing to China

How Sohio became first U. S. company to export technology to Mainland since 1940s

BY SHERMAN J. KEMMER*

My company, The Standard Oil Company (Ohio), is the smallest of four companies using the "Standard Oil" name in the United States and is commonly referred to as "Sohio." The four Standard Oil companies were among the 34 companies which resulted from the breakup of the Standard Oil trust some 60 years ago, and the companies are now strong competitors. Our company is about 110th in Fortune's 500 list, with 1973 sales of nearly \$1.5 billion. Sohio is not considered to be a "major" oil company.



Kemmer

For a company its size, Sohio is somewhat unusual in that it has no international manufacturing operations. While

Sohio has been eminently successful in its research, particularly in the chemical area, it has chosen to obtain a financial return on its intellectual property outside the United States by licensing rather than manufacturing. Within the United States, Sohio has also followed a policy of licensing its technology to all qualified parties including competitors. Sohio's royalties have been larger than would be expected for a company its size as a result of this "open license" policy and the election to license rather than manufacture overseas. Royalties for 1972 equaled \$21.3 million, and royalties for 1973 were \$24.7 million. Royalties for 1974 were about \$40 million.

Outside the petroleum business, Sohio operates a successful chemical and plastics business and it is the largest producer of toothbrushes in the world.

Sohio's Licensing Program

Sohio's major licensing success has been with its process for producing a chemical called "acrylonitrile" from propylene, ammonia, and air. The Sohio process is accepted around the world as the most economical route to acrylonitrile. Acrylonitrile, in turn, is used to produce acrylic fibers sold in the United States under such familiar trademarks as Orlon® and Acrilan®. Large amounts of acrylonitrile are used in producing a plastic called ABS

*Mr. Kemmer is General Manager of Patents and Licensing, The Standard Oil Company (Ohio).

(acrylonitrile-butadiene-styrene resin). ABS plastic has exceptional strength and is used for such things as appliances and automobile parts. It is quite likely that persons reading this paper own something made from acrylonitrile which, in turn, has been made by the Sohio process.

Sohio has also been active in licensing a process for making acrolein, acrylic acid, and acrylates. These materials have many uses, the largest volumes going to the paint, paper, and textile industries. Probably most of you are familiar with acrylic paints made from acrylates.

Barex Resin

Sohio has also licensed a process for making Barex® 210 resin, a material which provides an unusually effective barrier to the flow of carbon dioxide and oxygen. This material is especially well suited for packaging such materials as food, cosmetics, chemicals, and pharmaceuticals. Sohio also licenses a process for the manufacture of Filon® fiberglass reinforced panels. This process is licensed in 14 countries throughout the world.

Sohio has considerable prior experience in licensing in the Far East, including Japan, India, the Philippines, and South Korea. We have also licensed China Technical Development Corporation in Taipei. In the U.S., Sohio has licensed such well-known corporations as DuPont, American Cyanamid, Ethyl, Goodrich, Celanese, and Monsanto. In Europe, well-known companies such as Hoechst, Bayer, and Montecatini Edison are our licensees. Sohio also has considerable prior experience in licensing the Socialist countries including the U.S.S.R., East Germany, Bulgaria, and Romania.

China Project Background

In late 1969 or early 1970 we became convinced that there would be a warming of relationships between the United States and China which would result at least in a partial reopening of trade with China. We also believed that this reopening of trade would include the transfer of nonstrategic technology to the Chinese. Acrylonitrile is a classic case of nonstrategic material since such items as clothing and plastic parts could hardly be considered as vital defense materials. We also knew that China was importing substantial quantities of acrylonitrile based on our analysis of the worldwide flow of this material; therefore, we concluded that there was probably a desire to manufacture acrylonitrile locally. We also realized that if we did not act quickly that one of our licensing competitors might be successful ahead of us.

In those early days we also believed, erroneously, that the U.S. Department of Commerce regulations relating to

export of technology to China, when promulgated, would be much more stringent than those then existing for the U.S.S.R. We believed that the Department of Commerce review would be long and difficult and, therefore, we decided that we should "doorstep" the Department of Commerce and have our application among those first to be considered. This required careful planning since an application for an export license filed too early would merely be rejected and returned. In late 1972, Sohio received the first license to export technology granted to any company since the late 1940's. As a reference point, this was several months before Mr. Nixon's visit to China.

Cooperation with Asahi and Niigata

In the licensing of Sohio's acrylonitrile process, Sohio normally provides the basic technical information, operation manuals, operator training, and start-up assistance. The rest of the engineering and construction services are provided by an engineering company. In this case we turned to Niigata Engineering Co., Ltd. of Tokyo, an excellent company that had built 10 Sohio process acrylonitrile plants. Asahi Chemical Industry Co., Lt. of Tokyo, a licensee of Sohio's acrylonitrile process, was also brought into the group in order to provide start-up assistance, operator training, and other services that Sohio would normally provide but might be prevented from doing because of U.S. or Chinese regulations. Later, it was decided that in addition to providing these services Asahi would act as a general contractor for the project and be responsible for the general supervision of the project, arranging financing, and many other things.

Splendid Cooperation

Without the splendid cooperation of Asahi and Niigata, Sohio's licensing objectives could not have been completed as expeditiously as they were and, perhaps, not at all. In the remainder of my paper, I may write candidly of some of the conflicts or differences of opinion that occurred between Sohio and the Japanese cooperators. The fact that conflicts existed should in no way be taken as an adverse reference to either of these fine companies and, hopefully, not to Sohio. Those experienced in such complicated transactions will realize that resolving such conflicts is a normal part of doing business.

The License Agreement

Early in the project it was decided that the license agreement should be between Sohio and Asahi, as the general contractor, with a sublicense agreement between Asahi and the client, in this case China National Technical Import Corporation of Peking. The reasons for this were twofold. First, the Chinese wanted all of the responsibility in one party and, second, since the payment to Sohio was not conditioned upon receipt of the payments from the Chinese, structuring the agreement in this way had the effect of Asahi guaranteeing Sohio's payments.

The license agreement was structured as an exclusive license to manufacture in China in order to provide for the possibility of future capital gains treatment on the royalty income.

Much of the information published about Sohio's arrangement with the Chinese is not correct, including a

report in *Les Nouvelles*, Vol. 9, No. 2 (June), page 79, which states that Sohio did not allow the Chinese to export acrylonitrile. Sohio has never restricted any of its acrylonitrile licensees in this fashion.

Based on experiences of other Japanese companies in dealing with China, our Japanese friends suggested that Sohio quote a fee for a paid-up license for unlimited rights for the Chinese to use our technology in the future. While Sohio was in principle willing to quote such a figure, we felt that the amount of money would be so large as to discourage the Chinese. We quoted instead a figure for the rights to use our technology in a single plant of 50,000 metric tons per year capacity. Our initial offer was silent as to the price for future use of the technology.

Secrecy Agreement

Our Japanese friends also advised us that the Chinese would be unwilling to sign a secrecy agreement for receipt of the preliminary economic and technical information needed to evaluate the process. It was agreed between Sohio and the Japanese parties that this could probably be handled satisfactorily from our side, but it meant that the Chinese would receive very limited information because Sohio was not willing to disclose the normal amount of information without a satisfactory secrecy agreement.

Sohio was also advised that the Chinese would require the rights to manufacture the necessary catalyst for the process. Sohio declined to offer its catalyst manufacturing technology and offered instead to supply the catalyst from the United States or from a European source and to put the catalyst manufacturing information in escrow in some neutral country.

Early Negotiation

Negotiations were begun in the summer of 1972 by our Japanese cooperators. Many of our Japanese friends, including the head of the delegation, remained in China during the entire period of negotiations, more than seven months. Communication with the negotiating party in Peking was extremely difficult. Not only must a communication go from the Chinese in Peking to our Japanese friends, then to Tokyo, then to Cleveland, Ohio, and back through the same pipeline, but the message also had to survive three very different cultures, three very different methods of doing business, and three completely different languages.

The Chinese objected to the amount of the royalty and continued to press for a royalty quotation for the right to use technology in the future. We finally gave a quote for the use of our technology based on the size of the future plants to be built. This was not acceptable to the Chinese, and finally we quoted a lump-sum payment for unlimited use of our technology in China in the future. This quotation had the expected effect, and the Chinese indicated that they could not possibly consider paying the amount of money we were asking for unlimited use of the technology.

Catalyst Negotiation

The Chinese also pressed for the catalyst manufacturing information and the rights to manufacture the catalyst. With respect to our offer that this information be put in

escrow in a neutral country, it did not appear that there was any country which would be acceptable to China. We declined to go further. The Chinese did agree to purchase the initial charge of the catalyst from us.

In 1972, after many months of negotiation between our Japanese friends and the Chinese, in those dark days that December seems to bring to the Northern Hemisphere, we received a message from the negotiating party in Peking indicating that if Sohio did not lower the amount of the royalty payments our Japanese friends would be required to abandon the negotiations and return immediately to Tokyo. We carefully considered this very serious communication but finally sent a telex indicating we were not willing to lower our royalty quotes but offered instead to meet in a neutral country to explain why our offer was justified. We did not think it fair to our Japanese cooperators to permit them to assume the burden of negotiating or defending Sohio's royalty.

After several more weeks, we were informed that the Chinese were prepared to offer us an invitation to visit China providing we would agree in advance to make a substantial reduction in our royalty schedule. After a week or two of discussing the question of what constituted a substantial royalty reduction, we were finally able to convince our management that what was a "substantial reduction" was a matter of definition. We then thanked the Chinese for their invitation and replied that we were willing to come to China. An invitation for us to visit China was given during February 1973.

Hong Kong Developments

We entered China in what was the usual way at the time — from Hong Kong by train to the border and from the border by train to Canton (Kwangchow) and then by plane from Canton to Peking. While we were in Hong Kong, several important developments occurred. First, the dollar was devalued for the second time. This put the royalty negotiations in a difficult state. The quotations to the Chinese had been made in renminbi, the Chinese currency, and while the royalty in renminbi would be the same, the number of dollars was considerably increased.

Henry Kissinger had just completed another visit to China while we were in Hong Kong. Among other things, agreement was reached on the establishment of liaison offices in Washington and Peking. We concluded that this might cause a honeymoon period favorable for our negotiations.

Our Japanese partners informed us that all negotiations for the plant were complete except those relating to licensing. The major open points included:

1. The amount of royalty, payment schedule, rights to future plants, and the currency in which the royalty was to be paid.
2. The term of the secrecy agreement and other provisions relating to secrecy.
3. The improvement exchange; the Japanese informed us that the Chinese would not agree to give any of their improvements to us or to our licensees.
4. The rights to manufacture catalyst by the Chinese.

Negotiations were begun in early March in Peking with

the China National Technical Import Corporation.

Financial Negotiations:

We reached agreement rather quickly that our royalties should be quoted on a single plant basis. That is, the royalty would give the Chinese the right to use the technology for a single plant of 50,000 metric tons of annual capacity. The royalty for future plants would be negotiated at such time as the Chinese decided to build them. In order to save bank charges, the Chinese agreed that they would pay the royalty in dollars to the Japanese who in turn would transmit them to us.

Research that was done by our Japanese associates indicated that the Chinese had an aversion to the payment of interest. Since it was our policy to adjust lump-sum payment schedules depending on time of payment, we decided that the question of the amount of the payments that would be attributed to interest could best be avoided by agreeing on a payment schedule before discussion were begun on the amounts of the payments. Fortunately, the Chinese agreed to the principle of establishing the payment schedule first. The exact payment schedule was then rather easily resolved. This left only the amount of the royalty, and this question was not so easily resolved. After three days of discussions, little progress had been made. We informed the Chinese side that we felt the royalty question could be resolved in the next two days and asked their permission to receive an exit visa to leave the country the following Sunday. Our request for an exit visa was granted, and the negotiations continued.

Catalyst:

We were able to find a rather unique solution to our problems relating to catalyst, and I regret that I cannot disclose to you how this agreement was reached.

Secrecy:

The obligations of the Chinese with respect to secrecy of the details of our process proved to be one of the knottiest problems in the entire negotiation. Our normal terms are to require a secrecy agreement that expires only at such time as the information becomes public. The Chinese, on the other hand, informed us that according to the policy of their government they could agree to only a very short secrecy term. The issue was finally resolved by agreeing to a term of years for the secrecy which was quite satisfactory from Sohio's point of view. Because the Chinese have indicated to us that this term of years was much longer than they had normally accepted, I do not believe it is fair to the Chinese to disclose the length of that secrecy term.

Our normal contract has a provision that the person who receives our technology is required to have a secrecy agreement from employees or others that would receive the information in the course of construction or operation of the plant. The Chinese informed us that such agreements were not necessary in China since, when the Chinese Government gave their word that the information would be kept secret, the citizens of China would honor that commitment. Based on this assurance we did not require personal secrecy agreements.

Improvement Exchange:

The Chinese would not agree to pass on their improvements to Sohio or to Sohio's licensees. Sohio, as do most licensors, receive nonexclusive rights to improvements

(Please turn to Page 45)

prior to the Benelux uniform law, prohibit transfers of trademarks if such transfer is not done together with the business of which it forms part. Obviously, as a holding company is not authorized to own a business organization, it cannot own such trademarks as can be held only within a *fonds de commerce*.

Even if this condition is fulfilled, the administrative practice does not completely assimilate trademarks to patents. Specifically, rulings of the Administration de l'Enregistrement have set forth that licenses on trademarks can only be granted to subsidiaries of the holding company or at least companies which form part of the general group of companies to which the holding company belongs, and for all of which the relevant trademark is a valid commercial sign.

In other words, by comparison to the solutions prevailing on patents, a trademark is not completely assimilated to a *valeur mobilière* in the broad sense defined above. However, as the license of a patent is itself considered as a "participation", there would be no objection to grant a license on the trademark held by the holding company to any company to which a license of a patent, held by the same company, is also granted.

Although these solutions appear as somewhat complex, the difference between the treatment of patents and the treatment of holding companies can easily be justified by the different nature of these rights the patent being a title confirming the right to a new creation whereas the trademark is only a distinctive sign for the purpose of attracting and conserving clients to a product. In other words the attitude of the administration which treats the trademark to a lesser degree as a "participation" is justified by the fact that the patent is indeed by its nature a more complete type of industrial property.

Other forms of industrial property

On the ground of the interpretations referred to above, the Administration de l'Enregistrement has repeatedly, in its rulings, rejected the possibility for holding companies to hold any types of industrial rights other than patents or trademarks. Specifically, all attempts to include in the portfolio of a holding company industrial know-how, design rights, offership rights, exclusive sales rights, etc. have been rejected.

The Licensing Package

(Continued from Page 21)

plant construction and production start-up. If the plant has a certain size it will be essential to obtain a net plan from the planning department in order to keep up with all the problems.

Economics of a Licensing Operation

All the above-mentioned requirements for successful negotiation and licensing are only a sort of checklist which must be adapted to each case. One of the main purposes of the exercise we went through is to show that licensing is not cheap. Most licensors simply consider licensing income to be net additional return without considering the cost of the operation. And we have to understand: there is no licensing without cost except in very rare cases where

licensing is just a means to avoid patent litigation. It is therefore recommended to closely watch this side of the job. In one of my last seminars on licensing we have tried to calculate the cost of the preparation of the full licensing documentation and of the training for a high quality machine tool and we ended up with at least Sfr. 100,000! Beforehand one of the groups had proposed more or less offhand to collect a down payment of Sfr. 50,000—and a 5 percent royalty. This would have meant the loss of at least the royalty of the first production year just for failure to calculate the real cost of the transfer of know-how.

It was also amazing to hear from large-size companies who used to license quite a lot and who did not even have a separate licensing account on the cost side. It is so nice to show a high royalty income in a balance sheet: the cost thereof is simply hidden in the general overheads!

CONCLUSION:

As a conclusion I would say:

1. Licensing can only be successful if it is properly prepared as well for the negotiation stage as for later stages.
2. Licensing should always be backed by a proper system of documentation adapted to the transfer of technology to third parties. Otherwise it will be a failure which may have heavy commercial and legal consequences. Such documentation should be kept up-to-date at regular intervals.
3. Licensing can and should of course be a source of additional income. However successful licensing is linked to high cost already at the negotiation stage, but in particular at the stage of transfer of know-how. The cost is no doubt justified at the negotiation stage because it ensures a much higher return: a well prepared licensing documentation is attractive for the future licensee. The cost of the transfer of know-how stage which is much higher should be taken into consideration when fixing the licensing conditions. Such cost should be covered by the down payment at the signature of the agreement.
4. Licensing based on industrial property rights is easier and safer than know-how licensing. The possibility of filing patents and designs should therefore be carefully considered.

Case History: Licensing to China

(Continued from Page 24)

from their licensees which, in turn, are distributed free to all other licensees. Despite the fact that the Chinese would benefit very substantially because of the technical sophistication of our other licensees, they could not on political grounds agree to commit the Chinese Government to transmit improvements outside of China.

Somehow the Chinese found that I was at the time the immediate Past-President of LES and requested that I give some lectures in my spare time to less experienced members of their staff. Naturally, I accepted this invitation and one of the questions we discussed during the seminar related to the Chinese attitude with respect to improvements. I was able to confirm that their view on this was essentially ideological. They did not want to be obli-

gated to give improvements to people from other countries, particularly the U.S., where history would indicate an instability in the relations between the countries. Sohio, therefore, offered to give Sohio's improvements, but not those of our other licensees for a very short period of time which would essentially be equal to the date on which the plant was started up and running smoothly.

Unusual Aspects of the Negotiations

The negotiators we were dealing with seemed to follow the practice of "keeping the ball in our court." For example, in a situation where we agreed to reduce our demands for the term of secrecy agreement, if the Chinese were going to make a counter-proposal they would do so immediately. If they were going to give a "turn down" but make no counter-proposal, it was generally given at the next negotiating session.

During the final negotiating session we were still some distance apart with respect to the amount of the royalty. The representative of the China National Technical Import Corporation told us, much to our surprise, that they had authority to supplement the offer of their client. They did so only in those cases where they had made a determination that it would be in the best interests of China to obtain the technology even though the licensor was not able to reduce his royalty to the level that their client agency was willing to pay. This supplemental payment permitted us to close the financial aspects of the deal.

Negotiators and Translators

46

The representatives of the China National Technical Import Corporation seemed to be extremely intelligent and intellectually honest people. They were represented by three people; one man about 39 years old who mainly took notes, a chief negotiator who was about 35 years old, and a senior member who was about 45 but did not participate actively in the negotiations. It could be that the Chinese were following our lead in having the less senior man conduct the negotiations in view of the fact that I did almost all of the negotiating on our side even though I had with me a member of our Board of Directors who is also a Senior Vice-President of Sohio. The interpreters were furnished by the Chinese, and the gentlemen which we had for our business negotiations was a fully-qualified engineer who had no problem with the technical details. However, the Chinese were short of English-Chinese interpreters and therefore he interpreted for the negotiation sessions from morning until night. As a result, he became quite tired and I am sure that his ability to interpret was hampered because of it. If we were to be involved in another complex negotiation in China, I would seriously consider taking a back-up interpreter with us.

Plant Construction

Our last word is that engineering has been completed, equipment ordered and ready for shipment, and civil work nearing completion. In due time the plant will be producing acrylonitrile which will be used to provide acrylic fabrics which, in turn, will help provide a more comfortable life for the people of China.

Danish Taxes on Royalties

(Continued from Page 30)

Singapore. (This so-called reservation of the progression is of importance to natural persons, not to companies, which are taxed according to a flat rate).

ROYALTIES CONNECTED WITH PERMANENT ESTABLISHMENT ABROAD

It appears from the above summary that, according to the taxation agreements, the source country may in principle only to a very limited extent impose tax on outgoing royalties. If a Danish business has a permanent establishment (branch office) in another country, the gross profit of the branch will usually be taxed at a considerably higher rate. Most countries impose tax on branches of foreign enterprises in the same way as on other enterprises in the country.

If a Danish business has a branch office in another country, and if the business simultaneously receives royalties from activities in that country, the profit of the branch and the royalties cannot, according to the taxation agreements, be aggregated and taxed together at the usually higher tax rate that is applicable to the branch office.

Such an aggregation is permissible only if the right or property giving rise to the royalties is connected, directly and efficiently, with the permanent establishment. If the royalties are derived from the activities of the Danish business in the foreign country and have no connection with the operation of the branch, no aggregation may take place, and the royalties will either be entirely exempt from taxation in the foreign country or they will be taxable only within the limits established in the agreement.

Increased taxes sometimes may be levied in the source country, where a special dependence exists between the licensor and the licensee, and such dependence may be assumed to have influenced the terms of the license agreement. This may, for example, be the case if the Danish licensor has a possibility of exerting a determining influence on the transactions of the foreign licensee, e.g. through a shareholding, or in any other way.

ELIMINATION OF DOUBLE TAXATION

If a business is exposed to international double taxation — either because the royalties are derived from a country with which Denmark has no taxation agreement or because the taxation agreement provides for some foreign tax-at-the-source — the business will be entitled to a so-called tax credit for taxes paid abroad. Under the tax credit system royalties from abroad are included in Danish taxable income. Foreign taxes paid on such income are, however, allowed as a deduction from Danish tax, but in an amount not exceeding that proportion of the Danish taxes which the foreign income bears to the total income subject.

If a company is taxed at the ordinary corporation tax rate of 37 percent, it will accordingly always receive full refund for taxes paid abroad if such taxes amount to 37