

for forging crankshafts with throw of up to 13 inches and which have 3 to 6 cranks. In the line of bar upsetting, the TR method is applied for simple upsetting of elongated forgings. It allows for upsetting 3 or more successive stages from a single heat, without the necessity of changing the die inserts.

Pressing with the rocking die.

Very economic method of forming workpieces from steel and non-ferrous metals gives apart from high dimension accuracy and large output also considerable reduction of cost of presses required for shaping workpieces. Presses of about one-tenth normal capacity can be used instead of traditional ones.

Centrifugal dewatering screen OSO

For use in the process of mechanical separation of suspensions in the coal, steel and iron mineral aggregate and raw materials industries. The idea of the solution permits attaining considerable whirling speed of dewatered suspension, provides adequate circulation of the solution. The OSO screen has been licensed in the USA.

A method of rolling the parallel flange beams (IPE)

Parallel-flange beams are finding an even greater application in structural design. This invention makes it possible to roll the parallel-flange beams in mills currently manufacturing the tapered-flange beams. The rolls and rolling equipment manufactured by the new method fully ensure the obtaining of the parallel-flange beams, conforming to the Euronorm Standard Specification. The invention makes possible the adaptation of existing rolling mills to the production of the parallel-flange beams at a very low cost and also considerably reduces production costs involved in the manufacture of the parallel-flange beams.

Scaleless charge heating furnace

The new concept of design of the furnace can be used for various types of continuous rolling mill heating or forging furnaces, such as pusher furnaces, walking-hearth furnaces, rotary-hearth furnaces. The application of this invention lowers the material loss from a few to a fraction of per cent. This rate depends mainly on the air amount factor, specific for the reheating furnaces.

The manufacture of ingot moulds from molten pig iron

This new technology makes possible the production of ingot moulds and bottom plates of heavy weight directly from molten pig iron, eliminating such intermediate metallurgical processes as melting the cast iron in a cupola furnace, induction or other types. This method makes it also possible to change the properties of the pig iron in considerably wide limits. The production cost of ingot moulds and bottom plates is decreased by 25% as compares with traditional methods utilizing cast iron. The method can be applied in the industrial scale without any additional investment outlays.

Lubricated drawing dies

New design of drawing dies, applied already in a few factories in foreign countries, was developed in the Institute of Iron Metallurgy in Gliwice. The lubrication of dies increases the drawbench output by 30 to 50% without any investment costs. The amount of techno-economical effects arising from applying hydrodynamical lubrication depends however on local conditions and some preliminary tests have to be done.

A method of obtaining polyester powder for protective coatings

The polyester powder is applied in electrical engineering, chemical and other industries for protective coatings exhibited to high temperatures as an insulating material (class F). The new method of production of the powder reduces the costs by some 20% as compared with other methods, while the layers of the polyester powder are featured by excellent dielectrical strength.

New hardeners for epoxy resins

New hardeners have been synthesized at the Plastics

Institute in Warsaw. The technology of manufacturing the hardener is very easy and can be applied with common equipment. The resins cured with this hardener show very good physical and chemical properties and cost less. Applied in industrial scale they bring considerable profit for chemical plants. They also find a wide application for glass fibres reinforced epoxy resins, epoxy molding powders and coating compositions.

Fireproof epoxy paints

To satisfy requirement for fire protecting coatings, a new kind of epoxy paint has been invented. The paint is suitable for covering metallic, wooden, ceramic, polyester, laminate, cement and other surfaces. It has been approved by Polish Marine Medicine Institute for application in the ship-building industry, for coating sanitary rooms, loading and machinery rooms, machines, pumps, auxiliary equipment, storage for dried foodstuff, walls and floors of compartments as well as for fish processing installation. The costs of its production is quite competitive to other ones of similar mechanical properties, for example to the brominated paint.

These examples do not complete our offer, but give some picture of our licensing abilities and present, to certain extent, our contribution to increasing the flow of technology on the world wide scene. This increase is the highlight of interest of our foreign trade policy also from the point of view of acquiring foreign technologies for various Polish developing sectors of industry.

For the future, our aspirations are not restricted. We are entering into license agreements as well as in co-production arrangements, joint ventures and other commercial commitments which are supposed to accelerate the development of production capacity and improve the quality of products.

All the foreign proposals are thoroughly studied to find their suitability for manufacturing lines.

Inflow of foreign technologies will, no doubt, stimulate further development of licensing procedure, too. Development in both decision making concerning purchase of a technology and its application in industry. These improvements seem to be of mutual interest for both the licensee and licensor.

**About the Speaker: Mr. Andrzej Lewicki is currently head of the Department of Licensing of the Foreign Trade Enterprise Polservice in Warsaw. Polservice deals with the export and import of licenses, know-how and technical services to industrialized, developing and Comecon countries. Mr. Lewicki's personal responsibilities include the preparing, negotiating and concluding of such license agreements with foreign partners.*

He was a graduate in 1966 of Technical University, Faculty of Electronics in Warsaw, and in 1971 graduated from the Faculty of Foreign Trade.

His particular interests lie in the exchange of scientific and technical achievements. Mr. Lewicki is the 1974 Johnson's Wax Fund, Inc. Eisenhower Fellow from Poland. I am certain that you will find his remarks on "Licensing — Polish Style" of deep interest to you.

LICENSING — A PATH TO CHINA

by

Benjamin P. Fishburne III*

When I first mentioned to several of my colleagues that I had been asked to give a speech about licensing and the People's Republic of China, I was told that it would be a short speech since there was so little to say on the subject. The following list accounts in part for these comments: wheat, corn, cotton, passenger aircraft, soybeans, iron and steel



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scrap, soybean oil, aircraft parts, and fertilizer.

This is a listing of the nine major exports from the United States to the People's Republic of China during 1973. Wheat, corn, and cotton made up almost 75% of last year's U.S. exports to China. Given these trade statistics, which show the primarily agricultural nature of our trade with the People's Republic of China to date, it should be clear that many of our exports to China are simply not the proper subject matter for licensing.

Despite the foregoing, there have been a few sales of U.S. technology to the Chinese. These sales fall largely into the petrochemical and fertilizer area. Perhaps the most well-known of these transactions is the sale of eight complete fertilizer plants by M. W. Kellogg. These complete plant sales obviously involve U.S. technology. The other category of sale involves U.S. petrochemical processes as a part of turnkey plant sales by Japanese companies. Lummus, Standard Oil of Indiana, and Standard Oil of Ohio have provided technology for turnkey petrochemical plants sold to China by the Japanese.

An examination of the SOHIO transaction, about which a fair amount has been published, shows the role which licensing can play. The Chinese have not yet agreed to pay a standard royalty, and the SOHIO transaction is no exception. The Chinese are paying SOHIO a lump sum, which is not tied to output, spread in seven installments over several years. The SOHIO agreement provides that the Chinese will use the process only for a specified output with a renegotiation of the contract if this output is to be exceeded. Another significant part of the SOHIO agreement is that the Chinese may not export any portion of the plant's production.

Since the Chinese began paying for technology only in 1971, generalized statements concerning their practice are difficult. Nevertheless, the Chinese are now committed to obtaining the best technology in certain areas. If a company is fortunate enough to possess technology which the Chinese find highly desirable, it will be in a strong bargaining position and should be able to negotiate desirable contractual protections. If, on the other hand, its bargaining position is not strong, a company may have difficulty in obtaining the sort of contract for the technology exchange with which it feels comfortable. Insofar as pricing is concerned, it appears that the Chinese are willing to pay between 15 and 20% of total plant cost for technology.

There are certain problems which should be highlighted in the licensing of technology to the People's Republic of China. The first of these problems is the use of foreign start-up personnel. The Chinese like to limit, to the extent pos-

sible, such personnel. The concept of self-reliance is still important to the Chinese. Nevertheless, when the Chinese are convinced that foreign technical assistance is necessary, they will agree to it. As you may recall, a number of Chinese have come to the United States for training in the use and maintenance of the Boeing 707 aircraft. The Chinese are also sensitive on some occasions about the label attached to foreign start-up personnel. For example, technical assistant or technical supervisor may be unacceptable, while resident agent is not. The point is, that it is important to convince the Chinese during negotiations that technical assistance will be necessary.

Another problem is the difficulty of inspecting or auditing a Chinese facility for the purpose of determining its output. This information is important even where compensation is not directly tied to output, for the contract may call for the use of technology only up to certain production limits. While the Chinese are generally regarded as being extremely faithful in fulfilling contract obligations, a number of U.S. companies have expressed uneasiness in having to rely only on the contractual word of the Chinese. The problem of the inability to inspect or audit also arises when the Chinese have agreed to use a process in only one facility. At the present time there is simply no way in which a United States company can determine whether or not the Chinese have lived up to such a contractual commitment.

A further problem which relates to licensing is that the Chinese have no system which provides for the protection of foreign patents. Accordingly, the only protection for U.S. patents which is available is by contract. The Chinese do, however, have a system for the registration and protection of trademarks. But, before a foreign person can avail himself of this system, there must be a bilateral agreement between the foreign country and the People's Republic of China. Although such bilateral agreements exist with several Western countries, there is no agreement with the United States at this time. Accordingly, trademark protection is also available only by contract. It should be noted here, that the Chinese are proud of their trademarks and understand their value and the need for their protection. I am optimistic that a bilateral agreement on trademarks between the United States and the People's Republic of China will be forthcoming in the reasonably short-term, unless the Chinese decide to withhold such an agreement until they are granted formal diplomatic recognition.

Insofar as future trade with China, via licensing, is concerned, I believe that our trade with the Chinese will remain largely agricultural. Nevertheless, there will continue to be sales of complete plant by both U.S. and other companies which employ U.S. technology. It is this technology which will remain the subject of licensing agreements. Perhaps the next development will be a Chinese agreement to pay standard royalties. However, even this step may take several years. The introduction of U.S. licensed consumer goods into the Chinese market is years away.

I should also note that the outright sale of such high technology items as jet aircraft, communications equipment, computer components, and measuring and testing devices will also continue and expand.

Those interested in exporting technology to China must not overlook United States export controls. Under U.S. export regulations, China is classified as a "Y country". It is thus in the same category as the Soviet Union and technology which can be exported to the Soviets under a general license can likewise be exported to China.

Now that I have set forth some specific information concerning licensing, it is important to discuss doing business with China in a more general sense. There are certain characteristics of China, as well as certain problems of China trade, which relate to all aspects of doing business, including licensing.

Although I dislike reading statistics, it is helpful to re-

view the character of our trade with China. At the beginning of my remarks, I listed the major U.S. exports to China. Total U.S. exports to the People's Republic of China during 1973 amounted to \$663,733,533. Major U.S. imports from China included the following list: tin, hog bristles, cotton fabrics, works of art and antiques, raw silk, fireworks, brooms and brushes, essential oils, wood and resin-based chemical products, and animal hairs. U.S. imports from China amounted to \$63,951,913, an imbalance approaching eleven to one in favor of the United States. Redressing this imbalance of trade is important to the Chinese if trade is to continue with the United States at the present pace.

I will shortly discuss a number of problems present in trade with China. The question is always asked, "why do U.S. companies put up with these problems of China trade?" I believe the answer lies in the fact that there are approximately eight hundred million people in the People's Republic of China. Some American companies find the lure of such a potential market to be virtually irresistible. It is important to keep this potential market for U.S. products in mind as I discuss some of the difficulties which will be encountered in dealing with the Chinese.

The first problem is what I call "the frustrated American businessman." U.S. executives are simply not used to writing proposal letters and then waiting and waiting and waiting for a reply, which is sometimes delayed twelve months or more. In addition, these businessmen are not used to presenting a proposal in a face-to-face meeting and then receiving no response other than polite appreciation for the presentation. There are other causes of frustration. Matters which should be routine, such as obtaining visa application forms, can sometimes develop major snags. Moreover, negotiations can be delayed for weeks over the most unlikely issues. For example, there is a story, which may be apocryphal, concerning the Chinese negotiations with Boeing for 707's. I have heard that, at one point in the negotiations, the Boeing representative asked what sort of configuration the Chinese wanted the interior of the 707's to take. Did they want them to be all cargo, all passenger, or a combination of both. The Chinese side responded that, if they gave Boeing that information, then Boeing would be able to determine the exact use to which the Chinese were going to put the aircraft. This is information the Chinese did not want to share. Boeing responded that it would be impossible to build the aircraft without knowing the configuration. The difficulty was resolved after several weeks when the Chinese side indicated that, if Boeing delivered an aircraft with a certain configuration, "the Chinese would accept it." Whether or not the story is true, it does indicate the sorts of difficulty one sometimes encounters in negotiating with the Chinese. I should point out here that, while the Chinese are tough and able negotiators, they are an extremely pleasant group with which to do business.

If we can return for a moment to the trade statistics which I read earlier, you can see that the major Chinese exports to the United States are almost entirely agriculture products and raw materials. Most people agree that consumer goods of Chinese manufacture will be the next category to be added to this list of Chinese exports. As I mentioned earlier, the Chinese are very interested in reducing their trade deficit with the United States. Given the character of goods the Chinese export to the United States, as well as the Chinese desire to improve their trade balance, the tariff treatment of Chinese goods becomes important. At the present time, the People's Republic of China does not enjoy most-favored-nation tariff treatment. Thus Chinese goods are subjected to the highest U.S. tariffs available. In addition, if the Jackson Amendment to the Trade Reform Act becomes law, the President will be prohibited from extending most-favored-nation treatment, as well as U.S. credits, to the Chinese. The Chinese have expressed no interest in credit thus far; however, continuing lack of most-

avored-nation treatment will hamper China's ability to export to the United States. If China is unable to obtain hard currency from exports, her ability to make hard currency purchases of U.S. technology will thereby be limited.

China has practical problems in exporting to the United States which may, in the long run, be more important than the tariff treatment of Chinese goods. For example, China's policy of decentralizing certain industries makes it difficult to provide goods of predictable quality in sufficient quantities for the U.S. market. Thus, when a major United States retail chain wants to purchase large quantities of Chinese knitwear, the chain wants to be assured of the quality of the goods and of a continuing source of supply. The prospect that it will receive goods from a number of small factories from several Chinese regions is disquieting. One solution to this sort of difficulty, which the Chinese have been willing to discuss, is the allocation of the output of an entire Chinese factory to one large U.S. importer. Such an allocation requires time, training and retooling, but the fact that the Chinese are willing to discuss it indicates that they do recognize some of their problems in producing for the U.S. market and that they are willing to explore reasonable solutions to these problems.

Another problem is that the Chinese are basically unfamiliar with U.S. marketing practices. Some of their trademarks, of which they are proud, (for example, "White Elephant") are simply not appropriate for the U.S. market. Nor do the Chinese appear to understand the wholesale-retail distribution system. The Chinese sometimes express confusion as to why a large wholesale purchaser expects a volume discount.

China's trade fairs also raise certain difficulties. The Chinese hold two trade fairs each year, one from April 15 - May 15 and the other from October 15 - November 15. The primary purpose of these fairs, which are held at Canton, is to display and to conclude contracts for the purchase of Chinese goods, and a sizable portion of China's foreign trade is conducted at them. In the past, but to a lesser extent recently, firms interested in selling goods to the Chinese were also expected to transact their business at the fairs. Many U.S. businessmen, who would otherwise be willing to purchase from the Chinese, were simply unwilling to subject themselves to the crowded conditions and pressure negotiating at Canton. Fortunately, the Chinese are currently exhibiting more willingness to transact business, both import and export, away from the fair.

China's foreign trade is in the hands of eight state trading corporations. Each corporation is responsible for certain areas of trade: chemicals; native produce and animal by-products; light industrial products; textiles; cereals, oils and foodstuffs; machinery; metals and minerals; and technology. Centralizing both import and export trade to this extent gives rise to certain bureaucratic bottlenecks. In addition, the Chinese practice of placing the import of all technology under the China National Technical Import Corporation causes delays because of the need for technical consultations. A continuing source of frustration for American businessmen is that they are seldom if ever able to reach Chinese endusers because all transactions are negotiated by the corporations.

In addition to the practical problems of doing business with China, there are a number of legal problems. For example, the lack of formal diplomatic relations often requires cumbersome efforts at communications which could more practically be conducted on a government-to-government basis.

The question of claims and frozen assets remains a problem. At the time of the "liberation" in 1949, a large amount of U.S. assets in China were seized. Claims amounting to approximately \$197 million, exclusive of interest, have been certified by the U.S. Foreign Claims Settlement Commission. The other side of the claims question is the ap-

proximately \$80 million worth of Chinese assets frozen in the United States. The practical effect of the claims and frozen assets problem is that any Chinese assets in the United States are subject to attachment by U.S. claimants. Accordingly, all banking transactions with the People's Republic of China are carried on through third country banks. In addition, a trade show exhibiting Chinese goods would also run the risk of attachment. According to the State Department, an agreement in principle to settle the claims and frozen assets question was reached between the United States and the People's Republic of China approximately one year ago. However, certain technical difficulties are preventing a final resolution to this problem. It is impossible to predict when these technical questions will be resolved.

Another problem of less immediate relevance is the availability of Export-Import Bank credits to the Chinese. Even if the President were to declare such credits to be in the national interest, there is the question of \$22.5 million worth of claims which relate to loans obtained by the prior government of China for capital assets which it was unable to remove to Formosa. The Chiang Kai-shek government repaid the loans relating to all items which it was able to take with it; however, no one has paid for assets financed by Export-Import Bank which were left on the Mainland. This question must be resolved before Export-Import Bank credits will be available to the People's Republic of China.

There are a number of other legal difficulties in dealing with the Chinese, such as their usual insistence that all arbitration take place in Peking and the extent to which Chinese foreign trade contracts favor the Chinese whether China is buying or selling. Despite all of these problems however, the potential of the Chinese market remains.

I am confident that, absent political difficulties, U.S. trade with China, including licensing, will increase at a slow but steady rate, providing rewarding opportunities for U.S. companies in many areas.

**About the Speaker: Mr. Fishburne was born in South Bend, Indiana and is a graduate, cum laude at the University of Notre Dame in 1965. He received his LLB from the University of Virginia in 1968 at which time he joined the firm of Surrey, Karasik and Morse. After serving four years as a Captain in the Judge Advocate General's Corps including a year in Vietnam, he returned to Surrey, Karasik and Morse in September 1972. When Walter Surrey was asked to serve as one of the founding Directors of the National Council for U.S.-China Trade. Ben and Walter worked closely on the National Council affairs and at present he is on loan to the Council for the purposes of planning the itinerary for representatives of the China Council for the Promotion of International Trade. Ben is uniquely qualified to talk to you on Licensing — A Path to China.*

RECENT DEVELOPMENTS RELATIVE TO TRADE SECRET LICENSING

by
Roger Milgrim*

1. Recent Developments in Licensing.

1.1 *Kewanee Oil*, presently under review by the Supreme Court, should determine whether trade secret law conflicts with the federal patent scheme. [On April 8, 1974 the Solicitor General of the United States put in an amicus brief requesting reversal of the Sixth Circuit's decision finding that the Patent Act preempts trade secret law.] The limited question on review is whether matter which was presumably eligible for patent protection but held and used



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as a trade secret for more than one year can be protected as a trade secret. Hence a narrow holding affirming the Sixth Circuit's opinion would leave unaffected the wide array of technological trade secrets which were not patentable when originally developed.

1.2 *Detente*. The impact of detente will have its effect on technology licensing in the Eastern Bloc countries. A constant challenge on such agreements is finding viable, practical alternatives to standard running royalty provisions such as production contracts with quality controls.

1.3 *Fuel Crisis*. The fuel crisis has stimulated licensing of fuel saving technology (e.g. digitally controlled valves to reduce fuel and other raw material consumption) and enhanced exportation of U.S. agricultural technology toward oil producing nations: food for fuel.

1.4 *Economy*. The cash crisis has forced many companies which may find it difficult to raise equity or debt capital to rummage through their bundle of technology and convert unused or only partially used technology into licensing revenues.

1.5 *Manpower Crisis*. Labor shortages in Western Europe and elsewhere create even greater incentives for export of labor-saving technology. E.g., U.S. computer and related technology.

2. Trade Secret Licensing As An Alternative To Patent Licensing.

2.1 *General Comparison*. Patents are protected by federal law and trade secrets by State law. Patentable inventions have to achieve a high level of invention whereas trade secrets merely have to be not generally known in the trade.

Protection cannot start under a patent until it issues; protection terminates upon the earlier of a finding of invalidity or the statutory patent date (17 years in United States). Trade secret protection commences with use in business and continues at least until the trade secret becomes generally known. Patent protection is limited to the countries in which a patent issues; trade secret protection is basically worldwide.

2.2 *Licensing*. In the antitrust domain, some principal distinctions were discussed. The limited duration of a patent royalty was contrasted with possibly unlimited duration of a trade secret royalty. In trade secret licenses, the consideration is not an exclusive right ("monopoly") to use but rather the initial disclosure. The royalty is simply a private agreement between the parties determining their respective rights in exchange for the disclosure and hence should be lawful despite continuation beyond the life of secrecy.

Some other distinctions were considered. While the "monopoly" of a patent makes it imprudent to seek grant