



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

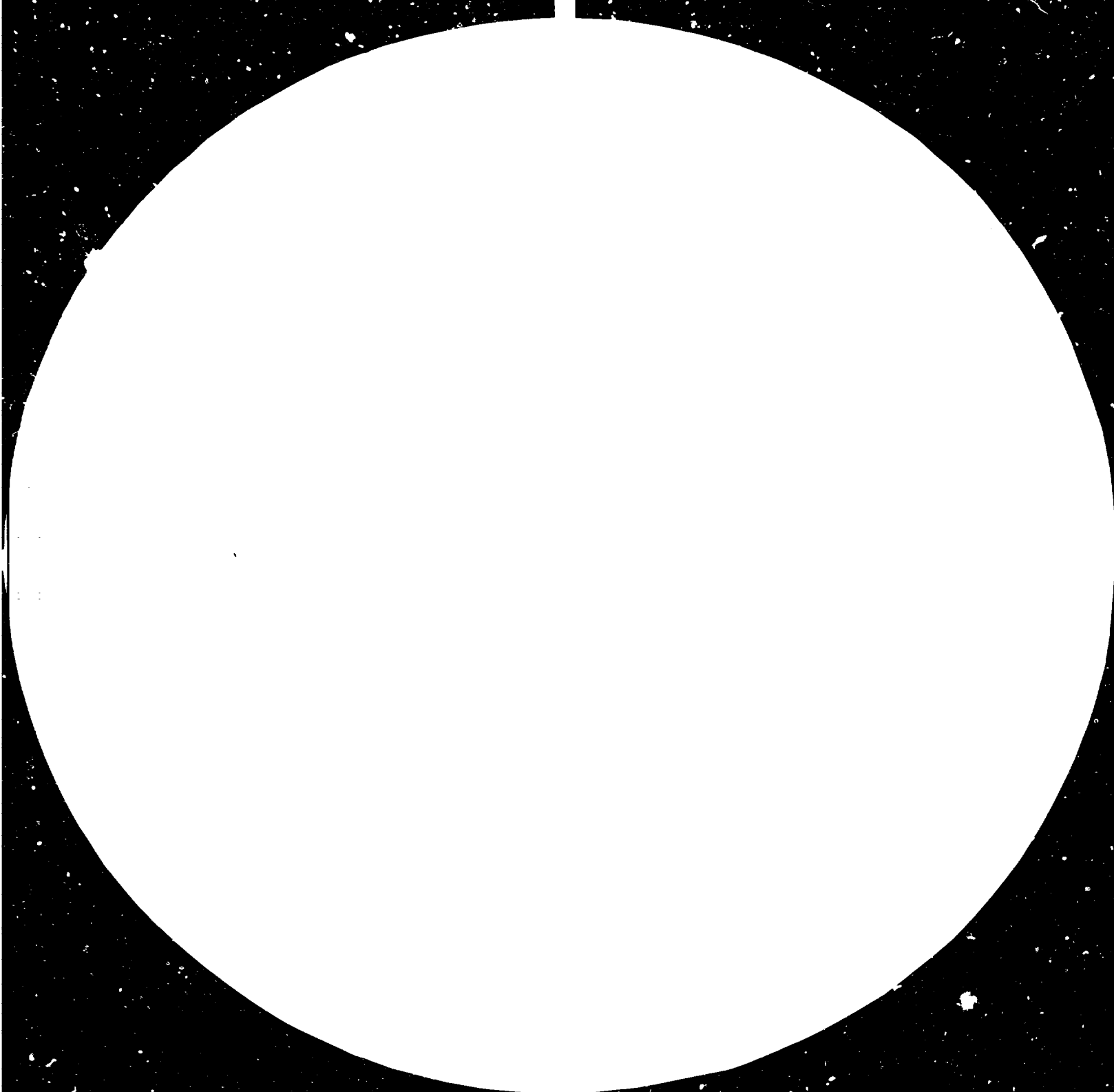
FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

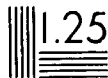
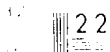
Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org





2.8 2.5



Resolution test targets are used to measure the resolving power of an optical system. The targets consist of patterns of lines of varying sizes and orientations, which are used to determine the smallest detail that can be resolved by the system. The resolution is typically measured in cycles per millimeter (CPM) or line pairs per millimeter (LP/mm).

The resolution of an optical system is determined by the diameter of the aperture and the wavelength of the light. The resolution is inversely proportional to the diameter of the aperture and directly proportional to the wavelength of the light. The resolution of an optical system is typically measured in cycles per millimeter (CPM) or line pairs per millimeter (LP/mm).

TIES NEWSLETTER

TECHNOLOGICAL INFORMATION EXCHANGE SYSTEM

Issue Number 12

November 1981

12040

Registry activities

Dear Reader,

This issue of the TIES Newsletter appears simultaneously with the Sixth Meeting of Heads of Registries to be held in Manila and be hosted by the Technology Transfer Board of the Philippines.

In view of the forthcoming meeting, I am taking the liberty to comment on developments in the past year, since the last time TIES members met in Buenos Aires, Argentina.

First of all, we have observed further increased trend in Governments' interest in the TIES system, and therefore, at our Sixth Meeting, we will welcome new observers possibly from Thailand, Ethiopia and Poland. The development in Indonesia indicates the possibility that they will become in due course TIES members.

It may be noted further that LES International has expressed their wish to continue their informal aminate and dialogue with TIES members and plans are underway to hold a joint meeting in 1982.

At UNIDO, I am happy to inform you that we had a very busy and interesting year. Under the overall programme of assessing the implications for developing countries of technological advances in selected fields, three meetings were held, dealing with micro-electronics, genetic engineering and biotechnology, and lighter than air technology.

Furthermore, I wish to note that our readership is increasing very rapidly. This increase has been observed among individuals and organizations representing the suppliers of technology.

Finally, as we are approaching the end of 1981, let me wish you all and your families a successful and profitable 1982.

G.S. Gouri

Fresh Approaches to Technology Transfer for ASEAN

A high-level policy meeting on the regulation of technology transfer in member countries of the Association of South East Asian Nations (ASEAN), jointly organized by the Committee on Industry, Minerals and Energy (COIME) and the United Nations Industrial Development Organization (UNIDO), was held at Vienna from 28 to 29 September 1981. It was attended by two representatives from Indonesia, two from Malaysia, three from the Philippines and one from Thailand. After the meeting, the participants proceeded to Portugal and Spain to visit the Portuguese Foreign Investment Institute and the Spanish Registry of Technology.

The meeting discussed the role of technology transfer regulatory agencies; an appropriate legislative and administrative framework for their establishment and operation at the national level; guidelines for the selection, evaluation and negotiation of technology transfer arrangements; and the possibilities of adopting a regional approach towards Technology transfer regulation and the possible areas of regional technology co-operation.

Two of the countries represented, Malaysia and the Philippines, already have technology transfer regulatory agencies and shared their experience with the other representatives. The meeting considered the project proposal "Strengthening of Regulatory Mechanism in the Transfer of Technology in the ASEAN Countries" which had been preliminarily endorsed by COIME for further submission to the United Nations Development Programme (UNDP). The meeting made several recommendations for amending the project proposal with greater emphasis on training in strengthening negotiating capabilities.

Other recommendations made by the meeting were that: Governments should evolve appropriate technology policies oriented towards the development of the indigenous technological base; national regulatory agencies should be established in ASEAN countries which do not yet have a national focal point, but that the scope, responsibilities and functions of the agencies should be left to the discretion of individual interested countries; the terms and conditions of technologies acquired from abroad should be harmonized among ASEAN countries and

Compiled by the Technology Group of UNIDO

P.O. Box 300, A-1400 Vienna, Austria

close co-operation and co-ordination among existing regulatory agencies should take place so as to strengthen the bargaining position of ASEAN member countries; all ASEAN member countries should support the continuation of the Technological Information Exchange System (TIES) of UNIDO.

Technological Transfer Centre of Korea
executed Local Consultation Tour

The Technological Transfer Centre held a seminar and provided information on technology transfer at cities including Seoul and Incheon from 13 May to 12 June under the co-sponsorship of Korea Chamber of Commerce and Industry. By means of seminars and consultations, this Centre furnished overall information covering suppliers, required documents and official procedures for technology transfer. The Centre intended to undertake a second consultation tour at the latter half of this year.

Recent Legislation

The Ministry of Industry and Energy of Spain decided last July to amend the regulation concerning the registration of technology transfer agreements. The following is a translation of the amendment of the order of the Ministry of Industry of 5 December 1973 to be followed by the full text of the order of 1973.

Ministry of Industry and Energy of Spain

Order of 30 July 1981 amending the regulations concerning the registration of technology transfer agreements as established through the order of the Ministry of Industry of 5 December 1973.

Sir,

The experience gained in the application of the order of the Ministry of Industry of 5 December 1973 concerning the inscription of technology transfer contracts in the Registry, created by Decree 2343/1973 of 21 September gives grounds for modifying the evaluation of the consequences of the presence of clauses which are in general unfavourable and to treat in a special manner those cases where the recipient company is accumulating an external technological dependence which will significantly affect its activities. Furthermore, in order to obtain a further knowledge of the content of the transfer, it appears desirable for statistical purposes that be presented to the Registry of Transfer of Technology of the Ministry of Industry and Energy contracts of this nature entered into by the State which by Decree 2343/1973 of 21 September are exempt from the registration process. In this light and as proposed by the General Directorate of Industrial Innovation and Technology, this Ministry has decided as follows:

First, the third paragraph of the order of 5 December 1973 concerning the inscription of technology transfer contracts in the Registry created by Decree 2343/1973 of 21 September shall be established in the following terms:

Third

3.1 Concerning article 5 of Decree 2343/1973, the Ministry of Industry and Energy, or the Ministry competent in the matter will make a comprehensive evaluation of the situation in the sector and of the characteristics of the process and product for which the technology transferred is intended, in relation to the rights and obligations of the parties to the contract.

3.2 The following, inter alia, will be regarded unfavourable conditions or aspects of the contract.

a. to limit the acquisition of technology from other sources, as well as condition, limit or cancel the research, development or innovation efforts of the recipient, to make it obligatory to transfer improvements developed by the recipient in the technology transferred through the contract or to condition the utilization of the knowledge not patented once the validity of the contract has expired.

b. to transfer a technology for which there is proven capacity of national delivery with equivalent quality and reliability, or a technology considered pollutant where cleaner technologies exist or a technology which involves energy wastage or which utilizes imported material or components instead of national substitute products.

c. to prohibit, limit geographically in an excessive manner, or not authorize specifically with respect to certain areas, the export of the goods produced by the recipient, as well as to make obligatory the acquisition of raw material or components and other intermediate goods or equipment from the transferrer or of suppliers mentioned in the contract.

d. to impose the use of trade names registered by the transferrer in Spain, as well as to establish the right of the transferrer when not obtained earlier through other means to intervene control or condition the management of the recipient company or its strategy of expansion or diversification.

e. to impose payments substantially higher than those normally practised in the market in similar circumstances or to impose minimum payments when the payments are based on royalty rates proportional to the rate of activity in its different expressions.

f. to establish payments through royalty rates proportional to the level of production, without deduction of the value of the products or components supplied by the transferrer and incorporated in the production process to which the transferred technology is applied, or not to exclude the billing corresponding to production lines not affected by the acquired technology.

g. to impose an inappropriate duration of the contract or of its direct consequences, either because of its shortness or because of its prolongation, or to extend the validity of the contract or its inscription in the Registry without the introduction of improvements in the terms of the contract.

h. to require that the version of the contract in the foreign language is to prevail in its interpretation when the contract has been signed in other languages than Spanish.

3.3 in those cases where the recipient company has accumulated an external technological and trademark dependence which affects more than 30% of its turnover the procedure will be as follows:

a. the possible restrictive clauses, limitations and abuses of the contract will be analyzed.

b. the effects derived from the external technology dependence will be examined, on the basis of a programme which the recipient enterprise will undertake to develop and which will contribute in a considerable manner to the assimilation of the received technology in the technological development of the concerned sector of the industry as a whole.

c. it will also be necessary to take into account the action initiated or to be initiated by the recipient company with regard to the utilization of natural resources, import substitution, the development of exports in terms of their value added, the creation of jobs, energy saving, reduction of pollution and of landscape deterioration and other elements which will contribute towards the attainment of the priorities of Spanish industrial policy.

Second, to the order of December 1973 mentioned above shall be added a seventh paragraph reading as follows:

Seventh

The technology transfer contracts entered into by the State which by article two of Decree 2343/1973 of 21 September are exempt from the process of inscription in the Registry shall however be presented for statistical purposes to the General Directorate of Industrial Innovation and Technology.

Third, the registration of valid contracts will be maintained as it stands until the period of their validity has expired at which time and for the purpose of extension they will be considered under the newly established norms.

Ministry of Industry of Spain

Order of 5 December 1973 concerning the recording of technology agreements on the Register created by Decree 2343/1973, of 21 September.

Sir,

Decree 2343/1973, of 21 September (Official State Gazette No. 236, of 2 October 1973), regulating the transmission of technology, authorized the Ministries of Industry and Commerce, within their respective spheres of competence, to develop the provisions set forth therein.

The application of the rules established in the said Decree requires the urgent and prior

development of the provisions relative to the recording of agreements on the Register created by the Decree.

In the light of the experience gained in the functioning of this Register, administrative provisions will subsequently be issued dealing with the remaining aspects of the Decree.

First.

1.1. The obligation of requesting the registration of contracts, agreements and similar documents on the Register created by Decree 2343/1973, of 21 September, applies to all such documents through which foreign technology is acquired, whether directly or through a Spanish intermediary, regardless of the nature of the consideration furnished by the recipient of the technology, that is to say, whether or not it is of a monetary or other tangible nature, or is intangible in any form.

1.2. This registration must be applied for by the individuals or legal entities receiving the technology, domiciled, resident or legally established in Spain.

1.3. Applications must be made in triplicate form in a formal petition addressed to the Director General of Industrial Promotion and Technology, accompanied by three copies of the agreement, which for the purposes of this Order must be signed in Spanish, an informative memorandum and the supporting documents specified below in paragraphs 1.5. and 1.6.

1.4. The memorandum shall include information and particulars concerning the contracting parties, the technology transmitted, and the scope and conditions of the agreement, along with other particulars justifying the acquisition of the technology.

The forms of application and informative memorandum will be provided by the appropriate departments of the Ministry of Industry.

1.5. The supporting documents shall necessarily include:

a) A public document evidencing the representative capacity, if any, in which the applicant is acting.

b) A copy of the entry of the establishment on the Industrial Register, or, where applicable, of the latest enlargement thereof, in the case of industrial enterprises.

c) A copy of the administrative resolution authorizing the foreign investment, if any, in the capital of the applicant company.

d) Complete texts of the technical offers and specifications agreed upon in the case of consulting or engineering services.

e) Such other documents as, in the judgment of the Ministry of Industry, may be necessary in each instance.

1.6. The agencies, organizations and companies referred to in Art. 9 of Decree 617/1968, of 4 April, entering into agreements

for the purchase of technical studies and services from foreign consulting and engineering companies, must accompany their application by documentary evidence that they have attempted to obtain the services in question from at least two firms recorded in the Special Section of the Register of Consulting and Industrial Engineering Firms created by the said Decree and operating in the field of activities covered by the agreement.

This evidence must be provided in the form of firm proposals from the said Spanish companies, or, in default thereof, by any other reliable means of proof. If such evidence cannot be furnished, on account of there being only one firm, or none at all, capable of performing the service in question and registered in the above-mentioned Special Section, then the applicant must produce, together with the offer from the registered company, if any, a certificate issued by the Directorate General of Industrial Promotion and Technology to this effect.

Where the certificate mentioned in the foregoing paragraph recognizes the inability of the firms registered in the said Special Section to provide a certain percentage of the services in question that is less than 85 per cent thereof, it will also be necessary to produce evidence showing that an attempt has been made to secure the remainder of such services from firms registered in the Special Section, provided that the activities covered by each of the above-mentioned percentages are technically separable.

Second.

2.1. Application must be made directly to the Directorate General of Industrial Promotion and Technology of the Ministry of Industry, or by any of the other procedures established in Art. 66 of the Administrative Procedure Act.

2.2. The Directorate General of Industrial Promotion and Technology shall classify the applications in accordance with the provisions contained in the following paragraphs, in which the action appropriate to each case is specified.

a) Technology agreements relating to the production or use of military equipment. They shall be forwarded to the military Department concerned, which shall report as to whether the existence of restrictive clauses is justified on the grounds of national interest, pursuant to the provisions of paragraph three, Art. 5, of the Decree.

b) Technology agreements entered into pursuant to international technical co-operation agreements which establish in sufficient detail the specific conditions of the co-operation between private legal entities in which such agreements are to be implemented. They shall be registered as provided in paragraph four, Art. 5, of the Decree.

c) Agreements which are not included in either of the above paragraphs, and which, on account of the subject-matter or the type of technology transmitted, fall within the competence of a Ministry other than the Ministry of Industry. They shall be forwarded to the

General Technical Secretariat of the Ministry concerned with a request for the report mentioned in paragraph one, Art. 4, of the Decree. If the report is against registration or recommends qualified registration it must specify the particulars and objections to be conveyed to the interested party, as established in paragraph five, Art. 5, of the said Decree and in section 2.4 of this Order.

d) Agreements not included in the foregoing paragraphs, the examination of which rests with the Ministry competent on account of the subject-matter. The pertinent Directorate General shall issue a report thereon specifying the importance and significance of the restrictive clauses, if any, contained therein as well as the special effects of the pertinent costs, in the light of the industrial policy of the sector towards which the technology is aimed. The Directorate General responsible for the sector in question shall recommend the type of registration applicable, or even non-registration.

2.3. For the registration of agreements coming under paragraphs c) and d) entailing a limitation of the export possibilities of the "resident" or of its sources of supply, the Ministry having competence on account of the subject-matter shall request from the Ministry of Commerce the compulsory report referred to in paragraph two, Art. 5, of the Decree.

2.4. If, during the examination of the application, there are seen to exist conditions that, in accordance with the provisions of this Order, may presumably determine non-registration or registration with qualifying annotations, the Directorate General of Industrial Promotion and Technology shall inform the applicant accordingly, and in any event prior to the hearing stage, if any, so that it may, within a term of one month, remedy or modify the particulars giving rise to such classification. As evidence that this action has been taken, a document shall be submitted, signed by the same contracting parties, agreeing to waive or modify the points originally covenanted and referred to in the notification from the Directorate General of Industrial Promotion and Technology.

Third.

For the purposes of Art. 5 of Decree 2343/1973, the Ministry of Industry or the Ministry having competence on account of the subject-matter, shall make a combined evaluation of the situation of the sector and the characteristics of the process and product for which the technology transmitted under the agreement is intended, in relation to the rights and obligations of the parties thereunder.

This combined evaluation shall take into account, as unfavourable conditions or aspects of the agreement, the following, among others:

1. That it prohibits, conditions or limits the use of the recipient's own technology, or the purchase thereof from other sources, or the use of unpatented know-how after the expiration of the agreement, or that it conditions, limits

or invalidates the recipient's efforts at research, innovation and technological development.

2. That it requires the assignment of any patents, improvements or innovations introduced or developed by the recipient subsequently to acquiring the technology the subject of the agreement.

3. That it provides for the transmission of technology in the form of a package deal, including parts or items that are unnecessary or for which there is proven supply capacity in Spain of equivalent quality and reliability, provided that such parts or items are technically capable of being separated from the technology as a whole supplied under the agreement.

4. That it provides for the transmission of technology that is partly or wholly inadequate owing to obsolescence, lack of competitiveness or other similar reasons, or that it requires quality standards or levels incompatible with the regulations of Spanish law, except in cases where production is mainly intended for markets in which such standards and quality are required.

5. That it prohibits, imposes excessive geographic restrictions on, or expressly does not authorize in regard to certain specific areas, the export of the goods produced by the recipient, or that it requires the purchase of raw materials or components and other semi-manufactured products or equipment from the assigner or from suppliers specified in the agreement.

6. That it prescribes minimum levels of output or limits the recipient's freedom to decide as to the characteristics of production, as regards levels, models, competitive articles, prices and deadlines, or allows the assigner the right to determine unilaterally the prices of goods produced by the recipient.

7. That it conditions, for the benefit of the assigner's interests, the sale in the domestic market of the goods produced by the recipient, or that it compels the recipient to maintain an exclusive relationship with the assigner or imposes the use of trademarks registered by the assigner in Spain.

8. That it establishes the obligation on the part of the recipient to supply, on conditions contrary to the interests of the Spanish economy, either to the assigner or to certain specific third parties, the items produced with the aid of the technology transmitted.

9. That it grants the assigner the right, not previously acquired by other means, to intervene in, control or condition the recipient's business management, or plans of expansion or diversification.

10. That it imposes payments appreciably higher than those customarily prevailing in the market in similar situations, or minimum considerations where such payments are based on royalties proportional to different levels of production activity.

11. That it provides for payments in the form of royalties proportional to the production level, without deducting the value of imported products or components incorporated into the production process to which the technology in question is applied, or failing to exclude the invoicing for product lines not benefiting from the technology acquired.

12. That it imposes payments based on royalties on the recipient's level of activity, where the recipient is a subsidiary of the assigner and the latter holds more than 50 per cent of its capital, where the assigner of the technology supplies raw materials or semi-finished products for use in the process in quantities representing more than 30 per cent of the total cost of the product, or where the recipient is a consulting or engineering company, unless in this latter case it is a question of assignment of process technology for activities in which such process is continuous.

13. That it provides for surcharges (differences between the prices stipulated in the agreement and those charged by the supplier or its main competitors in the international market) on supplies, materials and equipment associated with the transmission of technology and furnished by the assigner or by suppliers specified in the agreement.

14. That it imposes an unsuitable duration on the agreement or its direct consequences, whether too short or too long, or provides for the automatic extension of the agreement, or that it requires payments to be made over a period extending beyond the currency of the patents involved.

15. That it provides, for the purposes of interpretation, that a foreign language text of the agreement will prevail, in the case of an agreement signed in other languages in addition to Spanish.

Fourth.

4.1. The resolution allowing registration of technology agreements shall be notified to the applicant and to the Directorate General of Foreign Transactions of the Ministry of Commerce within ten days after signature. It shall also be notified to the relevant Directorate General of the Ministry of Industry.

The notification sent to the Directorate General of Foreign Transactions shall be accompanied by a copy of each of the following documents: application, agreement, informative memorandum, supporting documents produced and report, if any, from other competent Ministries.

4.2. The resolution allowing qualified registration, i.e., registration with annotations, shall specify the restrictive clauses and conditions in the agreement that have led to such classification, and notification thereof shall be sent to the applicant and to the Directorate General of Foreign Transactions of the Ministry of Commerce, in the term and manner established in paragraph 4.1., as well as to the competent Directorate General of the Ministry of Industry, for the purposes provided in Art. 7 of the Decree.

4.3. The resolution rejecting registration shall specify the restrictive clauses which, on account of the fact that they prevent, are detrimental to or hamper the recipient's technological development, limit its business freedom or represent an abuse on the part of the assigner of the technology, have served as grounds for such resolution. Notification thereof shall be sent, within the term established hereinabove, to the applicant and to the competent Directorate General of the Ministry of Industry, for the same purposes as mentioned in the foregoing paragraph 4.2.

4.4. In all cases, the resolutions adopted with respect to the agreements shall be notified to the competent Ministries that have issued reports in regard to the subject-matter of the agreement or the type of technology.

Fifth.

Pursuant to the provisions of Art. 3 of Decree 2343/1973, dated 21 September, and without prejudice to Arts. 6 and 7 thereof, the effectiveness of any contract, agreement or similar document regulated hereby shall be subject to the prior registration thereof, with or without annotations, on the Register of Technology Agreements.

Sixth.

6.1. In the event of any amendments being made to the agreements recorded on the Register, notification of the scope thereof shall be sent to the Directorate General of Industrial Promotion and Technology within a term of two months, in accordance with the provisions of Art. 8 of the Decree, such notification to be accompanied by three copies of the new text of the amended agreement, the informative memorandum specified in section 1 of this Order, and the relevant supporting documents.

6.2. The memorandum shall include, in addition to the particulars previously specified herein, information concerning the implementation of the agreement up to the time of its amendment and the reasons that have led to the substitutions, extensions, changes and amendments made with respect to the original text.

6.3. With respect to such amendments, the same procedure and terms as established in the preceding sections for the purposes of the original registration shall apply.

6.4. If the amendments made to the agreement give rise to any changes in registration or to the cancellation thereof, the procedure established in general shall be applicable by analogy.

Which I do convey to you for your information and other purposes

May God grant you many years.

Madrid, 5 December 1973

LOPEZ DE LETONA

Director General of Industrial Promotion and Technology.

Registry news

New Rules for Technology Transfers

(The following article has been reproduced from R & D Mexico, July 1981 edition, which is published 11 times a year by the Consejo Nacional de Ciencia y Tecnologia of Mexico)

Technological dependence - the importation of technology to Mexico - is an important concern to that country as well as to all developing nations. The degree of dependence cannot be understood or controlled if qualitative and quantitative data on technology transfer is unavailable. To cope with this problem in a creative and structured manner, Mexico created the National Registry of Technological Transfer, based on the Technology Transfer Law enacted in 1972.

High technology costs, often inflated to conceal transfers of profit abroad, and restrictions imposed on Mexico made these measures necessary. Several Latin American nations introduced similar legislation at about the same time.

The Technology Transfer Law stipulates that all technology transfer contracts must be registered. Under this law, no contract can be registered if it has binding or restrictive clauses that can be detrimental to the buyer. These include: 1) high licensing costs 2) excessively long enforcement terms and 3) restrictions on the company's operation, production, export and research activities.

Registry Established

As soon as the National Registry was established, 4,000 existing contracts were presented for registration and accepted, although they could not be modified to conform to the new regulations. Between December 1972 and December 1977, 7,000 additional contracts were presented; 5,000 were approved, 900 were awaiting further examination and 1,000 were rejected.

In 85 per cent of the rejections, one of the reasons was excessive cost. The second most important cause for rejection (39 per cent) was a restriction imposed on the buyer regarding production volume. In 38 per cent of the cases, rejection was due to clauses forcing the buyer to sign an exclusive contract to represent the seller throughout Mexico.

In 1976, a sample of 1,480 approved contracts was analyzed; 1,310 contracts were for manufacturing industries and 170 for extractive industries and services. With regard to payment conditions, 57 per cent of the contracts specified royalties on sales. The unwritten law of the National Registry of Technological Transfer is that they cannot exceed 4 per cent of gross sales.

Mexico imports 67 per cent of its technology from the United States and 17 per cent from four major European suppliers: France, Germany, England and Switzerland. Internal technology transfer and imports from other countries account for the rest.

There is a close relationship between technology sources and foreign investment in Mexico. In fact, the countries that supply most of the technology are also the ones that have the greatest capital investment in Mexico.

Recent studies have revealed important information on technology transfer conditions. In 49 per cent of the cases, the contract specifies the use of trademarks; 51 per cent provide for technical know-how; 48 per cent include technical assistance and 19 per cent patent licensing. These figures total more than 100 per cent because, in most cases, the contracts include more than one form of technology transfer.

Manufacturing is heavily concentrated in Mexico. On an average, the four largest companies in a given manufacturing area account for 43 per cent of total production. Multi-national corporations that use most of the imported technology provide 40 per cent of total industrial production in the most concentrated areas. Of the estimated \$450 million (U.S.) of direct annual payments for technology in 1980, 80 per cent was channelled to transnational home offices by Mexican subsidiaries which account for 31 per cent of the total industrial output. It is interesting to note that transnational subsidiaries pay, on the average, 2 per cent of royalties on sales, whereas private Mexican companies pay only 0.3 per cent. Distribution of contracts in specific areas of industry shows the pharmaceutical industry had 14.5 per cent of the contracts, petrochemical had 14 per cent, electrical and electronic industries 11 per cent and food, 9 per cent.

Since the establishment of the National Registry of Technological Transfer, statistics on technology payments have become available, and more important, Mexican manufacturers have learned that technology can be acquired and negotiated under internationally accepted terms. Many contracts have been signed recently under more favourable and reasonable conditions than in the past.

Happily, the problem with Mexico's technology imports does not seem to be one of foreign exchange. Although \$450 million (U.S.) a year for foreign technology may seem excessive, the total amount for importing capital goods and intermediate products is 20 times higher.

Actually, it is more important to stress technological quality rather than price. INFOTEC, a technological information agency, provides systematic up-to-date technological data for manufacturers. Thus, INFOTEC provides not only information for selecting the appropriate technology but also a way of keeping in touch with the latest innovations.

From a strategic point of view, efforts will be made to diversify technology sources and to include Mexican suppliers whenever possible. The recent move to combine the National Registry of Technological Transfers and the Foreign Investment Registry to negotiate investment and technology packages involving several countries should yield positive results.

Internal Activity Sparked

Some points made recently by Jorge Katz, an Economic Commission for Latin America (ECLA) economist in Argentina, seem applicable to Mexico. Contrary to what is believed, he said, imports are not replacing domestic technology. Technological imports (such as engineering) are generating internal technological activity and promoting the development of a technical infrastructure and trained human resources.

Finally, it is worth mentioning the conclusions of a recent study sponsored jointly by CONACYT and two other government agencies. It was found that providing minor amounts of technical information to industries exploring the purchase of technology abroad changed their pattern of decision making. In 64 per cent of the cases analyzed in the sample that resulted in a positive investment decision, the industries found that the information was enough to justify their own technological development, or the buying of Mexican technology.

This result indicates that the government should play an active role in promoting and even subsidizing the purchase of technical information services by industry. Through this rather inexpensive effort, a substantial gap could be bridged between the policy of foreign technology purchases and the policy of internal technological development.

UNIDO activities

UNIDO Model Contracts

Since the Second General Conference of UNIDO held in Lima, Peru, UNIDO Secretariat has been given the task to undertake consultations on the problems of industrial sectors, particularly from the point of view of creating conditions for developing countries to achieve increased share in the world industrial production.

As a part of this effort, in some selected sectors, like fertilizer production, petrochemicals and pharmaceuticals, UNIDO Secretariat together with representatives of developing and industrialized countries - is preparing model agreements for construction of fertilizer plants as well as selected licensing agreements.

None of the above agreements has reached yet a final shape, however, many versions of draft documents have been already prepared.

For convenience of our readers, those drafts, bear the following titles and symbol numbers:

1. First draft of the UNIDO model form of the semi turn key contract for the construction of a fertilizer plant - ID/WG.318/2.
2. Technical Annex for second draft of UNIDO model form of turn key lump sum contract - ID/WG.318/1 Add.1.

3. First draft of UNIDO model form of agreement for the licencing of patents and know-how in the petrochemical industry - ID/WG.336/1.

4. Annexures for first draft of UNIDO model form of agreement for the licensing of patents and know-how in the petrochemical industry - ID/WG.336/1 Add.1.

New addition in UNIDO's Monographs on
Appropriate Industrial Technology

As part of its effort to foster the rapid industrialization of developing countries, the United Nations Industrial Development Organization (UNIDO), since its inception in 1967, has been concerned with the general problem of developing and transferring industrial technology. The Second General Conference of UNIDO, held at Lima, Peru, March 1975, gave UNIDO the specific mandate to deal in depth with the subject of appropriate industrial technology. Accordingly, UNIDO has initiated a concerted effort to develop a set of measures to promote the choice and application of appropriate technology in developing countries.

Appropriate industrial technology should not be isolated from the general development objective of rapid and broad-based industrial growth. It is necessary to focus attention on basic industrial development strategies and derive from them the appropriate technology path that has to be taken.

The Lima target which, expressed in quantitative terms, is a 25 per cent share of world industrial production for the developing countries by the year 2000, has qualitative implications as well. These comprise three essential elements: fulfilling basic socio-economic needs, ensuring maximum development of human resources, and achieving greater social justice through more equitable income distribution. Rapid industrialization does not conflict with these aspirations; on the contrary, it is a prerequisite to realizing them. But, in questioning the basic aims of development, we also question the basic structure of industrial growth and the technology patterns it implies.

Furthermore, it is easy to see that the structure of industrial growth that should be envisaged and the corresponding structure of technology flows should be different from what they are today; a fresh approach is called for. This does not mean that the flow of technology to the modern sector and the application of advanced technologies are unnecessary. On the contrary, it is essential to upgrade the technology base in general, and it is obvious that to provide basic goods and services, there are sectors of industry where advanced or improved technology is clearly necessary. It would be difficult to envisage a situation where the dynamic influence of modern technology is no longer available for industrial growth and development in general. However, an examination of the basic aims of industrial development leads to the conclusion that there must be greater decentralization of industry and reorientation of the design and structure of production.

Such decentralized industry in the developing countries calls for technologies and policy measures that often have to be different from those designed for the production of items for a different environment, that of the developed countries. As a result, there is a two-fold, or dualistic, approach to an industrial strategy. Moreover, the two elements in such an industrial strategy need to be not only interrelated but also integrated.

In approaching the question of appropriate industrial technology from an examination of basic development needs, a mechanism is necessary to link and integrate appropriate industrial technology to the overall development process. Through such a process the concept of appropriate industrial technology could be placed in the mainstream of the industrial development effort. To focus attention on issues involved in choosing and applying appropriate technology, UNIDO organized the International Forum on Appropriate Industrial Technology.

In response to a recommendation of this meeting UNIDO, with financial aid by the Swedish International Development Authority is publishing a series of monographs based mainly on documents prepared for this meeting, on the following industrial sectors:

- Low-cost transport for rural areas
- Paper products and small pulp mills
- Agricultural machinery and implements
- Energy for rural requirements
- Textiles
- Food storage and processing
- Sugar
- Oils and fats
- Drugs and pharmaceuticals
- Light industries and rural workshops
- Construction and building materials.

A monograph on basic industries has recently been added to the series. This monograph is based on the following background papers.

- Basic materials industries: aspects of technology choice and industrial location
- Choice and adaptation of alternative technology for the iron and steel industry
- Appropriate technology for the iron and steel industry
- Appropriate technology for the capital goods industry (machine tools) in developing countries

The role of the engineering industry

Appropriate technology for the chemical industry

Technology for oil and gas based industries: the case of Kuwait

The fertilizer industry in India

Copies of this monograph can be ordered directly from the UNIDO technology group.

ECE Contract for Model Conditions of Contract for Computers Equipment

On 1 June 1981 the European Commission entered into an agreement through ASAB-VEBI Belgium, with a Working Group of the Conference of European Computer Users' Associations (CECUA), to produce model conditions of contract for the purchase of computer equipment.

The work will be carried out by an European Working Group of technical, commercial and legal experts who are experienced in the commercial aspects of computer hardware and software in the fields of rental, licencing, leasing, purchasing and maintenance. These experts represent the User Associations of Belgium, Denmark, France, Germany, Holland, Ireland, Italy and the UK.

The model conditions are intended to achieve the following objectives:

- i) To be equitable to both manufacturers and customers and protect the interests of all concerned;
- ii) to aid the commercial interests of the computer industry by eliminating ambiguities and aiding the evaluation process;
- iii) to provide an essential step towards the harmonization of the European market for EDP products;
- iv) to benefit Community manufacturers by the elimination of differing practices;
- v) to aid the development of effective competition.

The Working Party will also provide expert commercial advice and guidance to the European Commission. The model conditions will consist of definitions, clauses, and associated schedules, all of which will be covered by detailed commentaries to assist both manufacturers and users in ensuring that viable and equitable contracts result from their use.

Work has already commenced on both the model conditions and the commentaries and these will be completed and translated into all the Community languages. Publication of these documents in the individual countries will follow.

The availability of such model conditions for the purchase of computer equipment will provide considerable benefits to both manufacturers and users, and it is intended that the purchase conditions will be followed by similar conditions for hire and lease, maintenance and software.

Recent publications

ID/265 Manual on jigs for the furniture industry.

ID/WG.329/19 Yugoslav experiences, achievements and possibilities of co-operation with developing countries in the area of mini-hydroelectric generation units.

ID/WG.352/5 The paper and board mill situation in Indonesia.

ID/WG.352/6 The pulp and paper industry in Korea.

ID/WG.352/7 The pulp and paper industry in peninsular Malaysia.

ID/WG.347/13 Formwork and formwork systems in Australia. Workshop on cement and concrete products. Brisbane, Australia, 18-29 May 1981.

ID/WG.347/14 General introduction to precast concrete manufacturing techniques.

ID/WG.347/17 On-site precast tilt-up construction.

ID/WG.347/18 Post-tensioned building structures. Economic trends and the influence of construction time.

ID/WG.347/19 Post-tension segmental bridges: Neville Hewitt bridge - Albert St., Rockhampton.

ID/WG.347/20 Post-tension segmental bridges: The Houghton Highway Viaduct across Bramble Bay.

ID/WG.347/21 Post-tension segmental bridges: Some design aspects of a 215 metre span prestressed concrete box girder bridge.

REQUEST FOR NEWSLETTER

If you wish to continue receiving
the TIES Newsletter please complete
the form below and return to:

UNIDO
TIES Newsletter
Development and Transfer
of Technology Branch
P.O. Box 300
A-1400 Vienna, Austria

Please type or print in block letters

NAME

TITLE

ORGANIZATION

ADDRESS

CITY

COUNTRY



