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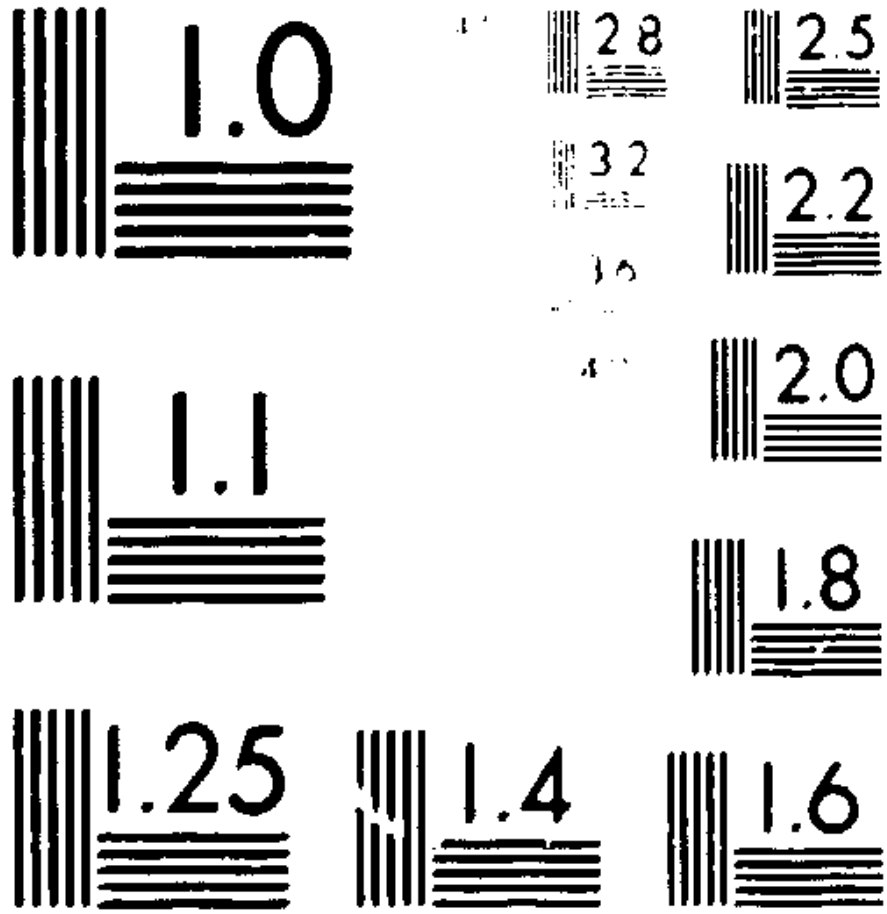
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Agenda item 5

FIRST DRAFT OF UNIDO MODEL FORM OF AGREEMENT FOR THE LICENSING OF PATENTS AND KNOW-HOW IN THE PETROCHEMICAL INDUSTRY*

prepared by the
UNIDO secretariat

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* To be printed as Addendum 1 to the present document.

INTRODUCTION

1. The First Consultation Meeting on the Petrochemical Industry in Mexico City, 12 to 16 March 1979 recommended that UNIDO prepares (a) a model contract for the licensing of patents and know-how in the petrochemical industry and (b) a set of guidelines on its use.[1/]

2. This document presents the Model Form of Agreement for the Licensing of Patents and Know-how in the Petrochemical Industry prepared by the UNIDO secretariat in response to this recommendation.

3. The UNIDO secretariat has attempted to draft a Licensing Agreement whose structure and contents are broadly in line with current licensing practice. Most of the provisions included in the UNIDO Model Form have been drawn from provisions in specific Licensing Agreements brought to the attention of the UNIDO secretariat.

4. The First Consultation discussed the scope of such a Model Form of Licensing Agreement and provided guidance to the UNIDO secretariat on a number of specific points that should be included. These guidelines are reproduced as Part I of this document, together with an indication of where the points are covered in the Model Form.

5. Part II of this document describes the approach followed by UNIDO in preparing the Model Form of Licensing Agreement. Part III provides some explanatory notes that will need to be considered before the Model Form is used.

6. The first aim of presenting this document to the Second Consultation on the Petrochemical Industry is to allow a full discussion of the text from the points of view of both Licensee and Licensor. For this purpose, arrangements have been made to convene a Working Group in Istanbul lasting three days.

7. The second aim is to check that the UNIDO secretariat has complied with the guidelines given by the First Consultation when it requested UNIDO to prepare such a Model Form of Licensing Agreement.

1/ See Report of the First Consultation on the Petrochemical Industry, Mexico City, 12-16 March 1979, ID/227, paras. 2(q) to 2(v).

8. The third aim is to draw from the discussion sufficient further advice for the UNIDO secretariat to be able to finalize the Model Form of Licensing Agreement immediately after the Consultation.

9. Detailed guidelines for use of the Model Form will be prepared by the UNIDO secretariat after the text of the Licensing Agreement has been finalized.

10. An informal meeting with a group of experts was held in January 1981 to review an earlier internal draft of this document as recommended by the First Consultation.

11. The UNIDO secretariat gratefully acknowledges the advice received from this group of experts and its consultants in preparing the present draft of this document.

12. The UNIDO secretariat alone is responsible for the draft as presented.

I GUIDELINES FOR DRAFTING OF THE MODEL FORM SUGGESTED TO UNIDO BY THE FIRST CONSULTATION

13. For easy reference, the Article in which each of the First Consultation's suggestions has been included in the UNIDO Model Form of Licensing Agreement is indicated on the right-hand side of the pages. The paragraph numbers are those of the Report of the First Consultation on the Petrochemical Industry, ID/227.

	Reference:
The type of model contract to be prepared	
51. The desirability of UNIDO preparing such a model contract was agreed but it was emphasized that it would be a difficult task.	
52. It was felt that one model contract could apply to the process used to manufacture all types of petrochemicals; however, in order to make the model contract as specific as possible, it was recommended that the technical annexures for the model contract should be prepared in relation to two or more specific products.	Annexes
53. It was also agreed that UNIDO should prepare guidelines for the use of the model contract since the main purpose of the exercise was to assist less experienced licensees in developing countries.	To be drafted later
54. It was pointed out that in addition to assistance in negotiating licensing agreements, developing countries needed guidance on the selection of sources of technology. The Working Group therefore recommended that UNIDO prepare a manual on alternative sources of petrochemical technology.	
55. It was recognized that in addition to the licensing and basic engineering contract, a detailed engineering and construction contract had to be prepared. It was noted that the UNIDO secretariat was preparing model forms of contract for the construction of a fertilizer plant and it was suggested that UNIDO examine how those could be adapted for use in the petrochemical industry.	UNIDO documents ID/WG.318/1-3
Guidelines to be followed by UNIDO when preparing the model contract	
56. The following guidelines were suggested for the more important areas to be covered by the model contract.	
The process know-how package and access to process improvements	
57. The principles agreed on were:	
(a) The extent and nature of the information supplied must include patented information, where appropriate, together with proprietary and other critical information on know-how;	3.1
(b) The information provided must be the latest known to the licensor on the process covered by the contract up to the termination date of the contract;	1.5, 1.7
(c) Information on improvements and modifications related to the processes as defined in the agreement would be given on a reciprocal basis between licensor and licensee during the life of the agreement;	3.2, 4.2
(d) If required, other forms of industrial property, such as trade-marks, might be included in the package and negotiated through separate document(s) that called for separate payment(s);	3.4(c)
(e) Any legal or contractual constraints contingent on the right to use patents or the sale of know-how should be made clear between the contracting parties;	3.1
(f) The licensing agreement might provide for assistance by the licensor in market development and technical services required for selling the product.	3.4(b)

58. Regarding point (f), the view was expressed that it might be possible for the licensee to purchase products from the licensor to build up the local market before commencement of production. The licensee might use the facilities of the product development laboratories of the licensor for developing the specific uses of the product in the country of the licensee. The assistance of the licensor might also be obtained in setting up the product technical services ahead of the production from the proposed plant. 3.4(d)

59. Other services such as assistance in training, maintenance and management might be discussed between the parties and be the subject of separate agreements and additional payments. 6 3.4(a)

Obligations of the licensee

60. It was agreed that the following main obligations of the licensee would be included in the model contract:

(a) To abide by the provisions related to confidentiality and secrecy for an agreed period normally not exceeding 10 years; 4.4

(b) To operate the plant in accordance with basic process requirements and within process specifications and to maintain complete operating records, if appropriate to the provisions of the licensing agreement; 3.5

(c) To allow inspection of the process plant by the licensor during construction and operation at times and for limited periods as agreed upon between the two parties. 4.5

Performance guarantees

61. It was agreed that the model contract should define very clearly the division of responsibilities between the licensor and the contractor of the plant as regards the performance of the plant, to ensure that there was no dilution of their obligations. It was left to the UNIDO secretariat to work out precisely how that might be achieved. ..5

62. It was recognized that in a normal licensing agreement, the licensor would be responsible for basic engineering whereas the contractor would take responsibility for the detailed engineering. 3.3

63. It was further recognized that the licensor would be able to give more substantial guarantees if he had the right to check the detailed engineering. 5 2.2(b)

64. It was agreed that the model contract should include guarantees with maximum possible liability to cover:

(a) The capacity of the plant; 3.5

(b) The quality of the product(s) and its(their) processability to service certain applications;

(c) The consumption of the main raw materials and utilities;

(d) The quality of emissions and effluents; Supplier

(e) The catalyst performance and life.

Guarantee test procedures

65. The following principles were agreed upon:

(a) A guarantee test should be conducted only after a reasonable period of steady, sustained and continuous operation of the plant that demonstrated its stability; 3.5.1

(b) A specific period of days could not be detailed in the model contract because that period would differ from one process to another; 3.5.1

(c) Test runs should be conducted for a longer period than was current practice; 3.5.1

(d) The duration of the test run should be provided for in the contract; 3.5.1

(e) The contract should clearly state the obligations of both licensee and licensor with regard to test run procedures. A separate annex to the contract should provide the technical details of such procedures.

Obligations of the licensor to "make good" deficiencies in the plant

66. The principal guarantees of plant performance for the licensee would be incorporated in the provisions of the contract covering performance guarantees. However, it was suggested that the "make good" clause should oblige a licensor to remedy appropriate defects or deficiencies in the plant arising pursuant to his obligations at his own expense, and that such expenses should not be subject to the ceiling normally established for the licensor's overall liability under the terms of the contract.[6/] 3.5.4 3.8(h)

Insurance for design defects

67. It was noted that most licensors carried insurance coverage on their corporate liabilities under their respective licensing agreements made on a world-wide basis. It was recognized that that could provide the licensees with the right to more payments on the licensor's liability for deficiencies than might otherwise be obtained if specific insurance cover was to be taken out on a case-by-case basis. 10.3.2

68. UNIDO should investigate the basis of such coverage and also current industry practices as regards other types of insurance that licensors could obtain. Annexure 8

69. If material of construction was exposed in the process to severe conditions (i.e. corrosion and extremes of temperature or pressure) the licensor should generally be responsible for the specifications of such material within the frame of his overall responsibility.

Arrangements for payment of licensing fees

70. The Working Group recognized that arrangements for payment of licensing fees was a complicated issue and it was recommended that the UNIDO secretariat study the subject in depth with a view to making appropriate recommendations in the model contract and in the accompanying guidelines for its use. 8.1

Performance bonds

71. It was recommended that the model contract should make provisions for the taking out of performance bonds in order to provide the licensee with greater protection concerning the licensor's performance of his obligations under the contract. 10.1 Bank Guarantee

Manpower development

72. The following principles were agreed upon:

(a) Both the licensor and licensee had a strong mutual interest in the adequate training of the licensee's personnel; 6

(b) The model contract should provide for a complete transfer of technological capability as opposed to a simple arms' length transfer of technology; 3.3

(c) Engineers of the buying country should be involved in the design and basic engineering of petrochemical plants; 5.1

(d) Training should be provided by the licensor for the required number of the licensee's operating personnel needed for efficient and safe operation of the plant, maintenance of health and safety standards; creation of suitable working and service conditions; and measures against pollution of the environment should also be emphasized; 6

(e) The licensee would pay the full cost of the services of the licensor's personnel used for the start up and initial period of operation of the plant; 3.4(a)

(f) All additional arrangements for training of the licensee's staff should be the subject of a separate annex. Annexure 10

[6/] Several participants felt that that condition in particular would not prove acceptable to licensors.

Access to export markets

73. The model contract should provide for licensees in developing countries to obtain access to international markets without undue restrictions. 3.1

74. In that connection it was felt that any limitations on exports imposed by licensors would have to be considered in the context of the legal provisions affecting both the licensee and licensor. 3.1

Settlements of disputes and arbitration

75. Participants from developing countries reported that they had found existing procedures and facilities for international arbitration inadequate for their needs. It was therefore suggested that new rules and procedures of arbitration should be drafted by the UNIDO secretariat and that consideration should be given to the possibility of establishing a new forum of arbitration for industrial contracts. It was recognized that the clauses of the model contract relating to that matter could only be completed when some progress had been made on the above work. 10.6

Most favoured licensee

76. The license agreements provided a most favoured licensee clause with only prospective effect. UNIDO might examine the method of the effective operation of such clauses by keeping a record of contracts entered into by different countries for the petrochemical products. Not suitable for lump-sum payment

Patent infringement

77. The model contract should provide for adequate coverage regarding infringement of the patents. It was desirable that the licensee was held harmless against patent infringement.[7] 7

Right to expand or improve capacity of the plant

78. The following principles were agreed on:

(a) The licensee would have the option to expand the capacity of his production facilities on more favourable terms than provided in the initial license; 3.7.1

(b) Additional royalties would not be charged if the licensee achieved rates of operation higher than name-plate capacity. 1.19, 3.7.2

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[7] Account could be taken of two different types of patent infringement: (a) on patented processes; and (b) on non-patented processes.

II. THE APPROACH FOLLOWED BY UNIDO IN PREPARING THE MODEL FORM OF LICENSING AGREEMENT

Preliminary steps in the Licensing Process

14. It has been assumed that the LICENSEE should first select the best process for manufacturing the product in his conditions because the selection of technology is nearly always much more important than the terms and conditions on which the License is obtained. Only then should he begin to seek the best terms and conditions that he can obtain from the chosen LICENSOR.

15. Normal practice is for the LICENSEE to invite offers from a number of potential LICENSORS which can then be evaluated from a technical and economical point of view. An example of such an invitation is provided in Annex A. Once a process is selected on the basis of one of those offers, detailed negotiations with the LICENSOR can begin.[1/2/]

The purpose of a Model Form

16. Many negotiations start with the LICENSOR's draft of the Licensing Agreement, which takes into account mainly the terms and conditions that he prefers. Relevant in this context are the terms and conditions he has granted earlier to other Licensees.

17. Where the LICENSEE has considerable experience, the LICENSEE may have his own proposals and counter proposals which he seeks to include in the Licensing Agreement. To date, only a few developing countries, have such experience in the petrochemical industry. Since the means available to developing countries to purchase technology are limited, it is important that the purchase of technology and related services are clearly defined. These two points are the raison d'être for the UNIDO Model Form of Licensing Agreement.

1/ See "Part II, The Negotiation Process" in Licensing Guide for Developing Countries; World Intellectual Property Organization (WIPO), Geneva, 1977. The First Consultation drew attention to this document (See para. 46 of the Report).

2/ A more general discussion of some of the provisions can be found in UNIDO Development and Transfer of Technology Series No. 12, Guidelines for Evaluation of Transfer of Technology Agreements; ID/233, Vienna, 1979.

18. The UNIDO Model Form may be used as a guide to what the two parties might include in the Licensing Agreement provided it is used flexibly and not in rigid manner. It should be understood that the final text of a Licensing Agreement signed by the two parties will take account of the particular features of the Process, their respective interests and the actual conditions pertaining at the time the Agreement is negotiated.

What the Model Form of Licensing Agreement covers

19. The Licensing Agreement covers only the grant of the right to use the LICENSOR's patents and know-how and the provision of the Process Engineering Design Package and related services. It is assumed that detailed engineering of the plant and its construction will be the subject of a separate contract.

20. The First Consultation recognised that "in addition to the licensing and basic engineering contract, a detailed engineering and construction contract had to be prepared. It was noted that the UNIDO secretariat was preparing model forms of contract for the construction of a fertilizer plant and it was suggested that UNIDO examine how these could be adapted for use in the petrochemical industry."[1/]

21. UNIDO presented three types of Model Form of Contract for the Construction of a Fertilizer Plant to the Third Consultation on the Fertilizer Industry held in Sao Paulo, Brazil, in September 1980.[2/] These Model Forms and their Annexures were drafted for an ammonia/urea complex; they can therefore be readily adapted for most petrochemical products.

22. In these Model Forms, where the granting of the License and construction of the plant are included in the same contract with one party, the Contractor assumes full responsibility for the Performance Guarantees of the Plant and the rectification of defects. When the Licensing Agreement and Construction Contract are separate, it is more difficult to obtain and implement such Guarantees.

1/ Para. 55 of the Report of the Consultation, ID/227.

2/ The UNIDO documents are:
Turn-key Contract, ID/WG.318/1 and Add.1;
Semi-Turn-key Contract, ID/WG.318/2;
Cost Reimbursable Contract, ID/WG.318/3 and Add.1.

23. In order to have the best chance of obtaining Performance Guarantees on the Process and Process Engineering Design Package, the UNIDO Model Form of Licensing Agreement provides for the LICENSOR to undertake some checking of the detailed engineering and construction of the Plant.

The Type of Licensing Agreement chosen by UNIDO

24. There are many different types of Licensing Agreement but the most important distinguishing features are as follows:

(a) Method of payment; lump-sum or running royalties or a combination of these methods.

(b) Extent to which the engineering design of the plant is worked out by the LICENSOR rather than the LICENSEE.

(c) Extent to which the rights are granted exclusively to the LICENSEE.

(d) Extent to which training is provided by the LICENSOR.

25. The type of agreement adopted for the UNIDO Model Form has been prepared on the following assumptions:

(a) Payment will be in the form of a lump-sum;

(b) The LICENSOR will provide a comprehensive Process Engineering Design Package and will assist the LICENSEE in the detailed engineering of, in the erecting and in the commissioning of the plant;

(c) The LICENSEE obtains a non-exclusive, non-transferable License for production in his country and for sales to some but not necessarily all other countries of the world;

(d) The LICENSOR will provide a comprehensive training programme for the LICENSEE's staff to operate the plant.

26. The other main assumptions are:

(a) The Process has been commercially proven and is therefore unlikely to be defective;

(b) The LICENSOR has a valid patent or patents on the Process in the LICENSEE's country;

(c) The LICENSEE will appoint a Contractor who is independent of the LICENSOR to undertake the detailed engineering of the plant; the appointment of the Contractor will require the LICENSOR's agreement;

(d) The LICENSOR and LICENSEE accept a continuing obligation to exchange information in improvements in the Process.

The Structure of the UNIDO Model Form

27. The main Articles of the Agreement are as follows:

1. Definitions
2. Definition of the Plant and the Process
3. Obligations of the LICENSOR
4. Obligations of the LICENSEE
5. Co-ordination of the Work
6. Training of the LICENSEE's personnel
7. Patent Infringements
8. Contract Price and Terms of Payment
9. Duration of the Agreement
10. General Conditions
11. Miscellaneous Provisions

28. The UNIDO Model Form of Licensing Agreement is expected to be suitable for the licensing of different types of petrochemical products. Articles in the main body of the Licensing Agreement therefore included all the general conditions which will be needed in most licensing agreements.

29. The contents of the Annexures to a Licensing Agreement will be specific to the Process licensed and the Product to be produced by the Plant. For this reason only the main contents of these Annexures have been outlined; however, Annexures 2, 3 and 11 have been elaborated for two products — polypropylene and a vinyl chloride monomer (VCM) — suggested by the First Consultation (ID/227, para 52). The annexures have been prepared as a separate document; Addendum 1 to the present document.

III. EXPLANATORY NOTES ON THE FIRST DRAFT OF THE UNIDO MODEL FORM OF LICENSING AGREEMENT

30. The UNIDO Model Form includes all of the specific points suggested by the First Consultation in the guidelines produced in Part I of this document. However, there were some points which could not be implemented at all and there were other points which raised problems, as discussed in the explanatory notes below.

Specific points not covered by the UNIDO Model Form

31. The present draft differs from the guidelines suggested by the First Consultation in the following ways:

(a) The information to be provided by the LICENSOR is the latest which he can disclose on the effective date of the Agreement and not up to the termination of the Agreement, as was suggested;

(b) A most favoured Licensee clause has not been included, as was suggested, because this is only appropriate when the form of payment includes running royalties;

(c) The Licensing Agreement does not include a guarantee of the catalyst's performance and life because these are given by the supplier, who may or may not be the same party as the LICENSOR;

(d) The Agreement does not include a performance bond, as was suggested but a Bank guarantee with almost the same effect.

Problems encountered in drafting specific Articles

32. The following notes identify some of the more important points in the Model Form of Licensing Agreement that will be subject to negotiation between the two parties for which it is therefore difficult to suggest one particular form of wording.

Article 3.1. Scope of the License

The UNIDO Model Form provides for restrictions on sales to certain countries, if required by the LICENSOR, but is silent on other forms of restriction.

The LICENSEE should take care not to include in the Agreement any clause binding him on the following points:

(a) restrictions on the volume of production except as specified in Articles 3.7 and 1.19;

(b) pricing of the Product produced by the Plant;

(c) sources of supply of raw materials, chemicals, catalysts required for the operation of the Plant;

(d) sources of spare parts for the equipment in the Plant;

(e) source of technology for future expansion of the Plant or for new plants established by the LICENSEE.

Restrictions such as (c) and (d) above are discussed in the WIPO Guide[1/] (paras 318 to 330) but it is best to exclude them all together.

The inclusion of the words "non-exclusive" in the Agreement reflects the situation most frequently encountered in the petrochemical industry. An exclusive license would be more expensive.

The Model Form provides for some restrictions on the freedom to sell the Product in all countries of the world. Such market restrictions are imposed by the LICENSOR

(a) in those countries where he has already concluded an exclusive licence;

(b) in other countries where he expects to do so;

(c) in other countries where for other reasons, he wants to restrict the access of the LICENSEE to the market in the future.

The countries in which the LICENSEE can sell his product should always be agreed upon and clearly specified in the Licensing Agreement. (See WIPO Guide, paras 143-189).

1/ "WIPO Guide" refers to Licensing guide for developing countries, World Intellectual Property Organization, Geneva, 1977.

Articles 3.2 and 4.2 Improvements in the Process within the Scope of the Agreement.

The WIPO Guide (paras 216-239) discuss improvements and developments in the Licensed technology. The principle followed in the UNIDO Model Form is that the obligations of both parties should be the same.

The term "significant improvement" is too broad a definition to include in the actual contract; the parties should agree on a more strict formulation to distinguish the "significant improvements" from the others. The same will apply in Article 4.2(b). The same observation applies to "payment of a reasonable fee" in Article 3.2(b). "Reasonable"should be defined; for example, no more than fees charged to other licensees.

Article 3.3.4 Suppliers of critical items of equipment.

It is recommended that vendors that are prequalified for supplying critical items of equipment must demonstrate use of such equipment in a similar plant already in operation.

The LICENSEE would prefer to have several possible suppliers competing for all critical items of equipment; but in the case, when only one or two possible suppliers are named by the LICENSOR, he may request the LICENSOR to indicate a reasonable price level for such equipment items.

Article 3.3.5 The LICENSOR's services in approving equipment and and detailed engineering.

The extent of the Process Engineering Design Package and of the basic engineering included therein is dependent on the Contractor's experience and skill in this field.

The UNIDO Model Form is drafted for a LICENSEE whose Contractor needs a detailed Process Engineering Design Package from the LICENSOR. If the Contractor appointed by the LICENSEE requires less details than provided in the Model Form, the License Fee will be smaller.

Article 3.5 Performance Guarantees

It is in the interest of both parties to specify as strictly as possible all the characteristics of raw materials, utilities, products, by-products, etc. pertaining to the Process and to specify equally strictly those characteristics that should be monitored and guaranteed during the Performance Test.

Article 3.5.1 Performance Guarantee Tests

The period of the test run will depend on how complicated the Process is. It may be appropriate to accept a shorter test run for demonstrating the Process LICENSOR's guarantees (say,72 - 120 hours) and a larger period for demonstrating the Contractor's Performance which includes equipment performance, (say, 240 hours or more). The words "continuous test run" should be clearly defined; in some cases, short interruptions can be tolerated. Since many petrochemicals require extensive analytical procedures, analytical investigation should be kept within reasonable limits. The tolerance limits also should be defined along with the measurement and analytical methods and instruments to be used. (See UNIDO DDT No. 12[1/], pages 21-23)

Guarantees of catalysts

In most processes, the catalyst(s) used is an essential element of the licensed know-how (patented or not). However, the LICENSOR and the catalyst manufacturer are not always the same. The Model Form does not include either the terms and conditions for the supply of catalyst or the guarentees of the catalyst(s)' life time. These should be part of the contract for the supply of the catalyst(s).[2/]

Article 3.5.4 "Make Good" Clause

The WIPO Guide (paras 294) states that "if the technical requirements (performance guarantees) are not met, the Licensor or technology

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1/ "UNIDO, DTT No. 12" refers to UNIDO Development Transfer of Technology Series No. 12: Guidelines for Evaluation of Transfer of Technology Agreement.

2/ See Catalyst Manual: Guide for Catalyst Users in the Petrochemical and Fertilizer Industries. 2 Volumes, (126 and 408 pages); 1976 edited by the Joint UNIDO/Romania Centre, Bucharest. UNIDO ITD/351.

supplier is usually required at his own expenses..... to make changes in the equipment of the Plant supplied by it and conduct future tests in order to enable the guarantee to be met".

In the UNIDO Model Form, the LICENSOR's potential liabilities under this Article are for:

(a) the modifications and changes in the process Engineering needed to rectify the Plant;

(b) the costs of the LICENSOR's personnel on the site incurred for this purpose; and

(c) the cost of equipment that has to be modified or replaced.

The LICENSOR may be unwilling to accept such large potential liabilities, that is several times his Contract Price which usually amounts to no more than 5 per cent to 15 per cent of the total cost of the Plant.

The extent of the liabilities which the LICENSOR will accept should be negotiated bearing in mind that large potential liabilities may increase the cost of the Licence itself and the fact that the LICENSOR's liability under this heading is not included in the overall limit of his liabilities (Article 3.8).

Article 3.5.11 Right to introduce Third Party

The purpose of this Article is to safeguard the LICENSEE's large investment in the project in the event that the LICENSOR is not willing or not able to rectify the Plant. In this case a possible loss of confidentiality appears justified.

As regards the amount of excess consumption which the LICENSEE can accept, it varies from case to case depending on whether the Plant is supplied by another unit of integrated complex or is purchased from outside. In any event, the range is likely to be 2 to 5 per cent.

Article 3.8 Overall Limit on LICENSOR's Liability

The interests of the LICENSOR and LICENSEE conflict in this Article and very careful negotiation is required. Since the LICENSOR will not receive a large fee, he will be reluctant to accept unlimited liabilities. This was recognized by some parties at the First Consultation and recorded in footnote 6 to para 66 of the Report.

Article 4.4 Secrecy obligations of the LICENSEE

The time limit on confidentiality is very variable, depending on the Process, the competition, the technical and scientific value of the information and on many other factors. Some Licensors may be striving to set limits beyond ten years if the Process licensed is a very new one. (See WIPO Guide, paras 238-283).

Article 7 Patent Infringement

The LICENSOR may not be willing to provide comprehensive warranty under patent infringement. The UNIDO Model Form aims to cover the LICENSEE against infringement of patents for use of the Product in the country where the plant is located for the duration of the agreement. This complicated matter is considered in the WIPO Guide, paras 190-206 and in para 198 in particular.

The LICENSEE is advised to conduct a patent search himself in his own country, if possible. To this end the LICENSOR should co-operate by advising him of all possible headings under which the patent could appear. Because default of a patent can lead to compulsory plant closure, this search should be undertaken whether or not the LICENSOR agrees to the "hold harmless"provision.

Article 8 Contract price and methods of payment

UNIDO was requested by the First Consultation to examine alternative methods of payment. This has not been done because WIPO Guide, paras 390-496, already provided an extensive discussion.

In the Petrochemical Industry the lump-sum method of payment used in the UNIDO Model Form is perhaps the method most widely used when production in a new plant is envisaged and the technology is well established.

If the LICENSEE accepts to pay running royalties in addition to a lump-sum payment, it should be so arranged that:

(a) the lump-sum payments are deemed to cover (i) the provision of the Process Engineering Design Package and other technical information, data and drawings; (ii) the additional technical services of the LICENSOR under Article 3.5 and (iii) the provision of training (Article 6).

(b) the royalty payments are deemed to cover only the grant of rights to patents and know-how.

Article 8.1.2 Payment conditions

The payment instalments suggested (25%-50%-25%) has been used in many specific contracts, but they are only given as an example. For further discussion see WIPO Guide, paras. 497-510.

Article 9.2 The Duration of the Agreement

In the UNIDO Model Form, the duration of the Agreement has been defined for the same period (10 years) as the obligation for maintaining confidentiality in general and in addition the mutual exchange of information on improvements. Other periods can be chosen as discussed in the WIPO Guide, paras 577-601.

Article 10.1 Bank guarantees

A Bank Guarantee is provided to secure the advance payment made by the LICENSOR. This is normal practice.

In place of the Performance Bond proposed by the First Consultation, the UNIDO Model Form provides for a Second Bank Guarantee covering the total liabilities of the Licensor for the period up to the time the Performance Test has been demonstrated. Both the size of the Bank Guarantee and its duration will in practice be subject to negotiation. The form suggested provides the maximum protection that the LICENSEE is likely to obtain.

Article 10.3 Insurance

It is normal practice for the insurance under 10.3.1 to be taken out; the UNIDO Model Form makes it the LICENSOR's responsibility because the LICENSEE may not be able to obtain appropriate coverage himself. (See WIPO Guide, paras 549-556.)

Article 10.3.2 has been included as recommended by the First Consultation, but the LICENSOR may consider his own assets sufficient to cover his liabilities under this heading.

No provision has been made in this Article for insuring against defective specification of materials of construction by the LICENSOR, except in so far as such defects are covered by the Professional Indemnity Insurance.

Article 10.5 Settlement of Disputes

The importance of a procedure for resolving disputes without Arbitration needs emphasizing. For example, in the event of disagreement as to whether defects in the Plant exist or not, as provided in Article 3.5.6, the LICENSOR and LICENSEE may agree to invite an Expert to determine the extent of the defects that need to be rectified.

Article 11.1 Assignment

In some Licensing Agreements, this provision is modified so the Agreement can be assigned by either party without the consent of the other in the event that:

(a) either party sells its entire plant, business and goodwill to another party and/or

(b) there is a merger involving the field of agreement; or

(c) the Agreement is assigned to a subsidiary or controlled company or to a parent company;

provided that the PURCHASER assumes all obligations of the LICENSOR or LICENSEE under the Agreement.

IV. THE UNIDO MODEL FORM OF AGREEMENT FOR LICENSING PATENTS AND KNOW-HOW IN THE PETROCHEMICAL INDUSTRY

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THIS AGREEMENT is made this (Day, Date and Year)
and entered into between

THE LICENSEE (Legal Name of Licensee)
having its registered office at (Place)
with its Principal Place of Business at (Place)
and hereinafter referred to as the LICENSEE which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors of the one part, and

THE LICENSOR (Legal Name of Licensor)
having its registered office at (Place)
with its Principal Place of Business at (Place)
and hereinafter referred to as the LICENSOR which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors of the other part.

WHEREAS
the LICENSOR has developed a process hereinafter referred to as the Process to manufacture Product 1/ and has accumulated know-how related to the use of the Process in manufacturing plants.

WHEREAS
the LICENSOR owns and maintains patents on the Process and has the right to grant to others the License to apply the Process.

WHEREAS
the LICENSEE wishes to install at (Place, Plant Site)
facilities for the production of (quantity) metric tonnes per day of Product, hereinafter referred to as the Plant.

WHEREAS
the LICENSEE wishes (a) to license the patents of the LICENSOR relating to the Process (hereinafter referred to as the Applicable Patents) in (Name of Country) on non-exclusive basis, (b) to obtain the services of the LICENSOR for the supply of the Process Engineering Design Package and related technical information and services sufficient to design, engineer and build the Plant, and (c) to obtain certain other services related to the construction and operation of the Plant.

WHEREAS
the LICENSOR is willing to grant the License and undertake these services, and hereby agrees to do so on the terms and conditions specified in this Agreement.

and NOW THEREFORE
IN CONSIDERATION of the premises and mutual covenants herein contained, it is agreed by the parties hereto as follows:

1/ The Product to be covered by the License.

ARTICLE I

DEFINITIONS

1.1 In this Contract, the following expressions shall have the following meanings assigned to them in this Article.

1.2 "The LICENSOR" shall mean the party named as such in this Contract or his successor or permitted assigns.

1.3 "The LICENSEE" shall mean the party named as such in this Contract or his successor or permitted assigns.

1.4 "The Plant" shall mean the manufacturing facilities to be built by the LICENSEE at a site in (country) using the Process for the production of (Product) from feedstock ( ) at nameplate capacity of ( ) metric tonnes per annum based on (330) operating day per annum.

1.5 "The Process" shall mean the latest commercially proven process developed or acquired and owned by LICENSOR at the Effective Date which is the subject of this Agreement and which is described in detail in Annexure 2.

1.6 "Product" shall mean the product(s) of the Plant produced according to Process and of the specifications set forth in Annexure 4.

1.7 "The Know-how" shall mean all the latest technical data, information drawings and designs and instructions relevant to the Process [1/] in the possession of LICENSOR, in commercial use and operated in the LICENSOR's and/or his other LICENSEES' plant(s) at the Effective Date and which LICENSOR is entitled to disclose, embodied in the Process Engineering Design Package which are sufcicient to enable the Contractor to undertake the detailed engineering of and construct the Plant and to enable the LICENSEE's personnel to operate the Plant so as to produce product(s) in accordance with the Performance Guarantees.

1.8 "Process Engineering Design Package" shall be as defined above in 1.7 and in more detail in Annexure 8.

1.9 "Agreement" means this contract (together with the Annexures and Specifications) entered into between the LICENSEE and the LICENSOR together with all of the documents to which reference has been made in the contract documents, and including such amendments and/or changes, (properly made from time to time by mutual agreement between the parties), to the documents constituting this Agreement.

1.10 "Applicable Patents" shall mean the patents relevant to the Process owned or controlled by the LICENSOR as the case may be, as defined in Annexure 1.

1.11 "Approval" shall have the meaning ascribed in Article 11.8.

1.12 "Basic Design Data" shall be the information provided by the Licensee as prescribed in Annexure 6.

1.13 "Commercial Production" shall mean the continuous production of specification grade Product at the rate of ( ) for ( ) days.

1.14 "Confidential Information" shall mean the Confidential Information defined as such in Article 4.4.

1.16 "The Contractor" shall mean the engineering organization(s) appointed by the LICENSEE in agreement with the LICENSOR to undertake detailed engineering and erection of the Plant based on the Know-how.

1.17 "Days" shall be calendar days.

1.18 "Effective Date" shall mean the date on which this Agreement shall come into effect in accordance with the provisions of Article 9.1

1.19 "Expanding the Capacity" shall mean an increase in capacity of the Plant in excess of the Nameplate Capacity consequent on the installation of additional items of major equipment or replacement of major items of equipment by equipment of larger capacity. An increase in capacity of the Plant arising by any other means including changes in piping, instrumentation, balancing equipment, catalysts, auxiliary chemicals or additives or operating and maintenance conditions and procedures shall not be considered an expansion of capacity.

1.20 "First Detailed Engineering Meeting" shall mean the first meeting between the Licensee, the Contractor and the Licensor following the appointment of the Contractor according to Annexure 6, Article 2.

1.21 "Guarantee Test" shall mean the test operation of the Plant as specified in Article 3.5 to be undertaken for the purpose of demonstrating the Performance Guarantees.

1.22 "Improvements" shall mean any modification or refinement of the Process or the Know-how, whether patented or not, which have been developed or acquired during the period covered by this Agreement, or during the period fixed in the Agreement and which are capable of improving the technical and economic characteristics of the Process and hence the quantity and quality of the Product produced.

1.23 "Mechanical Completion" shall mean the time when the physical construction of the Plant has been completed, the Mechanical Completion Certificate has been issued and the Plant is ready for initial operation.

1.24 "Performance Guarantees" shall mean the performance guarantees of the Plant built using the Process as defined in Article 3.5 and Annexure 11.

1.25 "Site" means the land upon which the Works are to be constructed as specified in Annexure 5.

1.26 "Specifications" means the technical criteria, definitions and parameters governing the Plant as set out in the Agreement.

1.27 "Technical Documentation" shall mean the technical documents described in Annexure 6.

1.28 "Tonne(s)" refers to metric tonne.

ARTICLE 2

DEFINITION OF THE PLANT AND THE PROCESS

Definition of the Plant

2.1 The LICENSEE intends to establish a plant at (town, country) to manufacture specification grades of (Product). The preliminary outline of the site of the Plant is provided in Annexure 5.

2.2 The capacity of the Plant shall be metric tonnes per day of Product and shall be designed to operate at least .... days per year.

2.3 The Plant shall be designed to produce the different grades of Product according to the specifications described in Annexure 4.

2.4 The Plant shall be a modern, reliable, safe and integrated plant for the manufacture of Product and shall be designed specifically to suit the locati n and feedstock.

2.5 The feedstock shall have the specifications detailed in Annexure 11.

Definition of the Process

2.6 The Plant shall use the ..... Process 1/ .....
.....
as described in Annexure 2 and consisting of the units described in Annexure 3.

2.7 The Process covers all the manufacturing facilities between the points where feedstock, other raw materials and utilities enter the Plant and the points at which Product and effluents leave the Plant. More specifically the feedstock shall enter at ....., other raw materials at ..... and utilities at .....
The Product will leave the Plant at ..... (At this point, the Agreement should refer to Annexure 5 showing layout of the Plant within Battery Limits.)

1/ As an example the following description might be used for a PP process:

..... for the manufacture of polypropylene by catalytic polymerization of propylene; starting with the monomer, ending with pelletized polymer; including in addition to the process steps proper, the preparation, separation and recovery sections as well as the preparation of the catalyst mixture.

ARTICLE 3

OBLIGATIONS OF THE LICENSOR

Grant Patent Rights and License

3.1 The LICENSOR warrants that it has the right to grant licenses for the use of the Know-how and the Applicable Patents in (country) for the production of Product and that Product produced may be sold in (country) or to all countries of the world (except ... countries). The LICENSOR hereby grants to the LICENSEE with effect from the Effective Date of the Contract, a non-exclusive, non-transferable right and licence under the Know-how and the Applicable Patents listed in Annexure 1.

(a) to employ the Process and Know-how in the design, engineering and construction of the Plant and in its operation during the life time of the Plant;

(b) to sell, use or otherwise dispose of the Product manufactured by the Licensed Plant in (country) or in any other country of the world, except (.....): and countries;

(c) to purchase, acquire, make or have made any equipment apparatus or other material or chemicals necessary for the construction and operation of the Plant.

3.1.1 The grant of the right to use the Process and the Know-how referred to shall not be interpreted to mean a passing to the LICENSEE of the LICENSOR's proprietary rights and title to the Applicable Patents and the LICENSOR's Process.

Improvements in the Process

3.2 The LICENSOR undertakes of his own accord to make available to the LICENSEE all Improvements in the Process developed or acquired by the LICENSOR for the duration of the Agreement (or, if agreed, a specified period) and specifically

(a) to make available, free of charge, all developments and improvements in operating techniques, preventive maintenance and safety measures, and process developments not covered by (b) applicable to the Plant as well as other relevant data and proprietary information which is made available free of charge by LICENSOR to other licensees of the Process;

(b) to grant to the LICENSEE, on payment of a reasonable fee and on agreed terms, the rights to use proprietary process developements implemented, or acquired by the LICENSOR, including patented developments, which could result in significant improvement(s) in the capacity, reliability and efficiency of the Plant, and quality of the products.

3.2.1 The LICENSOR shall inform the LICENSEE in writing of the availability of all Improvements in the Process when they are developed or acquired and applied in the LICENSOR's Plant or Plants of all other Licensees who, in their respective licence agreement do not explicitly prohibit the LICENSOR such disclosure.

Supply of Technical Documentation and related Services

3.3 The LICENSOR shall supply to the LICENSEE sufficient technical information and know-how related to the Process to enable the LICENSEE to undertake through his Contractor the detailed engineering of the Plant, to construct the Plant, to commission the Plant and to operate the Plant. The documentation to be supplied for this purpose shall include, but not to be limited to:

(a) the Process Engineering Design Package described in Annexure 8, and

(b) the other technical information, data and drawings listed in Annexure 6.

3.3.1 The LICENSOR shall ensure that all information required for the detailed engineering of the Plant by the LICENSEE or the Contractor is made available in accordance with the time schedule, place of delivery and number of copies required, as detailed in Annexures 6 and 7. In the event that documents supplied are incomplete or inaccurate and

have to be completed or modified, the date of delivery of the documents shall be the date on which such completions or modifications are supplied by the LICENSOR. If any explanation is required by the LICENSEE or the CONTRACTOR, such explanation shall not be unreasonably withheld by the LICENSOR.

3.3.2 The LICENSOR shall arrange for personnel of the LICENSEE and/or his Contractor to visit the LICENSOR's plants operating at (Locations) using the Process on agreed occasions until the Plant has demonstrated its Performance Guarantee Tests. 1/ The total duration of such visits shall not exceed ..... working days and shall be restricted to not more than ..... persons at a time. The visits shall be scheduled so as not to interfere with the operation of the plants visited.

3.3.3 The LICENSOR shall supply any other information on the Process and Know-how that may be reasonably required by the LICENSEE or his Contractor for checking the process engineering, undertaking the detailed engineering, erection and operation of the Plant.

3.3.4 The LICENSOR shall deliver to the LICENSEE, as detailed in Annexure 8, the names of vendors supplying all items of equipment of a proprietary or critical nature which form an essential part of the Process that are listed in Annexure 6.

3.3.5 The LICENSOR shall have the right to require its approval of the detailed design of any major item of equipment which may affect the Performance Guarantees of the Plant. At the request of LICENSEE, LICENSOR's approval shall be required on those parts of the detailed engineering, which in view of LICENSEE may affect the implementation of the Process. The list of all items whose detailed design shall be approved by LICENSOR is identified in Annexure 6.

1/ During such visits the LICENSOR shall provide on request such technical data on the operating plant as may be required to confirm the technical specifications of the Process Engineering Design Package.

3.3.6 The LICENSOR shall indicate the suppliers of catalysts and other chemicals required for start-up of the Plant and demonstration of the Performance Guarantees and its subsequent operation.

3.3.7 The LICENSOR shall provide competent personnel to supervise the commissioning and start-up of the Plant and the conducting of Performance Tests.

3.3.8 The LICENSOR shall during the term of this Agreement, at the request of the LICENSEE and on terms and conditions as agreed at the time, depute a competent person to review the operation of the Plant and to advise the LICENSEE on ways of improving or overcoming deficiencies in its operation.

Additional services to be provided at cost

3.4 The LICENSOR shall, when requested by the LICENSEE provide any or all of the following additional services for additional payments and under a separate agreement:

(a) assist the LICENSEE in managing the operation of the Plant for the first (....) months after the Performance Guarantee Tests have been successfully demonstrated.

(b) assist the LICENSEE to develop end-uses for Product, to establish a laboratory where applications of Product can be tested, and to provide technical services to customers to back up sales of the Product in (country);

(c) permit the LICENSEE to use the LICENSOR's trademark of Product when selling Product produced by the Plant in (country) and in selected markets;

(d) provide the LICENSEE with supplies of Product from its own plants to assist the LICENSEE to build up a market for Product in (country) from the Effective Date up to the start of commercial production by the Plant.

Performance Guarantees of the Process

3.5 The LICENSOR guarantees that the Plant shall meet the Performance Guarantees listed below during a continuous test run of ..... hours provided that (i) the Plant is designed, constructed and operated in strict accordance with the Process Engineering Design Package, the Know-how and Technical Documentation furnished by the LICENSOR, subject to any changes approved in writing; and (ii) the LICENSEE provides a constant and adequate supply of the raw materials, utilities and the number of trained personnel for the Plant as required in the Agreement.

(a) The Plant shall produce ..... tons per day of Product of Specification Grade ..... (Where more than one grade of product is to be manufactured, the capacity of the Plant for each grade of product should be mentioned and the grade(s) which shall be tested during the Performance Guarantee Test as well as the tolerances and the quality characteristics being guaranteed should be specified).

(b) The consumption of raw materials and utilities shall be as follows:

(Guarantees of raw material, steam, power, etc., per ton for each grade of product, tolerances and eventual compensations among utility consumptions should be specified)

(c) The Effluents shall meet the following specifications within the tolerances mentioned:

(d) The application of the Process and the operation of the Plant shall meet the safety and environmental requirements of the laws and regulations in force in the (country) where the Plant is located, as specified in the Basic Design Data provided by the LICENSEE.

3.5.1 The Performance Guarantee Tests shall be performed within ..... days from the Mechanical Completion and be demonstrated by means of a ..... hours continuous operation of the Plant during which:

(a) The Plant produces ..... x/daily production listed in Article 3.5 (a) above/metric tons of Specification Grade Product.

(b) The Product when separately collected in each 8-hour shift and analysed in accordance with the procedures meets the specifications provided for in Article 3.5 (a) above during each shift.

(c) The consumption of raw materials and utilities when aggregated over the 10-day test run period meet the guarantees provided in Article 3.5 (b).

(d) The effluents and emission when analysed at regular intervals in each 8-hour shift meet the specifications provided in Article 3.5 (c).

3.5.2 The LICENSOR shall prepare a Performance Guarantee Test Report after completion of the Performance Guarantee Test which should be signed by the LICENSOR and submitted to the LICENSEE for approval. If the Plant's performance is satisfactory, the LICENSEE shall issue to the LICENSOR an Acceptance Certificate within ten (10) days from receipt of the Report. The Acceptance Certificate terminates LICENSOR's obligations and liabilities regarding the performance of the Plant.

3.5.3 If the Plant's performance is not satisfactory, the LICENSEE shall inform LICENSOR on the reasons for non-acceptance within ..... days. Upon receipt of this information LICENSOR shall within ..... days prepare a Report which considers whether changes in operating procedures, modification or replacement of equipment, installation of additional equipment or facilities are required.

3.5.4 If the Performance Guarantees are not met, due to defects in the Process and/or Process Engineering Design Package attributable to LICENSOR, LICENSOR shall at its own expense, and in co-operation with LICENSEE proceed to effect the rectifications which in its professional judgement are necessary to rectify the defects and thereby to achieve the Performance Guarantees, LICENSOR and LICENSEE shall determine a mutually agreeable schedule to incorporate such changes, modifications or additions to the Plant and LICENSOR shall bear the expense of design, purchase, delivery and installation of the required equipment necessary to make such changes. In making such request, LICENSOR shall consult with LICENSEE and take into consideration LICENSEE's current production requirements.

3.5.5 If the Performance Guarantees are not met, due to LICENSEE's fault (including the Contractor's fault) LICENSEE shall, through the Contractor proceed to effect the rectifications which in the professional judgement of LICENSEE but with advice and approval of LICENSOR are necessary to rectify the defects and thereby to achieve the Performance Guarantees. LICENSEE shall bear the expenses of design, purchase, delivery and installation of the required equipment necessary to make such changes.

3.5.6 If the LICENSOR and the LICENSEE do not agree and the LICENSOR neglects or refuses to take measures to rectify the defects in the Process within a reasonable time (..... days), then the LICENSEE may itself take steps to rectify the defects in the Process pending Arbitration which shall decide who shall bear the costs thus incurred.

3.5.7 The LICENSOR or the LICENSEE, as the case may be, shall in every case keep accurate records of the costs of rectifying any defect(s) in pursuance of this Article and each party shall be entitled to receive copies of the relevant documents.

3.5.8 The LICENSEE shall not be required to make any payment to the LICENSOR for the extension of the services of LICENSOR's personnel for any period beyond the first unsuccessful Performance Guarantee Test run if the Plant fails to demonstrate the Performance Guarantees for reasons attributable to the LICENSOR.

3.5.9 After completion of the rectification of the defects according to Article 3.5.4, 3.5.5 and/or 3.5.6, a second Mechanical Completion Certificate shall be prepared by the Parties and a Second Performance Test made.

3.5.10 In the event that the Plant is still unable to demonstrate the Performance Guarantees for reasons attributable to LICENSOR, but achieves a performance above the minimum specified below, the LICENSOR shall have the right to pay to the LICENSEE penalties established in the manner set out in Article 3.6 below and thereupon be relieved of his obligations in accord with Article 3.6.

(a) (95) percent of the production capacity equivalent to ..... tons/day;

(b) Consumption of feedstock excees the guaranteed level by (2) per cent;

(c) Consumption of catalysts, chemicals, stream and power exceeds the guaranteed level by ( ) per cent.

3.5.11 In the event the production of Product during the final Performance Test is below that stated above in 3.5.10 does not meet the specifications set out in Annexure 4 hereof or the consumption of feedstock exceeds the guaranteed figure by (2) per cent or more, the LICENSEE shall have the right to rectify the plant. For this purpose, the LICENSEE may approach any other party for advice and know-how on the operation or modification of the plant and the LICENSEE may carry out such modifications of the plant as may be necessary in order to secure production of Product in the quantity of the specification and with consumption of (feedstock) to the guaranteed levels specified in this Agreement. In so doing, the LICENSEE shall not in any manner be restricted by the provisions of confidentiality contained in Article 4.4. The LICENSOR shall be liable to pay to the LICENSEE the full cost to the LICENSEE of obtaining advice and know-how and modifying the Plant.

3.5.12 If, for reasons not attributable to the LICENSOR, the first Performance Guarantee Test has not been carried out within (.....) months of supply of the Process Engineering Design Package, or within (.....) months from the Effective Date, whichever somes later, the obligations of the LICENSOR with regard to Performance Guarantees of the Plant shall become void.

3.5.13 If, for reasons not attributable to the LICENSEE, the first Performance Guarantee Test has not been made within the period stipulated in 3.5.12 above, the LICENSOR shall, on the request of the LICENSEE, undertake to assist LICENSEE in the start-up of the Plant at a later date. In this case additional fees and travel expenses that take account of the increased costs to the LICENSOR shall be agreed between the LICENSEE and the LICENSOR.

Penalties

3.6 The LICENSOR shall be subject to a penalty to be paid to LICENSEE

(1) for delay in supplying the Basic Engineering Design Package and other documents required by the LICENSEE and the CONTRACTOR for detailed engineering of the Plant ..... thousand US Dollars for each week of delay.

(2) If the Plant fails to demonstrate the Performance Guarantees set out in Article 3.5 in the last Performance Guarantee Test conducted and subject to the provisions of Article 3.5.10, the LICENSOR shall pay the LICENSEE compensation in the form of penalties arrived at as follows:

(a) to the extent that production fails short of ..... metric tons (the quantity guaranteed), the LICENSOR shall pay to the LICENSEE a penalty of ..... per every 1 per cent or fraction of 1 per cent of the deficiency;

(b) to the extent that consumption of (feedstock) exceeds ..... metric tons per ton of product (the consumption guaranteed), LICENSOR shall pay to LICENSEE a penalty of ..... per every 1 per cent or fraction of 1 per cent of the excess consumption;

(c) to the extent that consumption of catalysts, chemicals, steam and power per 1000 kg. of product produced is in excess of the guaranteed quantities, the LICENSOR shall pay to the LICENSEE a penalty worked out as follows:

1. For every ..... excess consumption of (catalysts) a sum of ..... per .....
2. For every ..... excess consumption of (chemicals) a sum of ..... per .....
3. For every ..... excess consumption of steam a sum of ..... per .....
4. For every ..... excess consumption of power a sum of ..... per .....

3.6.1 The LICENSEE, without prejudice to any other method of recovery, may deduct the amount of such penalties from any payments due to the LICENSOR.

3.6.2 The payment of such penalties shall relieve the LICENSOR only from those specific obligations for which the penalties were paid.

Additions to Capacity of the Plant

3.7 The LICENSOR grants to LICENSEE the right to Expand Capacity of the Plant and/or to set up additional facilities for the production of Product employing the Process and the Know-how during the term of this Agreement, in ..... (country).

3.7.1 In the case the LICENSEE acquires the right to Expand the Capacity as defined in Article 1.19, the LICENSOR shall grant the right on payment of additional fees at the rate of no more than ..... per metric ton of additional capacity, payable as to 25 per cent on notification to the LICENSOR, and 75 per cent on the date of commercial production.

3.7.2 In the case the LICENSEE achieves higher production without Expanding the Capacity, no further licence fee shall be paid.

3.7.3 The terms and conditions for providing LICENSOR's personnel to assist the LICENSOR with additional services required with regard to Expanding the Capacity shall be at rates negotiated at the time of notification to the LICENSOR.

Liability Limitation

3.8 LICENSEES total liabilities under this Agreement shall be limited to ..... per cent of the lump sum fee mentioned in Article 8, with the following exceptions:

(a) liabilities for patent infrongement (Article 7);

(b) liabilities for defaults in Process Know-how and Process Engineering Design Package (Article 3.5).

The LICENSOR's liabilities under 3.8 (a) and 3.8 (b) above shall be unlimited.

3.8.1 The LICENSOR shall not be liable for loss of anticipated profits or for any consequential loss or damage arising from any cause.

ARTICLE 4

OBLIGATIONS OF THE LICENSEE

Provisions of Basic Design Data for the Plant

4.1 The LICENSEE shall provide and be responsible for the accuracy of the Basic Design Data on which the design of the Plant is to be based. The Basic Design Data shall be transmitted to LICENSOR and discussed at the First Basic Engineering Meeting, according to Annexure 6.

4.1.1 In the event that the LICENSOR finds discrepancies in the Basic Design Data or apprehends that the Basic Design Data is incorrect or in-complete, the LICENSOR shall promptly inform the LICENSEE in writing and the LICENSEE shall amend the Basic Design Data.

Improvements in the Process

4.2 The LICENSEE undertakes on his own accord to make available to the LICENSOR all Improvements in the Process developed by the LICENSEE for the duration of the Agreement (or, if agreed, a specified period) and specifically

(a) to make available free of charge to the LICENSOR all developments and improvements in operating techniques, preventive maintenance and safety measures and process development not covered by (b) applicable to the Plant;

(b) to grant to the LICENSOR, on payment of a reasonable fee and on agreed terms, the rights to use proprietary process developments implemented by the LICENSEE, including patented process developments, which could result in significant improvement(s) in the capacity, reliability and efficiency of the Plant and the quality of the Products.

4.2.1 The LICENSEE shall inform the LICENSOR in writing of the availability of all Improvements as they are developed and applied by the LICENSEE in the Plant.

Appointment of the Contractor

4.3 The LICENSEE and the LICENSOR shall mutually agree on the appointment of the Contractor to undertake detailed engineering and construction of the Plant.

4.3.1 The Contractor shall be obliged to sign a normal secrecy agreement before his contract with LICENSEE becomes effective.

Secrecy and Confidentiality

4.4 The LICENSEE shall treat all process and technical information, proprietary know-how, patented processes, documents, data and drawings supplied by the LICENSOR as "Confidential Information" and shall not divulge such Confidential Information to a third party, except when required by law, when the LICENSEE shall inform the LICENSOR in advance. These obligations shall begin with the first supply or disclosure of the confidential information and shall cease (10) years after the date of disclosure and for the Improvements (10) years after the date of their receipt. The LICENSEE shall not utilize the Confidential Information for any purpose other than for completing, operating, repairing, maintaining or modifying the Plant.

4.4.1 The employees of the LICENSEE, the CONTRACTOR and their sub-contractors entrusted with the work relating to the Plant, shall be bound by the same obligations of confidentiality as the LICENSEE.

4.4.2 Information received from the LICENSOR shall not be deemed Confidential Information when

(a) it enters the public domain by publication or otherwise;

(b) it was in the possession of the LICENSEE at the signing of the Contract; or

(c) it is made available to the LICENSEE independently by a third party.

4.4.3 The LICENSEE shall be authorized without prior approval of the LICENSOR to disclose such part of the Confidential Information received from the LICENSOR to the CONTRACTOR and suppliers of equipment and/or sub-contractors and/or insurance companies when such information is absolutely necessary to call for bids or to purchase equipment and/or for the insurance of the equipment and/or the Plant.

4.5.4 LICENSEE shall be authorized to communicate to any Government regulatory body such parts of the Confidential Information as may be required by the applicable law relating to the approval or registration of this Agreement or grant of licence for import of equipment or any other matter pertinent to the setting up of the Plant.

4.4.5 The LICENSEE shall be authorized to disclose to any Government laboratory part of the Confidential Information received from the LICENSOR, subject to LICENSOR's approval in advance and to the recipients of such information being bound by the same obligations of Confidentiality as the LICENSEE.

ARTICLE 5

CO-ORDINATION OF THE WORK

5. LICENSOR shall assist LICENSEE and Contractor in the technology transfer during the preparation of the Process Engineering Design Package and to undertake the detailed engineering, construction, start-up, commissioning, operation and maintenance of the Plant. The details of the arrangement for co-ordinating the work to be undertaken by LICENSOR, LICENSEE and Contractor are specified below and in Annexure 6 and the time schedule is specified in Annexure 7.

5.1 Transfer of Technology

During the preparation of the Process Engineering Design Package, LICENSEE shall accept in LICENSOR's Office LICENSEE's representatives at the dates, number of days, and number of persons fixed in Annexures 6 and 7. The Contractor, if already selected shall assist at the conferences. For the duration of these conferences, LICENSOR shall provide office accommodation, technical and clerical assistance. Expenses incurred on telex, cables and postage shall be on the account of LICENSEE.

5.2 Detailed Engineering

The LICENSEE in his contract with the Contractor shall make arrangements for co-ordinating the work it undertakes with the LICENSOR. The arrangements shall include but not be limited to the arrangements listed in this Article 5 and Annexures 6 and 7.

5.2.1 The LICENSEE shall convene at (Place) in (Country) the First Detailed Engineering Meeting with the LICENSOR and Contractor to discuss and agree on the matters listed in Article 5 and Annexures 6 and 7.

5.2.2 In order to assist LICENSEE and Contractor in the detailed engineering of the Plant, LICENSOR shall take part at the design conferences to be held between LICENSEE and Contractor. The date, duration, number and qualification of the participants and the scope of each conference shall be agreed upon at the

First Detailed Engineering Meeting. At these meetings LICENSOR shall

(a) give advice and supply information on the Process according to Article 3.3.3;

(b) approve all the detailed engineering designs and drawings that are specified in Article 3.3.5 and Annexure 6 as requiring LICENSOR's review and approval. The conferences shall be held either at Contractor's or LICENSEE's office. The secretarial and clerical assistance shall be given by the host organization.

5.2.3 The LICENSEE and the Contractor shall prepare the detailed engineering of the Plant strictly in accordance with the Process Engineering Design Package.

5.2.4 The LICENSEE shall notify the LICENSOR of any changes it wishes to make in the Process Engineering Design Package. If in the opinion of the LICENSOR, such changes are likely to prevent the LICENSOR from fulfilling any of his obligations under the Agreement, he shall notify the LICENSEE in writing of the modifications to his obligations that would result and the LICENSEE shall decide forthwith whether or not the changes shall be carried out. If the LICENSEE reconfirms in writing his intention to carry out the changes, then the obligations of the LICENSOR shall be modified to such extent as the LICENSOR specifies.

5.3 Procurement

LICENSOR shall assist LICENSEE and Contractor in the procurement of the critical items of equipment listed in Annexure 6 and in addition take part at the tests and acceptance procedure at the manufacturing plants. The schedule and method of the LICENSOR's participation in the work shall be agreed upon at the First Detailed Engineering Meeting.

5.4 Erection of the Plant

LICENSOR shall assist LICENSEE and Contractor in the erection of the Plant. For this purpose LICENSOR shall

(a) at LICENSEE's request give consultation services on questions arising during erection

(b) to inspect the Plant on Mechanical Completion and to report to LICENSEE any evident defects which would affect the safe and efficient operation of the Plant and/or its demonstration of the Performance Guarantees.

5.5 Start-up

LICENSOR shall direct the start-up and Performance Guarantee Test by his delegated personnel in co-operation with the Contractor and LICENSEE.

5.6 LICENSOR's personnel

The LICENSOR shall communicate to LICENSEE the background and experience of the person or persons proposed for all such assignments. No person shall be deputed without the LICENSEE's approval, which shall not be unreasonably withheld.

5.6.1 The LICENSEE shall have the right at any time to require the immediate repatriation of any of the LICENSOR's personnel found to be misbehaving, negligent or lacking in competence. In such cases, the LICENSOR shall immediately satisfy himself of the validity of the claim and shall provide a replacement in not less than ..... days. The costs of repatriation and of providing a replacement shall be borne by LICENSOR.

5.6.2 LICENSOR's obligations to depute personnel to the country of the Plant under the Agreement shall be limited to ..... man-days.

5.7 Payment for LICENSOR's services

Payment for all the LICENSOR's services under Article 5 are included in the lump-sum Fee (Article 8.1.1), except for the reimbursable changes for the LICENSOR's personnel assigned to work outside his home office.

ARTICLE 6

TRAINING OF LICENSEE'S PERSONNEL

6. The LICENSOR shall arrange for the training of LICENSEE's personnel in plants which commenced production within .... years previous to the Effective Date using the Process and owned either by LICENSOR or one of its licensees. The training shall cover, but not be limited to, plant operations, plant maintenance, material handling, quality control, effluent treatment. The LICENSOR shall ensure that the training shall be adequate to enable the LICENSEE's personnel to master the technology of the Process, the operation, maintenance and control of the Plant. The LICENSEE shall ensure in this connection, that the personnel to be trained shall have the qualifications provided for in Annexure 10.

6.1 The LICENSOR shall ensure that personnel designated by the LICENSEE be given adequate opportunity to study and acquaint themselves with the Process, safety precautions, quality control of the Product, laboratory procedures, maintenance of the plant, and to discuss plant and laboratory practices and operations with the plant personnel.
The LICENSEE's personnel shall be permitted to make notes and sketches, and to procure pertinent information as required.

6.2 The LICENSOR shall provide training for the LICENSEE's personnel for the periods described in Annexure 10.

6.3 The Training Programme shall be carried out in ..... language, and wherever necessary the interpreters for this purpose shall be provided by ..... The LICENSOR undertakes to supply training manuals and data in the ..... language.

6.4 All living and travel costs for the LICENSEE's personnel shall be borne by the LICENSEE.

6.5 The cost of the LICENSOR's personnel supervising the training and training fees are included in the lump-sum fee payable to the LICENSOR under Article 8.1.1.

6.6 The personnel of the LICENSEE, during the time they are present at the plant of another party, shall be subject to all rules and regulations prevailing on the premises but shall not be considered an employee of the other party.

6.7 The LICENSOR shall have the right at any time to require the immediate repatriation of any of LICENSEE's personnel found to be negligent, lacking in competence or guilty of a misdemeanour. In such cases, LICENSEE shall immediately satisfy himself of the validity of the claim and shall provide replacement in ..... days. The cost of repatriation and of providing a replacement shall be borne by LICENSEE.

6.8 LICENSEE will use his best endeavours to retain and use the trained personnel for start-up and operation of the Plant.

ARTICLE 7

PATENT INFRINGEMENT

7.1 The LICENSOR shall indemnify and hold harmless the LICENSEE in the event that any claim is made or any suit or other action is brought against the LICENSEE alleging infringement of one or more of Third Parties' Patents published until the Effective Date by reason of the LICENSEE's practice of the Process and the Know-how in the Plant or of the sale on the home market of the product produced in the Plant, provided the LICENSEE so notifies the LICENSOR promptly.

7.1.1 The LICENSOR shall also indemnify and hold harmless the LICENSEE from any infringement of a patent on an item of equipment or apparatus of design specified by the LICENSOR as required for the practice of the Process.

7.1.2 Indemnify shall mean that the LICENSOR shall reimburse in full to the LICENSEE any royalties, licence fee or damages paid to a third party as a result of a ruling of a competent court of law that LICENSEE's practice of the Process and/or Know-how infringes the patent rights of the third party.

7.2 The LICENSEE shall give the LICENSOR prompt notice, in writing, of any claim or suit (referred to in Article 7.1) of which it has knowledge. The LICENSOR shall have sole charge and direction of the defence and disposal of such suit of action and the LICENSEE shall render all reasonable assistance but shall not be obligated to sustain any expenses. The LICENSEE shall have the right to be represented by legal counsel experienced in technology contracts of its own choice at its own expense.

7.3 The LICENSOR shall have the right to acquire immunity from suit and to make or cause to be made alterations at its own cost to the Plant(s) to eliminate the alleged infringement provided such alteration does not prevent the Plant(s) from meeting its Performance Guarantees mentioned in Article 3.5 with a time schedule to be agreed with LICENSEE.

7.4 Neither the LICENSOR nor the LICENSEE shall settle or compromise any suit or action without the written consent of the other if such settlement or compromise would oblige the other to make any payment or part with any property, to assume any obligation or grant any licences or other rights, or to be subjected to any injunction by reason of such settlement or compromise.

ARTICLE 8

CONTRACT PRICE AND TERMS OF PAYMENT

8.1 The LICENSEE will pay to the LICENSOR as consideration for the execution of the Agreement and the performance of the LICENSOR's obligations described in Articles 3, 5 and 6 but excluding the additional services for which an option is provided but Articles 3.4 and 3.7, a lump sum of

(Insert Price and Currency)

together with payments to be made on a cost reimbursable basis at rates specified in Annexure 11 for the assignment of LICENSOR's personnel to the LICENSEE's country. For optional services under 3.4 and 3.7 a separate Agreement will be concluded.

8.1.1 The Lump-Sum Fee will be for services rendered outside the LICENSEE's country and made up as follows:

(a) for the granting of the License for the Plant (Price and Currency);

(b) for the supply of the Process Engineering Design Package, Know-how, and related Technical information and service as described in Articles 3 and 5 (Price and Currency);

(c) for the provision of training and training facilities as described in Article 6 (Price and Currency).

8.1.2 The Lump-Sum Fee shall be paid in three instalments as follows:

(a) (25) per cent as an advance payment to be paid 30 days after signature of the Agreement;

(b) (50) per cent on receipt of the Process Engineering Design Package;

(c) (25) per cent on satisfactory demonstration by the Plant of the Performance Guarantees as confirmed by the Acceptance Certificate issued.

These payments shall be paid by the LICENSEE within 30 days of the LICENSEE being advised by the LICENSOR that they are due.

8.1.3 For the assignment of the LICENSOR's personnel to work away from home office, payments will be made within 10 days in accordance with Annexure 9 against LICENSOR's monthly invoices, certified at the site. Payments due in local currency shall be made direct to LICENSOR's personnel and in advance.

8.1.4 LICENSEE shall pay to LICENSOR ..... per cent interest on any delay in his payment obligations.

8.1.5 Payments shall be made in ..... currency to the account of the LICENSOR at ..... (Bank named by LICENSOR).

ARTICLE 9

DURATION OF THE AGREEMENT

Effective Date

9.1 The Agreement shall become valid upon the formal execution (signing) by the duly authorized officers of the LICENSOR and LICENSEE properly witnessed and sealed and in accordance with the applicable law.

The Effective Date of the Agreement shall be the date upon which the last of the following requirements has been fulfilled:

(a) Approval of the Contract by the Government of (country) where the plant is to be located, such approval, if required, to be obtained by the LICENSEE.

(b) Approval of the Government of (country) where the LICENSOR resides and has his principal place of business, if required, such approval to be obtained by the LICENSOR.

(c) The remittance of the advance payment by the LICENSEE as provided under Article 5 secured by the Bank Guarantee provided by the LICENSOR in accordance with Article 10.1.

Duration of the Agreement

9.2 The duration of the Agreement shall be for a period of (10) years from the Effective Date.

Rights on Expiring of the Agreement

9.3 The rights and licenses granted by the LICENSOR to the LICENSEE under Article 3.1 and 3.7 of this Agreement shall survive expiration of the term of this Agreement.

Obligations on Expiring of the Agreement

9.4 The LICENSOR and the LICENSEE shall have no further obligations on Expiring of the Agreement, except as specified in Article 4.4.

Termination

9.5 If the Agreement has not come into effect before , the Agreement shall be terminated unless the LICENSOR and the LICENSEE agree to amend the Agreement to take account of the delay. The Agreement may also be terminated in the following circumstances:

9.5.1 The LICENSOR may terminate this Agreement and the right and licence granted to LICENSEE by written notice to the LICENSEE if any payment required to be made by LICENSEE to LICENSOR is more than ..... months overdue, provided that the written notice has been given by LICENSOR to the LICENSEE and one month has elapsed since such notice was served.

9.5.2 The LICENSEE may terminate this Agreement by written notice to the LICENSOR, if the LICENSOR has failed to complete its obligations in the time specified in the Agreement and provided that such default has continued unremedied for more than ..... months and that one month has elapsed since written notice was served by the LICENSEE.

9.5.3 LICENSOR may terminate this Agreement by written notice to the LICENSEE if LICENSEE has definitely discontinued business and the Plant has been closed down for any reason whatsoever and production has not been resumed after ..... months from the closure of the Plant.

ARTICLE 10

GENERAL CONDITIONS

Bank Guarantees

10.1 The LICENSOR shall provide the LICENSEE Bank Guarantees in favour of the LICENSEE in the form provided in Annexure 12, guaranteed by (Name of Bank) and confirmed in (LICENSEE's country).

10.1.1 The LICENSOR shall deliver on receipt of the advance payments a Bank Guarantee to secure the advance payments made under this Agreement. The amount of the Bank Guarantees shall be completely released upon delivery of the Process Engineering Design Package.

10.1.2 The LICENSOR shall deliver on receipt of payments for the Process Engineering Design Package (Article 8.1.2(b)) a Bank Guarantee for an amount equal to his liability under the Agreement as limited in Article 3.8 less the amount due to the LICENSOR under Article 8.1.2(c)); this Bank Guarantee shall remain in force until the Performance Guarantees of the Plant are successfully demonstrated.

Insurance

10.2 The LICENSOR and LICENSEE shall effect insurance in respect of their own property and personnel, respectively; such insurance cover shall in particular cover any claim that may be made by or on behalf of their employees alleging injury or death arising as a result of or in connection with the performance of this Agreement and shall hold each other harmless from any or all such claims. The LICENSOR shall also effect insurance in respect of design defects.

10.2.1 The LICENSOR shall be responsible for taking out the following Insurance policies:

- Insurance liability for the staff of the LICENSOR deputed to site of the Plant, if required.
- Insurance liability for automobiles or other transport of the LICENSOR at site of the Plant.

10.2.2 The LICENSOR shall ensure that its services provided under this Agreement are covered by its corporate "Professional Indemnity" insurance policy as regards its liability for errors and ommissions, negligence, mistakes in design, etc., arising from the LICENSOR's work.

10.2.3 The LICENSOR shall, when required by the LICENSEE, submit to the LICENSEE adequate proof that the insurance(s) for which it is responsible are in force.

Taxes and Levies

10.3 Except as otherwise specified in this Contract, each and every price cited in or contemplated by this Contract as described in Article 8, includes and covers all patent royalties, and all taxes, rates, charges and assessments of any kind whatsoever (whether Federal, State or Municipal, and whether or not in the nature of excise taxes/duties, customs tariffs, sales taxes, land taxes, license fees or otherwise) outside the LICENSEE's country pertinent to the LICENSOR's services provided with respect to the Plant pursuant to this Contract, and/or to the performance of the work, and all other costs and charges whatsoever relevant to equipment, material, services and/or to such performance of the work by the LICENSOR.

10.3.1 Subject to national laws in the LICENSEE's country, the amounts to be paid to the LICENSOR under the Contract shall be net and free of any income taxes or other taxes, duties, or imposts or levies in (LICENSEE's country).

10.3.2 Notwithstanding the provisions of Article 10.4.1, in the event of a double taxation agreement between (LICENSOR's country) and (LICENSEE's country), any taxes or levies of any kind imposed by the National or any Local Government of (country of LICENSEE) pursuant to the law with respect to payment of fees, charges or expenses under this Article or the remittance thereof shall be paid by LICENSEE by deduction from the amount or amounts to be paid to LICENSOR. LICENSEE shall provide LICENSOR with original receipts of the Government authorities in evidence of payment of such taxes or levies.

10.3.3 In the event that the tax benefits obtained by the LICENSOR as a result of the tax deduction by LICENSEE under 10.4.2 above, are less than the amount deducted, the LICENSEE will reimburse the difference to the LICENSOR.

Settlement of Disputes

10.4 In the event that in the interpretation this Agreement is disputed, both parties shall endeavour to resolve the dispute by mutual discussions. Should the dispute remain unresolved, both parties

may each nominate a person to negotiate and reconcile the dispute. In the event that these two persons cannot agree, they shall nominate a third neutral person to reconcile the dispute. If the efforts of the neutral person fail, both parties to the Contract shall have the right to proceed to Arbitration as provided for in Article 10.5.

10.4.1 Pending resolution of a dispute, the LICENSOR shall carry out its obligations under the Agreement without prejudice to any claim by the LICENSOR for additional compensation and/or time to complete the work, the LICENSEE shall carry out its obligations under the Agreement, and payment(s) to the LICENSOR shall continue to be made in accordance with the Agreement.

Arbitration

10.5 All disputes between the parties arising out of the provisions of this Agreement if not resolved amicably by negotiation according to Article 9.5 shall be settled by arbitration in accordance with the Law of Arbitration of (country)/the Arbitration Rules of the United Nations Commission on International Trade Law/the Rules of Conciliation and Arbitration of the International Chamber of Commerce.

10.5.1 If either party hereto defaults under any provision of this Agreement and such default continues unremedied for ..... days after written notice has been given by one party to the defaulting party and settlement has not been arrived at by Article 10.5 then the former party shall have the right to have the matter resolved and settled by arbitration.

10.5.2 The award of the Arbitrator or Arbitrators, as the case may be, shall be final and binding on the parties hereto. Judgement upon the award may be entered by the court of (country)/by any court of competent jurisdiction.

10.5.3 Failure to demand arbitration within the said ninety (90) days period shall result in the final decision being final and binding upon the party.

10.5.4 The LICENSOR shall continue to undertake its obligations under the Agreement during any arbitration proceeding unless otherwise agreed by the LICENSEE in writing.

10.5.5 The LICENSOR and LICENSEE agree that in the event of arbitration proceedings, the Arbitrator(s) shall have unrestricted access to the Plant for the purpose of the said Arbitration.

10.5.6 Arbitration shall be in (town) and all proceedings will be in ..... language. The Governing Law shall be in accordance with Article 11.3.

Force Majeure

10.6 Force Majeure shall be deemed to be any cause beyond the reasonable control of the LICENSOR or the LICENSEE which prevents, impedes or delays the due performance of the Agreement. Force Majeure may include but shall not be limited to any one or other of the following:

- any war or hostilities;
- any riot or civil commotion;
- any earthquake, flood, tempest, lightning, unusual weather or other natural physical disaster;
- any accident, fire or explosion;
- any strike, lock-out or concerted acts of workmen;
- any major change in the laws and regulations of the Government of the countries concerned. *

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* State in the Agreement the countries concerned.

10.6.1 The affected party shall give a written Notice of Force Majeure to the other party within ..... days of the happening of such event, specifying the details constituting Force Majeure with necessary evidence that a contractual obligation is thereby prevented or delayed; the affected party shall then be excused from the performance or punctual performance of such obligation as from the date of such notice for so long as may be justified by the event.

10.6.2 The affected party shall be diligent in endeavouring to prevent or remove the cause of Force Majeure. Upon receipt of the Notice of Force Majeure, the other party shall confer promptly with the affected party and agree upon a course of action to remove or alleviate such cause(s), or shall seek alternative methods of achieving the performance objectives under the Contract.

10.6.3 If performance of the Agreement is affected by conditions of Force Majeure for a continuous period of six (6) months, the parties shall amend the terms of the Agreement accordingly.

10.6.4 If the LICENSEE and the LICENSOR are unable to reach agreement or amendments to the terms of the Agreement needed by virtue of the prevailing Force Majeure, within (30) days the dispute will become subject to Arbitration.

ARTICLE 11

MISCELLANEOUS PROVISIONS

Assignment

11.1 This Contract shall inure to the benefit of and be binding upon the parties hereto and their and each of their executors, administrators, curators, successors and assigns, subject to the provision that this Contract may not be assigned by the one party without the written consent of the other party.

General Provisions

11.2 The express convenants and agreements herein contained and made by the LICENSEE and the LICENSOR are and shall be the only convenants and agreements upon which any rights against the LICENSEE or the LICENSOR are to be founded.

11.2.1 This Contract supersedes all communications, negotiations, and agreements, either written or oral, relating to the work and made prior to the date of this Contract.

11.2.2 The provision of the Articles of this Agreement and the contents of the Annexures shall be complementary to each other, but in the event of any conflict, the provisions of the Articles shall prevail.

11.2.3 Article headings appearing herein are included for convenience only and shall not be deemed to be part of this Agreement.

11.2.4 The governing language of the Agreement shall be ( ) and the definitions in such language shall be final in the use and interpretation of the terms of the Agreement.

Governing Law

11.3 The laws applicable to the Agreement shall be the laws of 1/

1/ In some countries, the Governing Law must be the laws of the country where the plant is located; where the choice is open, the other possibilities are the laws of the LICENSOR's country, the laws of a neutral country, etc.

Language

11.4 All correspondence, information, literature, date, manuals, etc. required under the Agreement shall be supplied in the ( ) language.

11.4.1 All personnel sent by the LICENSOR to the Site, and all personnel sent by the LICENSEE for training shall be conversant in the ( ) language.

Standards and Codes

11.5 The standards and codes of (country) shall be used in the design and specifications of the Plant, unless otherwise agreed at the First Detailed Engineering Meeting. The LICENSEE will inform the LICENSOR of any statutory standards and codes applicable to the plant at this meeting.

Local Laws and Regulations

11.6 The LICENSOR, his staff, and representative shall observe all codes, laws and regulations in force in the country of the LICENSEE and in the region where the Plant is located, made known to LICENSOR by LICENSEE.

11.6.1 In the event that any code, law or regulations are enacted after the Effective Date and transmitted by LICENSEE are proven (to the satisfaction of the LICENSOR) to have adverse effect on the LICENSOR's obligations, scope of work, prices and/or time schedule under this Contract, the LICENSOR shall either:

(a) assist LICENSEE to obtain appropriate exemption(s) from the relevant authorities on the LICENSEE's behalf, or

(b) negotiate with the LICENSEE for commensurate change(s) in the scope of the work to be performed under the Contract, together with such changes in price as properly reflect the actual increased costs that are anticipated. The increased amount shall be subject to full audit by the LICENSEE.

Notices

11.7 Any notice or other communication to be made by the LICENSOR to the LICENSEE shall be effective when mailed by registered post with acknowledgement due. Any notice or other communication to be made by the LICENSEE to the LICENSOR shall be effective when mailed by registered post with acknowledgement.

11.7.1 When any such notice is sent by registered mail, it shall be deemed to have been duly served following the expiration of seven (7) days following the date of posting; in proving that notice was served it shall be sufficient to show that the letter containing the notice was properly addressed and conveyed to the postal authorities for transmission by registered airmail.

11.7.2 Either party may, by notice to the other party in writing, change its postal address, cable address or telex address for receiving and/or forwarding such notices.

Approvals

11.8 "Approval" shall be deemed to mean approval in writing. Decisions requiring approval shall also be deemed to encompass modifications or rejections, all of which shall be in writing.

11.8.1 Any and all approval(s) which amend, modify or vary the Contract and/or involve an increase in payment(s) shall be forwarded in like manner as the procedure specified for the notices under Article 11.7.

National Security

11.9 If any document or information given or disclosed to the LICENSOR is deemed by the LICENSEE to affect national security, the LICENSOR will take all reasonable measures directed by the LICENSEE to ensure the maintenance of the security.

ANNEX A

INVITING BIDS FOR A LICENSING AGREEMENT

EXAMPLE OF LETTER FROM THE LICENSEE TO PROSPECTIVE LICENSORS

Gentlemen:

We wish to install a petrochemical plant with a capacity of ( ) metric tons per year of (product) to be located at ( ) .

Since your company is noted as a specialist in this process technology, we are requesting you to present us a formal proposal for our specific project. We are also sending similar letters to some other companies which have the right to license know-how for this process.

We are enclosing hereto (i) a list of the information we require to ensure uniformity in content of the different bids and simplicity in their evaluation and (ii) an outline of the Scope of the Process Engineering Design Package which the Licensor will be expected to supply.

We wish to complete evaluation of bids and contracting of technology by (date) . Therefore, you must present your proposal on or before (date 2 months earlier).

We would also like to obtain from your company, the name of engineering companies with experience and knowledge of your process who would be suitable to undertake the detailed engineering and construction of the plant under our supervision.

Thank you for your kind attention to this invitation; confirmation by telex of your intention to bid would be appreciated.

Yours sincerely,

on behalf of
The Prospective Licensee

ANNEX A

INFORMATION ON THE PROCESS TO BE FURNISHED BY THE LICENSOR

1. Description of the Process. Advantages over other competing process. Technical and economic characteristics.

2. Existing plants constructed using the Process.
Full detail of the experience of the Licensor in the use of the Process, including a list of plants with capacity and location and for each plant:

(a) Number of years of satisfactory operation,
(b) Contact in person to whom reference may be made.

3. Cost of the plant.

3.1 Estimated total cost.
(The basis for the estimate should be either (a) the current cost for a battery limit plant built in the Licensee's country; or (b) the current cost for such a plant built in the United States Gulf Coast plus an indicative location factor for erection in the Licensee's country.)

3.2 The estimated total cost must be split under:

(a) Engineering,
(b) Equipment and materials,
(c) Construction,
(d) Initial fill of catalyst and/or reagents.

4. Cost of the License.

4.1 The licence will include the right to use the patents technical information and know-how of the Licensor and the supply of Process Engineering Design Package sufficent for the Contractor to perform the detailed engineering and construct the plant.

4.2 The licence fee should be presented in two alternative forms:

(a) As a lump-sum, which would be paid in three instalments:

25% on signature of the Agreement;

50% on receipt of Process Engineering Design Package;

25% on satisfactory demonstration of the Plant's Performance Guarantees.

(b) On the running royalties basis, which may include an initial lump sum payment payable in instalments plus royalties based on the volume of sales. (The basis for calculating royalties and any maximum limit for all accumulated royalty payments should be stated.)

4.3 The Licence fee should be inclusive of local taxes (in Licensee's country), if and where applicable.

4.4 The licence must confirm that the Licensee will be free of charges of infringement of patents or technological rights of any third party. Any payments or additional royalties to be paid to a third party for the use of their technology must be clearly states.

4.5 Limitations to exports. None.

5. Engineering Services.

The Licensor is expected to provide the following engineering services:

5.1 Process Engineering Design Package as per Enclosure A,

5.2 Checking detailed engineering drawings,

5.3 Checking the part on Mechanical Completion,

5.4 Commissioning the plant.

6. Raw materials, utilities and catalysts.

The Licensor should indicate typical as well as guaranteed figures that will be included in the Agreement.

6.1 Specification and unitary consumptions of feedstock, other raw materials, catalyst, inert gas, etc.

6.2 Conditions and unitary requirements of utilities (water power, steam, air, etc.)

6.3 Unitary cost of catalyst and miscellaneous chemicals per ton of product.

7. Personnel.

The number of personnel required for the operation of the plant should be detailed.

8. Site.

The area required for the construction of plant in battery limits.

9. Time of Construction.

Estimate the time required from initiation of the Detailed Engineering to Mechanical Completion of the Plant and compare with time actually taken in respect of existing plants listed under 2 above.

10. The Contractor.

Recommended Engineering Organization(s) for Detailed Engineering and Construction of the Plant, preferably in the country of the Licensee.

11. Process Engineering Design Package.

Estimated time required to prepare the Process Engineering Design Package (Black- that will allow a reputable Engineering firm to proceed with the Detailed Engineering and to construct the Plant. The scope of this package is given in Enclosure B.

SCOPE OF THE PROCESS ENGINEERING DESIGN PACKAGE

The LICENSEE will submit the description of the Process Engineering Design Package provided in Annexure 8 of the Model Form of Licensing Agreement pages 75 to 85 of the present document.

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Agenda item 5

ANNEXURES FOR FIRST DRAFT OF UNIDO MODEL FORM OF AGREEMENT FOR THE LICENSING OF PATENTS AND KNOW-HOW IN THE PETROCHEMICAL INDUSTRY*

prepared by the
UNIDO secretariat

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LIST OF ANNEXURES

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1. LIST OF PATENTS GRANTED APPLICABLE TO THE PROCESS ON DATE OF SIGNATURE OF THE AGREEMENT.

2. DESCRIPTION OF THE LICENSOR'S PROCESS.

3. DESCRIPTION OF LICENSED PLANT.

4. SPECIFICATION OF PRODUCT.

5. PRELIMINARY OUTLINE OF THE SITE AND LAYOUT OF THE PLANT. DEFINITION OF THE BATTERY LIMITS.

6. SCOPE AND CONTENT OF ENGINEERING SERVICES AND CO-ORDINATION OF WORK.

7. TIME SCHEDULE OF THE ENGINEERING SERVICES.

8. SCOPE AND CONTENT OF THE PROCESS ENGINEERING DESIGN PACKAGE.

9. CATEGORIES, QUALIFICATIONS AND EXPERIENCE OF PERSONS TO BE ASSIGNED BY LICENSOR. EXPENSES OF AND FACILITIES FOR LICENSOR'S PERSONNEL ASSIGNED TO WORK FOR THE LICENSEE.

10. CATEGORIES, QUALIFICATIONS AND EXPERIENCE OF PERSONS TO BE TRAINED BY LICENSOR.

11. GUARANTEES FIGURES FOR CONSUMPTION OF RAW MATERIALS. VOLUME AND COMPOSITION OF EFFLUENTS.

12. FORM OF BANK GUARANTEES.

ANNEXURE 1

LIST OF PATENTS GRANTED APPLICABLE TO THE PROCESS
ON DATE OF SIGNATURE OF THE AGREEMENT

Reference Article 1.10 and 3.1

Patent No. (Country)	Registration date	Expiry date	Description

ANNEXURE 2

DESCRIPTION OF LICENSOR'S PROCESS (An illustrative outline with reference to Polypropylene and VCM)

Reference Article 2.6

A. Process for manufacture of Polypropylene:

The LICENSOR'S PROCESS referred to in Article 1.5 and 2.6 is the process for manufacture of Polypropylene whereby propylene is polymerised in the presence of a catalyst formed by a mixture of a solution of an aluminium organometallic compound and titanium trichloride at .....°C (temp. range) and.....kg/cm^2 to produce pelletized propylene homopolymers. (pressure range)
The process includes:

- preparation of the catalyst mixture
- polymerisation in liquid..... (solvent)
- separation of unreacted propylene
- decomposition of the catalyst by.....alcohol
- centrifugation from solvent, stripping, aqueous centrifugation.
- drying
- extrusion and pelletisation of the polymer, natural as well as coloured
- solvent recovery

The preparation of the components of the catalysts are not included.

B. Process for the manufacture of EDC and VCM:

B.1 The LICENSOR'S PROCESS referred to in Art. 1.10 is the process for manufacture of EDC and VCM whereby ethylene is converted to EDC partly by direct chlorination and partly by oxychlorination and EDC is converted by pyrolysis of VCM.
The process shall include:-

(i) The manufacture of EDC by liquid phase addition chlorination of ethylene by low temperature or high temperature.

(ii) The manufacture of EDC by air based oxychlorination of ethylene.

(iii) The purification of recycle EDC and the crude EDC produced by the reactions under (i) and (ii) above.

(iv) The thermal cracking of pure EDC to produce VCM and HCL.

(v) The purification of the VCM.

(vi) Primary treatment of the liquid effluents.

(vii) Recommendations on the disposal system for vent gases.

(viii) Waste incineration and effluent treatment.

.....

Note: For some processes, it may be useful to include a flow-sheet describing the Process in this Annex.

ANNEXURE 3

DESCRIPTION OF LICENSED PLANT (Illustrative with reference to Polypropylene)

Reference Art. 2.1

The LICENSED PLANT referred to in Article 1.4 means a commercial plant designed with a capacity to produce ..... metric tonnes per day of propylene homopolymers corresponding to ..... metric tonnes per year based ..... operating hours. The Plant will produce .....% of the polymer in the form of powder and .....% in the form of pellets.

The Plant will consist of the following units:

(i) Polymer powder production unit: The unit has separate sections for

a. preparation of catalyst mixture

b. polymerization of propylene and separation of unreacted propylene

c. centrifugation and finishing

d. drying of polymer powder.

(ii) Polymer extrusion and pelletization.

(iii) Solvent recovery.

(iv) Waste incineration.

(v) Effluent treatment.

The Battery Limits of the Plant will be as follows (only for the purpose of this Agreement):

(i) The physical boundaries on the site layout (Annexure 5) marked as Battery Limits,

(ii) Every and all process step between the inlet points of the raw materials, services and chemicals and the outlet point(s) of Product, defined in Annexure 5 necessary to implement the Process and fulfil the guarantees. Exclusions (if any) should be clearly defined.

ANNEXURE 4

SPECIFICATION OF PRODUCT (Illustrative with reference to Polypropylene and VCM/EDC)

Reference Art. 2.1

The specifications of the PRODUCT, the characteristics of by-products and the expected recoveries are given below:

Polypropylene

1. The specifications of polypropylene common to all the grades will be:

1.1.	polypropylene homopolymer	.....% by wt.min.
1.2.	density	.....kg/cm^3
1.3.	ash content in the powder	.....ppm wt.max.
1.4.	water content in the powder	.....ppm wt.max.
1.5.	chlorine content in the powder	.....ppm wt.max.
1.6.	isotacticity index of the powder	.....%
1.7.	specific heat	.....K cal/kg^{o}C
1.8.	thermal conductivity	.....K cal/mh^{o}C
1.9.	linear expansion co-efficient	.....^{o}C
1.10	dielectric constant	.....
1.11	dissipation factor	.....
1.12	dielectric rigidity	.....
1.13	volume resistivity	.....

2. The specifications particular to each type and grade will be as follows:-

2.1. TYPE

SPECIFICATION

(a)

(b)

(c)

etc.

3. By-products and recoveries

3.1 Atatic Polypropylene

- water	.....% by wt.
- solvent	.....% wt.max.

3.2. Untreated Propylene

- state .....gaseous
- propylene .....% wt.
- solvent .....% wt.
- impurities (ethane + propane + hydrogen + water + nitrogen .....% wt.
- temperature .....°C
- pressure .....kg/cm^{2}g.

EDC & VCM

Vinyl Chloride

- vinyl chloride 99.9 .....% wt. min.
- Acidity (as HCL) .....ppm wt. max.
- Acetylene .....ppm wt. max.
- Acetatdehyde .....ppm wt. max.
- water .....ppm wt. max.
- sulphur .....ppm wt. max.
- Iron .....ppm wt. max.
- Heavy ends (contains chloroprene, ethyl + chloride, vinylidene chloride, cis & trans dichloroethylene, 1.1 and 1.2 dichloroethane trichloroethylene, pre-chloroethylene, mono & dichloropropane and vinyl bromide. .....ppm wt. max.
- Methyl chloride .....ppm wt. max.
- 1, 3 Butadiene .....ppm wt. max.
- Non-volatiles .....ppm wt. max.
- Color .....colourless
- Appearance .....clear and free from suspended matter.

The specifications of the commercial grade ethylene dichloride will be:

- Ethylene dichloride .....% wt. min.
- Trichloro ethylene .....ppm wt. max.
- 1,1,2 trichloro ethane .....ppm wt. max.
- Chloroform and carbon tetrachloride .....ppm wt. max.
- Hydrochloric acid .....ppm wt. max.
- Moisture .....ppm wt. max.

ANNEXURE 5

PRELIMINARY OUTLINE OF THE SITE AND LAYOUT OF THE PLANT

DEFINITION OF THE BATTERY LIMITS

1.1 Plant location

The Plant is to be located at (or near) (name of town) in (country).

The site for the Plant has been selected and a site map indicating the dimensions of the site is attached as Drawing No. ___. The LICENSOR will locate the Plant in the site area (which he acknowledges is sufficient) bearing in mind the wind direction and the LICENSEE's suggestions for incoming and outgoing roads.

1.2 Layout of the Plant

The preliminary layout of the Plant shall be designed by LICENSOR within Battery Limits defined below and taking into account the site condition (1.1. above) as well as the Basic Data.

1.3 Definition of the Battery Limits

The Battery Limits of the area of plant design should be clearly stated and indicated on the preliminary plot plan with approximate data on elevation of the connection points above and underground. All points of connection (inputs and outputs) shall be clearly defined. An example is given below:

Inputs - Natural gas shall be supplied by the Gas Distribution Company at a single point on the boundary of the plant (unit inlet or battery limit).

- Water shall be pumped to the plant site and will be available (provide separate data on cooling water and/or well water etc. as make-up water and utility water) at a single point in the plant. A plant storage at ground level of _____ m^3 will be provided, and water will flow to this storage. All treatment and pumping facilities for the water are part of the design.

- Steam and power requirements will be generated in the plant. External steam and power supplies will be connected to the respective points as indicated on the plot plant (separately for different parameters).

- Electric power of .....V H_2 .....MW capacity at ..... point (indicated on the plot plan).
- Naphtha input at ..... point coming from storage area (excluded).
- All chemicals, catalysts will be supplied at storage/warehouses at ground level. (Indicate location at the construction site or within the plot).

Outputs - Filling and loading facilities are included in Battery Limits. Outputs are: railway wagons and road trucks.

- Effluents will be disposed off to _____.

Within the above battery limits, the entire Plant, including the utilities and off-sites contained in Annexure 1 and 2 shall be designed by the LICENSOR. It is generally understood that if not specifically mentioned the connecting points of inlet and outlet pipes will be one meter outside the battery limit or 250 mm above ground/floor level, flanged or unflanged with the cut-off valves included in the scope of design.

ANNEXURE 6

SCOPE AND CONTENT OF ENGINEERING SERVICES
AND CO-ORDINATION OF WORK

1. LICENSOR shall execute the Basic Engineering Design Package with the content and the delivery date defined in Annexures 8 and 7. The co-operation of both parties shall be assured by the Process Engineering Design Meetings held according to Article 5.1 and mutual delivery of technical documentation as follows:

1.1 Within ..... days from the Effective Date LICENSEE shall deliver the Basic Design Data for the Plant containing:

(a) Information on site including geographical details, connection of the site by rail and road to nearby major town and ports, shipping and transport possibilities and limitations;

(b) Meteorological information;

(c) Soil conditions including soil bearing data and geological aspects e.g. susceptibility to earthquake etc.,

(d) Information on utilities. This will cover

(i) the source of steam, supply, pressure level, superheat, temperature, condensate system characteristics,

(ii) availability and reliability of power, levels of voltage, etc.,

(iii) system of cooling proposed, air/water, re-circulating/once through (and other cooling water properties),

(iv) fuel oil, gas or other fuel characteristics,

(v) systems for instrument air, process air, inert gas, refrigeration, process water, etc.

(e) Design codes and standards to be adopted and special considerations from the viewpoint of fabrication of equipment in particular country or countries:

(f) Local codes, laws or regulations on toxic or explosive hydrocarbons affecting layout provision of safety systems etc.

(g) Design information, flexibility requirements and design margins for equipment:

(i) preference for types and design criteria of rotary equipment namely pumps and compressors from the point of view of standardization and spares policy,

(ii) heat exchanger design considerations e.g. on type of pitch, tube length, etc.,

(iii) considerations on internals of columns and vessels e.g. type of trays,

(iv) fired heaters, e.g. from the point of view of energy conservation,

(v) instrument type and sizes to be used,

(vi) piping design requirements and the philosophy to be followed,

(h) Safety system, pressure relief system and the flare system to ensure compatibility with the requirements of the LICENSEE;

(i) Coding system for the equipment;

(j) Capacity of the unit for purposes of the design, process design margins, etc.;

(k) Source of the raw materials and auxiliary chemicals, condition of delivery at the battery limits, specifications, level of impurities, etc.;

(l) Philosophy of storage required for the plant. Special requirements for intermediate storage;

(m) Ecological considerations namely, legal prescriptions for solid, liquid and gaseous waste streams from the plant and their possible methods of disposal;

(n) Local codes, laws, prescriptions and rules to be taken into account in the Process Engineering Package.

1.2 Within ..... days from the Effective Date the first Basic Design Conference shall be held (Article 5.1) to discuss the Basic Data and agree on them as basis for the LICENSOR's design work.

1.3 Within ..... days from the Effective Date LICENSOR shall deliver to LICENSEE the first part of the Process Engineering Design Package containing points 3.1, 2.25, 3.26 defined in Annexure 8.

1.4 Within ..... days from the Effective Date the Second Process Engineering Design Meeting will be held to discuss and agree on documents delivered uner 1.3 above. This agreement shall form the basis of LICENSOR's consequent design work.

(Paras. 1.3 and 1.4 are optional and not always required.)

1.5 Within ..... days from the Effective Date LICENSOR shall deliver the complete Basic Engineering Design Package.

1.6 Within ..... days from the Effective Date the Third Process Engineering Design Conference will take place. LICENSEE and if possible Contractor will make his observation and remarks on the documentation delivered and if appropriate, require the necessary alterations, modifications and/or additions. LICENSOR having completed this work, the Process Engineering Package will be accepted by LICENSEE.

2. If the Contractor has already been appointed in due time before the Third Process Engineering Design Conference (1.6 above), this meeting shall be also the First Detailed Engineering Meeting. If this is not the case, within ..... days from the appointment of the Contractor but not later than ..... days after the acceptance by LICENSEE of the Basic Engineering Package, the First Detailed Engineering Meeting shall be convened by LICENSEE according to Article 5.2 of the Agreement covering the following:

(a) Review the Basic Engineering Design Package and agree on all starting date, conditions and provisions which shall form the basis of Contractor's work;

(b) Agree on the scope and time schedule of the co-operation between Contractor and LICENSEE during the design work and the scope, content and extent of LICENSOR's participation. LICENSOR's responsibilities as defined in Article 3.4.2 shall extend but not limited to

- review and approve the following design documents:

I. Project Engineering Documents:

- Final Project Engineering Diagrams.
- Layout arrangement plant and elevation.
- Engineering Flow Diagram.
- Equipment general specifications and engineering equipment list.
- Line Designation Tables.
- Requisitions for all items of equipments.
- Bid comparisons.
- Spare parts list.

II. Design Engineering and Drafting Documents:

- Specifications for pressure vessels.
- Specifications for storage tanks.
- Specifications for shell and tube exchangers.
- Specifications for underground drainage, sewers.
- Specifications for fire proofing.
- Specifications for design of buildings.
- Piping design guide.
- Specifications for instruments, their installation, instrument process piping, instrument air piping.
- Specifications for electrical design, installation.
- Mechanical design of reactors, vessels.
- Arrangement drawings of internals for shell and tube exchangers.
- Piping arrangement drawings of specified areas.
- Drawings and/or wiring diagrams of critical shut down system.
- Piping around critical items e.g. reactor.

III. Model Review (if appropriate)

IV. Fabrication drawings of specified/critical equipment prepared by the fabricators.

This list shall be considered as informative only and shall be finalized at this First Detailed Design Conference.

(c) Provisional scope, schedule and content of LICENSOR's participation in the procurement (Article 3.4.3) of equipment, erection of the plant (Article 3.4.5). The actual dates and durations are subject to review according to the progress of the work.

ANNEXURE 7

TIME SCHEDULE OF THE ENGINEERING SERVICES

1. Delivery of Documents

No.	Documentation	Made by	Delivery date (days) from Effective Date
1.	Basic Data	Licensee	
2.	Basic Engineering Design Package (I. Part)	Licensor	
3.	Basic Engineering Design Package (Comp.)	Licensor	

2.1 Process Engineering Design Meeting

No.	Held at	Date	Duration	Participants (persons) Licensee	Contractor
1	Licensor's Office	....	(5) days	x	(2)
2	"	....	(5) days	x	(2)
3	"	....	(5) days	x	(2)

(illustrative example only)

3. Detailed Engineering Design Meetings

To be agreed upon at the First Detailed Design Conference

No.	Scope	Place	Duration	Licensor's participants (qualification and number)

Maximum total Man-Days expected for Licensor's personnel:

4. Licensor's participation in procurement

No.	Equipment item	Manufacturer	Expected supervision date	Duration

Maximum Man-Days:

SCOPE AND CONTENT OF THE PROCESS ENGINEERING DESIGN PACKAGE

Scope of work of the LICENSOR

The LICENSOR shall supply the Process Engineering Design Package which shall provide sufficient process and mechanical design data such that a qualified engineering contractor can carry out the following:

(a) Execution of detailed engineering design;

(b) Procurement of all equipment and materials required for the construction of the Plant;

(c) Construction of the Plant;

(d) Start-up and commissioning of the Plant; and

(e) Safety and maintenance instructions for the Plant.

1.1 The LICENSOR shall provide all data for the Process Engineering Design Package in the (English) language. All data will be specified in (metric technical, metric S.I. or) Units.

1.2 The LICENSOR shall approve as agreed with the LICENSEE:

(a) The Contractor's detailed engineering design for the Plant;

(b) Specifications for the procurement of critical items of equipment.

Contribution of the LICENSEE

2.1 The LICENSEE shall supply the LICENSOR with the Basic Design Data according to the description in Annexure 6.

Content of the Process Engineering Design Package

3.1. Basis of design and process description

This section of the package will have information contained under the following headings:

3.1.1. Basis of design for all cases.

3.1.2. Feed and product specifications and properties.

3.1.3. Battery limit conditions.

3.1.4. Description of flow; this includes normal operations, start-up, shutdown and alternative operations.

3.1.5. Design features of process.

3.1.6. Physical and chemical properties; for streams whose properties have not been defined in 3.1.2. (Feed and product specifications and properties) and are considered essential within the process, e.g. reactor effluent streams will have their physical and where relevant chemical properties listed. Hazardous materials used within the unit will have their properties listed within this section.

3.1.7. Summary of estimated utilities, including electrical power, steam, condensate, boiler feed water, fuel, cooling water, process water, plant air, etc. This will be a schedule of estimated individual users, totalling up to the maximum estimated utility quantities for the unit. This over-all maximum will be for one consistent case for each utility. Where the estimated maximum utility quantity for a particular item of equipment is not part of this consistent case, this maximum will be stated separately.

3.1.8. Estimated catalyst and chemical consumption. Initial catalyst charge and subsequent catalyst and chemical consumption will be tabulated for each unit.

3.1.9. List of effluent streams. Liquid and gaseous effluents requiring further treatment before disposal will be tabulated. This listing would be limited to streams produced from the process only and would not include furnace effluents.

3.1.10. Process flowsheets.

These diagrams will contain the following information:

- All process equipment shown diagrammatically marked with an equipment number;
- Operating temperature and pressure of equipment;
- Main process lines (shown marked with a stream number where applicable to the mass balance) including direction of flow;
- Main process controls;
- All lines, essential for understanding the mass balance around each piece of equipment will be shown (and only those);

. All figures will be given in the defined units of measurement;

. Heat and Material Balance, and Pressure Balance.

For each stream number on the Process Flowsheet, the following information shall be given where required for complete understanding of the heat and material balance, and pressure conditions.

Total hourly flow rate (mass/volume);

Hourly molar flow rate for each major components;

Molecular weight;

Pressure;

Temperature;

Density.

3.1.11. Materials of construction flowsheet. There will be included a "Materials of Construction Flowsheet" to provide the information as described in Exhibit .

3.2. Process and engineering design specifications

The information contained within this section will be presented under the following headings, details of which are further developed in this section.

3.2.1. Equipment list

This will include at least the following:

. Equipment identification letter and number;

. Equipment description.

3.2.2. Equipment data sheets and specifications.

3.2.2.1. Vessels

A standard process sketch will be provided showing:

. Maximum operating temperatures and pressures;

. Mechanical design temperature and pressure;

. Materials of construction and corrosion allowance;

. Diameter and height or length;

. Number, type and spacing of trays for towers;

. Number, size, rating and location of nozzles (location of nozzles will only apply to special height requirements of nozzles; orientation is not part of this scope unless for process design purposes);

. High and low liquid levels;

. Insulation requirements;

. Details of special internals such as pans, distributors, mist eliminators, supports, etc.;

. Catalyst type, size of bed, bulk density and design.

Where applicable, tray process information will be provided. See "Exhibit - Trays Process Specification Sheet".

Specific design and fabrication requirements will be detailed, e.g. regular temperature/pressure cycles will be specified.

3.2.2.2. Heat exchangers and air coolers

Specification sheets will be provided giving all process and mechanical design data which is required. See "Exhibit - Shell and Tube Exchanger Process Specification Sheet" and "Exhibit - Air Cooled Exchanger Process Specification Sheet" for data requirements.

Further specific design information which would be provided if necessary to establish the design includes, for example:

- . Limiting transfer rates where applicable;
- . Limiting viscosities and pour points;
- . Vaporization and condensation curves;
- . Restrictions on combining air fin services;
- . Alternative specifications for individual services;
- . Specific design and fabrication requirements.

In general, all necessary data to prepare ratings will be provided, however complete ratings will not be provided.

Where kettle type exchangers are to be used, the specification shall include a sketch or specific information giving:

- . Vapour space;
- . Surge volume required;
- . Nozzles;
- . Instrumentation, etc.

Generally only the Materials of Construction will be given in the "Construction" Section of the specification sheets.

3.2.2.3. Fired heaters

Specification sheets will be provided giving all process and mechanical design data which is required. See "Exhibit - Fired Heater Process Specification" for data requirements.

Further specific design information which will be provided includes, for example:

- . Vaporization curves;
- . Limiting fluid peak temperatures;
- . Limiting transfer rates or velocities;
- . Type of heaters and coil arrangement;
- . Control specifications;
- . Firing equipment;
- . Whether steam - air decoking is required;

. Specific design and fabrication requirements;

. Whether coil temperature and pressure profile required from vendor;

. Type of terminal fittings;

. Fuel type and conditions.

3.2.2.4. Pumps

Specification sheets will be provided giving all process and mechanical design data which is required. See "Exhibit - Pump Process Specification Sheet" for data requirements. Data will be included for alternative duties.

Further specific design information which may be provided includes, for example:

. Corrosion allowance;

. Alternative specifications if necessary for individual services;

. Sealing requirements;

. Flushing requirements;

. Specific design and fabrication requirements.

3.2.2.5. Compressors

Specification sheets will be provided giving all process and mechanical design data which is required. See "Exhibit - Compressor Process Specification Sheet" for data requirements. (All design cases will be included.)

Further specific design information which will be provided includes, for example:

. Materials of construction;

. Corrosion allowance;

. Special mechanical features required;

. Control requirements;

. Specific design and fabrication requirements.

3.2.2.6. Miscellaneous equipment

This includes all mechanical handling equipment, package units such as inert gas generators, driers, specialities such as scrubbers, cycle timers and vacuum equipment and miscellaneous items such as filters, strainers and process steam traps. Complete duty specification sheets will be provided which would include all process and mechanical design data as required for the equipment. Such specifications may include design and fabrication requirements.

3.2.2.7. Relief valves

Specification sheets will be provided giving all process design data which is required. See "Exhibit - Relief Valves Process Specification Sheet" for data requirements.

Certain emergency risks as identified in Exhibit may require review by detailed engineering contractor after equipment selection. The relief header will normally be designed by the engineering contractor.

3.2.2.8. Instruments

Specification sheets will be provided giving all process design data which is required. See "Exhibit - Instrument Process Specification Sheet" for data requirements. Data for any special instruments required for start-up, shutdown and safety, will be included.

Further specific design information which will be provided includes, for example:

- Material of construction;
- Vaporization across valves, sealing, purging or flushing requirements, including any special process design considerations, i.e. pour point;
- Alternative operating conditions (specifically for minimum and maximum flow, to ensure proper control and readability of all instruments);
- Specific mechanical design and fabrication requirements will be detailed.

This information will be supplied for all major instruments. Detailed data on minor instruments, e.g. pressure gauges, level gauges, etc., will not be included.

3.2.3. Relief valve loading listing

A summary will be provided of the loads from each relief valve for each emergency condition under which the relief valve opens, e.g. fire, power failure, steam failure (and other utility failures), blocked in condition, etc. See "Exhibit - Relief and Blowdown Flow Data Summary" for data requirements.

3.2.4. Process line summary list

A summary will be provided for all process lines as detailed in "Exhibit - Process Line Summary List". However, it will be the responsibility of the engineering contractor to check the hydraulics of the unit.

3.2.5. Preliminary engineering flowsheets (P and ID)

This will be a complete first issue of the Engineering Flowsheet and will include (see Exhibit):

- All process equipment;
- Line size and material specification for all lines;
- Maximum operating temperatures, insulation tracing and jacketing requirements of lines (heat conservation, personnel protection, process stabilization or "not insulated" only);
- All valves and check valves;
- Significant equipment details;
- Tower and vertical drum tangent line elevations;
- Horizontal drum minimum elevations and slope;

. Relative elevations of all equipment and piping where gravity or 2-phase flow is taking place, e.g. reboilers, condensers, seal pots;

. Direction of flow on lines;

. Required line slope, relative location of equipment or special conditions such as required vertical loop dimensions, gravity lines with or without pockets, etc.;

. Vents and drains additional to Engineering Standards required for process reasons;

. Steam, hot water or solvent tracing of lines and instruments;

Gas or liquid purging or flushing of control valves, instruments or relief valves;

. All start-up, bypass, shutdown and emergency lines and lines for alternate operations;

. All instruments required for proper operation of the plant (indicating any special types required);

. Instrument numbers;

. Any special instructions, e.g. dead leg distances on slurry lines;

. Utility distribution systems would not be included on these flow sheets.

3.2.6. Preliminary plot plan

This will be a suggested plot plan based on the LICENSOR's know-how of requirements of normal and emergency operation, safety and maintenance requirements. It will include preliminary layout of the equipment and elevation diagrams (see Exhibit).

- Special requirements (analysers, sample connection);
- Recommended suppliers.

3.2.7. Drainage and effluent disposal

This will cover the suggested layout and materials of construction.

3.2.8. Basic data for piping

- Fluid handled;
- Operating pressure and temperature;
- Design pressure and temperature;
- What phase? Liquid, vapour or both?;
- Specific gravity and viscosity;
- Construction materials;
- Insulation required;
- What kind of test is necessary for the pipe (pneumatic or hydrostatic) if any special test is required, explain it;
- List of the main lines.

3.2.9. Auxiliary services

Steam (all the pressure levels), cooling water, process water, inert gases, plant and instrument air, chemicals, etc. consumed in each equipment and a summary.

3.2.10. Catalyst, chemicals

- Specific characteristics, name, size, quantity.
- Recommended suppliers. Preferred supplier. State reasons.

3.2.11. Vent system

- Equipment required, fluid, flow, temperature and pressure.
- Special requirements.
- Suggested piping arrangement where required.
- The materials of the pipe and equipment must be referred to the ASTM code.

3.2.12. Safety requirements

- Equipment required.
- Monitors, eyewashers, shower and sprinkles location.
- Special requirements.

3.2.13. Building specifications

- Suggested layout of the plant building, control room, electrical switch room, and other building.
- Indicative sizes of the respective buildings.
- Type of contribution in each case.

3.3. Basic data for operating manual

The operating guide will include an outline of start-up, shut-down and alternative operations. It will also indicate emergency procedures covering utility failures and major operating upsets. Its scope will be sufficient for the engineering contractor to prepare a comprehensive operating manual. In addition, this section will describe special safety features incorporated in the design of the unit. Data will include:

. Start-up procedures;
. Normal operation procedure;
. Normal shutdown procedure;
. Emergency shutdown procedure;
. Reduced drawings of heaters, vessels, towers and reactors;
. Reduced drawings of process and mechanical P and I drawings;
. Data sheets of mechanical equipment.

with the following details:

3.3.1 Description of process:

(a) Description of Process - A brief discussion of process flow to provide adequate background to the plant operating personnel.

(b) Process specifications and Process Flow Chart - Quality of feedstocks, composition of various streams and designed yields and qualities of products, intermediates and by-products.

3.3.2 Process Operating Conditions:

A simplified discussion of cause and effect, exemplified where possible, of operating variables with consequent changes in yields, purities etc.

3.3.3 Details of Operating Procedures:

(a) Preliminary operations - preparation and inspection of equipment before start-up. Run in procedure on pumps, compressors etc.

(b) Start-up procedures.

(c) Normal operation.

(d) Shut down procedure.

(e) Special operations - Catalyst regeneration, switching of cyclic systems, steam air decoking etc.

(f) Emergency Procedure - anticipated emergencies and reccmmended procedures to result in maximum safety of personnel and equipment.

(g) Detailed flow charts and process equipment.

3.3.4 Control Systems:

Employed with details on any special provisions and its bearing on the operations.

3.3.5 Equipment Summary:

Details on equipment by categories and in accordance with the agreed coding system.

3.3.6 Utility and Utility Summary:

On the basis of utility levels agreed to for the plant, utility requirements on guaranteed and expected figures for both plant and its auxiliary/off-site facilities.

3.3.7 Operating Records:

The suggested format for proper maintenance of operating records through:

a. Daily log sheet.

b. Management control - exception reports.

c. Product test record for quality control at various stages in the plant.

3.3.8 Personnel required for operations and maintenance:

Suggested organization for operations and maintenance of the plant giving:

a. Supervisory Staff - with duties and responsibilities.

b. Operating staff - duties, responsibilities and operating positions.

3.3.9 Safety of plant and personnel:

Rules and regulations governing conduct in the operating area with special precautions to be followed. First aid facilities to be provided shall be discussed e.g. eye baths, emergency showers etc. The proper use of special safety equipment will be described.

3.4 Basic data for maintenance manual

- Particular emphasis: preventive maintenance;
- Maintenance instructions for each equipment, including specific types of lubricant/grease required;
- Periodicity of major shutdown for regular overhead/ maintenance.

3.5 Analytical Methods Manual describing in detail all the methods of analysis for all raw materials, process streams products, by-products, catalysts and chemicals required for the efficient operation of the Plant.

3.6 List of catalysts and chemicals required for the initial operation of the Plant and for one year's production, indicating specifications, quantities, recommended source of procurement and packing, storage and handling instruction.

3.7 General design information

The information contained in this section will essentially be akin to the data supplied by the LICENSEE as outlined in 2.2. However, as some data may be supplied by the LICENSOR, the total design information is reproduced for the benefit of the engineering contractor.

This data will include but not necessarily be limited to:

- Outlet steam conditions for equipment feeding steam into Plant headers;
- Inlet steam conditions of equipment using steam from Plant headers;
- Battery limit conditions for boiler and steam generator feedwater;
- Battery limit conditions for condensate return systems;
- Voltage and frequence for electrical power;
- Analyses of available water streams;
- Fuel data;
- Other available utility data;
- Climatic data;
- Site information;
- Equipment design information (e.g. preferred tube lengths, philosophy for design conditions, etc.);
- Relief and blowdown philosophy.

3.8 LICENSOR's standard drawings

The standard drawings will be referenced in the Process and Engineering Design Specifications and represent design details and practices which are part of the mechanical specifications.

3.9 Name of vendors of critical equipment

No.	Equipment	Possible vendors	References

3.10 Mechanical specifications

The mechanical specifications will represent LICENSOR's or LICENSEE's current standard practice for design and installation of the equipment in the particular process unit.

ANNEXURE 9

CATEGORIES, QUALIFICATIONS AND EXPERIENCE OF PERSONS TO BE ASSIGNED BY LICENSOR. EXPENSES OF AND FACILITIES FOR LICENSOR'S PERSONNEL ASSIGNED TO WORK FOR THE LICENSEE

1. Terms and conditions of personnel services

1.1 The LICENSOR shall assign such qualified and competent personnel as are necessary for the proper and final implementation of the Contract. Such personnel should be fit for working in a (tropical) climate.

1.2 At the First Detailed Engineering Design Meeting, the parties shall further agree upon the details about the expected initial number of each category of the LICENSOR's personnel and duration of their assignment.

2. List of personnel to be assigned by the LICENSOR

2.1 The LICENSOR shall assign the following personnel for the period noted against each person/category of person.

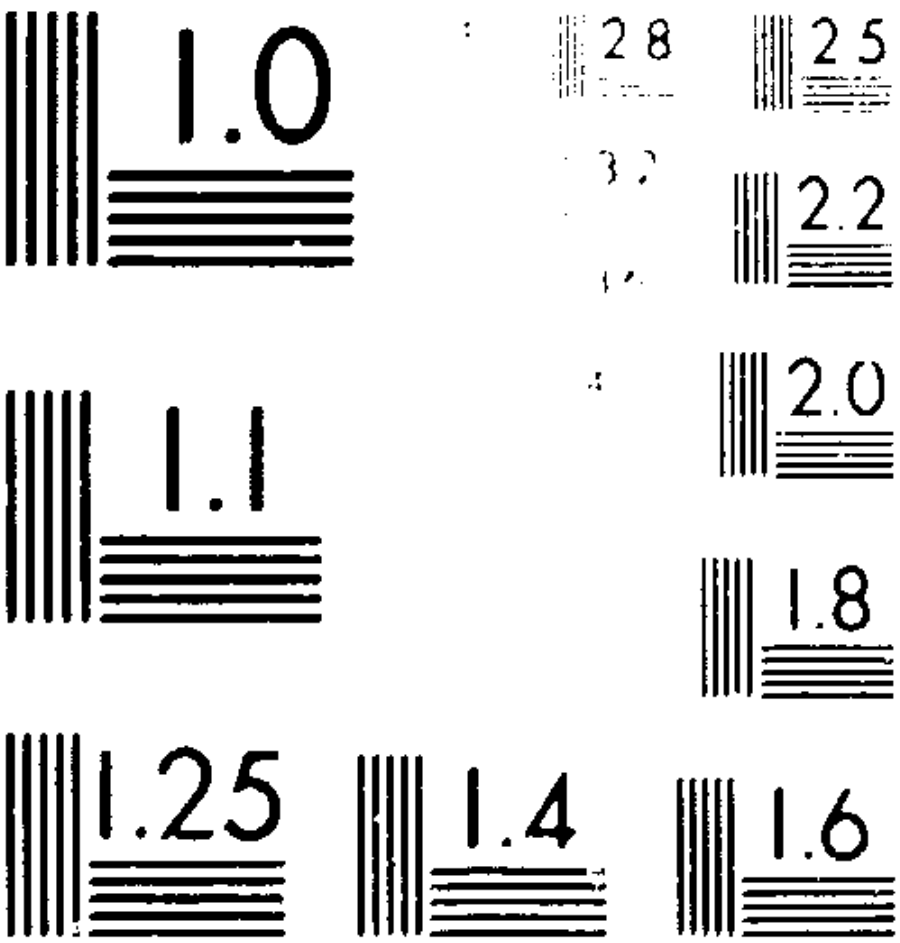
Category	Expected number	Total expected man-days
x x x	x x x	x x x
x x x	x x x	x x x

2.2 The period of stay mentioned above is only indicative and the parties shall agree on the definitive figures at the First Detailed Engineering Meeting.

3. Charges for the LICENSOR's assigned personnel

3.1 (a) The charges for the LICENSOR's assigned personnel for each day of absence from Home Office shall be as follows:
(example only)

	Rates per day (currency)
Construction Manager	
Start-up Manager	
Specialist Engineers	
Erection Specialists	
Assistant for erection and start-up	
(other may be specified)	


1.0
2.8
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

(b) (It is recommended that this should not have an escalation clause. However in some cases this may be required. This escalation in such cases should be based on an index specified in this clause, which index should be an officially published index of the LICENSOR's Government agencies).

The above charges are for an 8 hours per day, 40 hours per week day time work.

3.2 Overtime charges

Overtime charges in accordance with the contract shall be paid as follows:

Up to 54 hours/week	(100%) of normal rates
above 54 hours/week	(130%) of normal rates
for weekly and public holidays	(130%) of normal rates
for night shift	(130%) of normal rates

No additional payments will be made in local currency.

3.3 In addition to what is specified under 3.1 and 3.2, the following allowances, services and facilities will be paid by LICENSEE to the LICENSOR's personnel deputed to work under the Agreement:

3.3.1 Local Allowance

The LICENSEE shall pay to each of the assigned personnel engaged in the work a living allowance at the rate of (amount in local currency) for each calendar day of presence to site.

3.3.2 Travelling

Tourist class return air fare for each assignment for each assigned personnel fron the Home Office to site by (air carrier) or an IATA carrier at the discretion of the LICENSEE.

Transport within (LICENSEE's country) by plane (economy class) or rail (air conditioned class) on the rail route for the assigned personnel on their arrival in and departure and for travelling on official work.

3.3.3 The LICENSEE shall also provide free of cost to the LICENSOR's assigned personnel the following:

3.3.3.1 Furnished residential accommodation, as well as water, electricity and gas for domestic use.

3.3.3.2 Furnished office accommodation, as well as secretarial assistance and facilities for official communications including telephone and telex services.

3.3.3.3 Medical assistance to the personnel and their facilities to the extent available at the LICENSEE's own or nominated medical centre(s).

ANNEXURE 10

CATEGORIES, QUALIFICATIONS AND EXPERIENCE OF PERSONS TO BE TRAINED BY LICENSOR

Reference Art. 3.6 — Illustrative Example

	Category	Qualifications	Experience
A. Group of Engineers			
	Process Engineers	Graduate Chemical Engineers	Not less than....years in projects or plant operations or technical services, trouble shooting.
	Chemists for Process Laboratory	Degree or Diploma in Chemistry	Not less than.....years in chemical plant laboratory or research laboratory.
	Mechanical Engineers	Graduate/Post-graduate Mechanical Engineers	Not less than.....years experience in project engineering or construction or preventive plant maintenance or corrosion control or workshop.
	Electrical Engineers	Graduate Electrical Engineers	Not less than.....years experience in electrical installation covering different types of motors, PCC, power distribution or maintenance and procedures for preventive programmes of all electrical equipment.
B. Group of Foremen			
1. Chemical Process Section 2. Polymerisation Section 3. Extrusion and finishing section	Foremen for operations in each section	Diploma in Chemical Engineering/ Technology or Graduate in Science	Not less than.....years experience in operation of similar plants in supervisory position.
	Foremen (Maintenance)	Diploma in Mechanical/ Electrical/ Instrument Engineering	Not less than.....years experience in maintenance of chemical plants or carrying out of repairs in workshop.

	Category	Qualifications	Experience
C. Product Application and Market Development	Senior Marketing Officer	Degree in Polymer Science or Degree in Chemical Engineering (with polymer science as elective subject) or Masters degree in Science.	Not less than.....years experience in organic chemicals.
	Senior Technologists (Product Application)	- do -	Not less than.....years experience in processing of polymers.

Note: It is assumed that the operating, maintenance and product applications staff of shift engineers, technicians, panel controllers and operators will be trained by the above mentioned senior personnel through extensive in-plant training and simulated training on trainer of the carmody type.

GUARANTEE FIGURES FOR CONSUMPTION OF RAW MATERIALS VOLUME AND COMPOSITION OF EFFLUENTS

Specification of the Raw Materials
(Illustrative with reference to Polypropylene and VCM)

Reference Art. No. 3.7

A. LICENSOR guarantees that consumption of raw materials, catalysts and chemicals and utilities will not exceed the quantities indicated below per 1000 kg of polypropylene.

Raw Materials

1.	Propylene	.....kg
	Catalysts and chemicals	
2.	Titanium trichloride	.....kg
3.	Diethyl aluminium Monochloride	.....kg
	Utilities	
4.	Low pressure saturated steam	.....kg
5.	Medium pressure steam	.....kg
6.	Electric power	.....Kcal
7.	Cooling water	.....M^3

Note:

a. The consumption of steam is guaranteed for process use only and is subject to the condition that heat insulation is installed in accordance with LICENSOR'S specifications.

b. The electric energy consumption guarantee figure is an average for the melt flow range from to , and is subject to the condition that machines and electric motors installed conform with LICENSOR'S specifications.

B. Specifications of raw materials, catalyst, chemicals and utilities:

Propylene	99.5%	min.
Ethylene	25	ppm max.
Ethane	250	ppm max.
Propane	0.5%	max.
Nitrogen	300	ppm max.
Water	50	"

Hydrogen	100 ppm max.
Allene	10 "
Acetylene	1 "
Butylene	20 "
Butadiene	10 "
CO	5 "
Carbon dioxide	5 "
Oxygen	10 "
Sulphur	1 "
Chlorine	1 "
Pressure	20 kg/cm^2 min.
State	liquid

Titanium Trichloride

Titanium trichloride	80% by wt. min.
Titanium tetrachloride	1% by wt. max.
Iron as Ferric Chloride	0.2% by wt. max.
Residue (after solution in methanol)	0.2% by wt. max.
Activity	160 min.

Aluminium Diethyl Monochloride - Solution

Solvent	-	Heptane
Concentration	-	10% by wt.

Total chloride/total aluminium ratio 1.35 $\pm$ .02

Active aluminium 9.8% by wt. min.

Composition of gases obtained by decomposing basic aluminium diethyl monochloride:

Hydrogen	0.1 max.
Ethane	90 to 99%
Total C3	0.1% max.
Isobutane	4% max.
n-butane	6% max.
Butylenes	0.1% max.

Dimineralised water:

Total hardness	0
Total alkinity (as Ca CO_3)	5 ppm max.
SiO_2	0.1 ppm max.
pH	8
Cloudiness	0
Conductivity	1 pcs/cm. max.
Temperature	Ambient
Pressure	2 kg/cm^{2}g. min.

Steam

Saturated at	3.5 kg/cm^2

Electric Power

Three phase, alternating 415V ± 10%
50H2 ± 3%

Single phase, alternating 230V ± 10%
50H2 ± 3%

Three phase, alternating 6.6V ± 10%
50H2 ± 3%

Cooling Water

Inlet temperature 27°C (max 33°C as seasonal peak)

Inlet pressure 4 kg/cm^{2}g. min.

Fouling factor not higher than 0.006 h m2°C/K Cal, non corrosive hangellier index 0.1 - 0.3

.....

Illustrative with reference to VCM

Raw Material	Per 1000 kg VCM
1. Chlorine	.....kg
2. Ethylene	.....kg
	Per 1000 kg EDC
1. Chlorine	.....kg
2. Ethylene	.....kg

B. Effluents. The quantity and quality of the effluents from the plant shall not exceed the following under normal operating conditions:

Utilities

Steam	0.8 MT
Cooling water	220 M^3
Power	200 Kwh
Fuel gas(net heating value)	0.76 million K cal
Process Water	0.03 M^3

C. Specification of raw materials and utilities:

Ethylene	99.7% by vol min.
Methane and Ethane	0.3% by vol max.
Propylene	30 ppm by vol max.
Butylene and Heavier	70 ppm by vol max.
Sulphur	2 ppm by vol. max.
Amonia	2 ppm by vol max.
Acetylene	5 ppm by vol max.
Methanol and water	20 ppm by vol max.
Pressure	125 PSIG min.

Chlorine

Chlorine	98.5% by vol min.
Hydrogen	0.25% by vol max.
Oxygen	0.3% by vol max.
Chlorinated Organics	0.1% by wt. max.
Bromine	200 ppm by wt. max.
Water	100 ppm by wt. max.
Pressure	65 PSIG min.

Specifications of Utilities

Steam	17.5 kg/cm^2g or 10.5 kg/cm^2g
Cooling Water	33°C (12° Rise)

Note: Taking into account the accuracy and repeatability of the measuring facilities and the importance of the individual items, tolerance limits shall be agreed. For utility consumption, compensation among the different categories could be agreed upon.

ANNEXURE 12

FORM OF BANK GUARANTEES

A. Bank Guarantee for Advance Payment.

This Guarantee No. .... made this day .... between (_____) a Company incorporated and having its Registered Office at ..... (hereinafter called BANK*/, which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns) of the one part, and ..... (hereinafter called LICENSEE which expression shall unless repugnant to the context or contrary to the meaning thereof, include its successors and assigns) of the other part.

1. WHEREAS in Article 12.2 of the Contract dated..... (hereinafter called Agreement), between LICENSEE and ..... A Company incorporated in ..... (hereinafter called LICENSOR which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns) for supply of a Plant, as envisaged in the Agreement it is stipulated that the sum of ..... will be paid by ..... as advance payment against a Bank Guarantee of equal amount to be issued by the BANK.

2. WHEREAS in fulfilment of the said Agreement and against receipt of said advance by (name of LICENSOR), the LICENSOR has agreed to furnish a Bank Guarantee as hereinafter contained.

3. In consideration of the above, the BANK hereby guarantees as a direct responsibility, to pay to LICENSEE any amount up to a total sum of .....

4. The BANK shall effect payment under this letter of guarantee immediately upon LICENSEE's written request stating that LICENSOR did not fulfil his Contractual obligations without being entitled to enquire whether this payment is lawfully asked for or not.

5. In any case, however, the BANK's responsibility under this letter of guarantee comes into force as soon as and as far as the advance payment of..... has been received by the BANK in favour of LICENSOR.

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*/ This could be a Bonding Company and this could then be a Bond.

6. This letter of guarantee shall be initially valid for a period of ..... months from the EFFECTIVE date and shall be extended by suitable periods in accordance with Agreement (but not more than 6 (six) months at a time). This guarantee shall be returned to the BANK after its expiry unless extended beyond this period for any reason whatsoever.

7. In the event of force majeure or in the event of recourse to arbitration according to the Agreement, the validity of the present guarantee shall be extended for a period to be mutually agreed upon.

8. This guarantee shall be in addition to and shall not affect or be affected by any other security now or hereafter held by LICENSEE and LICENSEE at his discretion, and without any further consent from the BANK and LICENSEE's right against the BANK may, compound with or give time or other indulgence to or make any other arrangement with LICENSOR and nothing done or omitted to be done by LICENSEE in pursuance of any authority contained in this guarantee shall affect or discharge the liability of the BANK.

(Bank)

_____

_____

B. Bank Guarantee of Final Payment.

At the request of (Name and Address of LICENSOR) (hereinafter called LICENSOR), we hereby open our irrevocable guarantees No. _____ for an amount of maximum _____(Amount)_____. In consideration of the LICENSOR having entered into a Licensing Agreement dated _____ (hereinafter called "Agreement") with _____

_____

(Name and Address of LICENSEE), (hereinafter called LICENSEE) for the grant of licence, supply of Process Engineering Design Package and related know-how and technical information and other services for the Plant to be built by LICENSEE, we (Bank) do hereby agree and undertake to pay forthwith to LICENSEE in repatriable currency on demand by LICENSEE and without prior recourse to LICENSOR such sum or sums not exceeding _____(Amount)_____ as may be demanded by LICENSEE stating that LICENSOR has failed to fulfil its obligations relevant to performance guarantees and for other guarantees and warranties under the Contract for reasons for which LICENSOR is liable under the Contract. It is understood and agreed that any demand made hereunder by LICENSEE shall be conclusive evidence of LICENSOR's failure to comply with its obligations relevant to guarantees under the Contract for reasons for which LICENSOR is liable under the Contract.

The amount being guaranteed hereunder shall be applied towards the payment by LICENSOR of damages under and in accordance with the Contract.

This bank guarantee shall come into force immediately and shall remain valid until the successful demonstration of the Performance Guarantee Test by the Plant, in accordance with the Agreement, and we _____(Bank)_____ shall at all times in this period be bound on the demand of LICENSEE to forthwith pay LICENSOR the amount guaranteed hereof.

_____(Bank)_____

_____

_____