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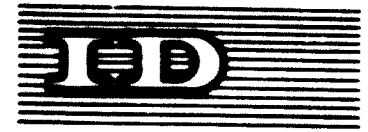
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Meeting of Experts on the Insurance of
Consequential Losses Incurred by
Fertilizer Plants

Vienna, 18-20 September 1978

DRAFT REPORT

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Organización de las Naciones Unidas para el Desarrollo Industrial

Reunión de Expertos sobre seguros para cubrir
las pérdidas consecuenciales en que incurran
las plantas de fertilizantes

Viena, 18 - 20 septiembre 1978

**RESUMEN DE LAS CONCLUSIONES Y RECOMENDACIONES
DEL PROYECTO DE INFORME***

* El presente documento es traducción de un texto no revisado por la Secretaría de la ONUDI.

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II. CONCLUSIONES Y RECOMENDACIONES

13. Se convocó la Reunión para examinar si el seguro podría cubrir las pérdidas consecuenciales resultantes de las causas identificadas en el párrafo 50 del informe del primer Grupo de Trabajo sobre Contratos y Seguros que se cita en el párrafo 7 (figura en la página 2).

14. Sobre la base de su análisis de los tipos de pólizas de seguros disponibles actualmente en los mercados nacional e internacional, los participantes llegaron a las conclusiones siguientes:

- a) Ya se dispone de pólizas de seguros que cubren pérdidas consecuenciales resultantes de varias de las causas enumeradas en el párrafo 50 del informe del Grupo de Trabajo. Sin embargo, la garantía total que se desea lograr con esta cláusula no puede conseguirse mediante seguros, y no es la solución apropiada del problema que se les plantea a los compradores.
- b) Las causas principales de pérdidas consecuenciales descritas en el presente informe que no pueden ser cubiertas por las pólizas de seguros disponibles en la actualidad son:
 - i) defectos de materiales y fabricación que no se traducen en daños materiales.
 - ii) defectos de diseño que se ponen de manifiesto antes de que los aseguradores hayan convenido en que entre en vigor el seguro contra pérdidas de beneficios por incendios y contra pérdidas de beneficios por averías de la maquinaria (normalmente hasta que han transcurrido 12 meses de la terminación de los ensayos de funcionamiento) o que, en cualquier caso, no se traducen en daños materiales.
- c) Respecto de las pérdidas consecuenciales resultantes de defectos de diseño, sería necesario distinguir entre i) un defecto en el know-how en la ingeniería básica, ii) un defecto de parte de las unidades de calidad de ingeniería, iii) defectos en el diseño de distintos elementos de equipo; y establecer si incumbe responsabilidad a algunas de las partes en el contrato.
- d) Si el contratista necesitara un seguro que lo ayudara a hacer frente a una parte de su responsabilidad por las pérdidas consecuenciales descritas en a) supra, se podría tratar de conseguir cobertura en virtud de arreglos de indemnización profesional. Se suponía que el contratista haría frente por su cuenta a una parte de su responsabilidad. En la actualidad, el mercado internacional de seguros sólo tiene, respecto de la indemnización profesional, una capacidad limitada para asegurar contra ese tipo de riesgo y adopta al respecto un criterio muy selectivo.
- e) Cuando un diseño defectuoso se traduce en que la planta no pudiera producir a la capacidad especificada, era frecuente que no se produjeran daños materiales que hubieran sido asegurable la causa. A este respecto, se señaló que las garantías contractuales incluidas en el proyecto de modelo de la ONUDI de contrato de obras reembolsables se discutieron en la Segunda Reunión de Consulta.

- f) Si, no existiendo la garantía total propuesta en el párrafo 50 del informe del primer Grupo de Trabajo sobre Contratos y Seguros, en los contratos se especificara que los contratistas pagaran sanciones limitadas en cantidad, correspondería a la industria de los seguros considerar si en casos individuales sería posible que un contratista se asegurara para cubrir parte de esta responsabilidad.

15. La Reunión recomendó que, en beneficio de futuros proyectos, la ONUDI preparara un historial completo de todo incidente que se tradujera en pérdidas considerables de ese tipo en plantas de fertilizantes, a fin de tener un panorama más completo del tipo y la frecuencia de los incidentes que causaban pérdidas consecuenciales. A estos efectos, se debía pedir información tanto a los compradores como a los contratistas de las plantas de fertilizantes que se construyeran en todo el mundo.

* * *

7. Los riesgos identificados fueron los mencionados en la siguiente cláusula, cuya inclusión en los modelos de contrato de la ONUDI se sugiere en el párrafo 50 del informe del Grupo de Trabajo.

Además de las pólizas de seguro normales que se requieren en virtud de otros artículos del contrato, el comprador y el contratista obtendrán, en la medida de lo posible, de común acuerdo, un seguro a nombre del comprador por las pérdidas consecuenciales ocasionadas por defectos de diseño, de materiales o de fabricación, y por defectos de construcción o instalación, que estén bajo control del contratista o de sus subcontratistas, proveedores o fabricantes. Sin embargo, ninguna responsabilidad recaerá sobre el comprador o el contratista por motivo únicamente del pago de la prima de tal póliza.

INTRODUCTION

1. The Second General Conference of UNIDO held at Lima, Peru, in March 1975 recommended that UNIDO should include among its activities a system of continuing consultations between developed and developing countries and among developing countries themselves. The objective of these consultations would be to assist the developing countries in achieving their industrialization goals, which include in particular the goal of producing at least 25 per cent of world industrial output by the year 2000.
2. The First Consultation Meeting on the Fertilizer Industry was convened in Vienna in January 1977. It was attended by over 250 participants from 60 countries, representing Governments, industry and labour.
3. The Meeting recognized that there were occasions when fertilizer plants and specific items of equipment had not functioned adequately and buyers had suffered high consequential losses. It was further noted that the protection given by penalty clauses in international contracts was inadequate protection against consequential losses. The Meeting also examined the proposal made by UNIDO to investigate the possibility of setting up a multilateral insurance scheme covering consequential losses. The Meeting supported the intentions underlying the scheme but realized that practical difficulties might arise in its implementation. The scheme warranted further consideration.
4. It was suggested that a Second Consultation Meeting should be held in 1978 and that the following should be one of the subjects to be given more intensive examination and investigation prior to the Meeting:

Contract procedures intended to ensure the successful construction and operation of fertilizer plants and the suggested multilateral insurance scheme intended to ensure the protection of the interests of all parties concerned by providing, in particular, adequate compensation for consequential losses.

5. The First Working Group on Contracts and Insurance was convened to examine this subject, 14-17 February 1978^{1/}, and to contribute to the formulation of conclusions and recommendations that could be considered at the Second Consultation Meeting on the Fertilizer Industry, which UNIDO plans to convene at Innsbruck, Austria, from 6 to 10 November 1978.

6. The meeting was convened as recommended by the above Working Group whose recommendations and conclusions read as follows:

19. UNIDO, as recommended by a previous seminar, should prepare an analysis of causes of inadequate performance in fertilizer plants built in developing countries within the last 10 years, paying particular attention to the losses resulting from design and manufacturing etc. defects. This information should also be available by the first week of September 1978.

20. After the model contracts are available and data has been collected on operational records of fertilizer plants in developing countries, UNIDO should convene a small working group of insurance experts from developed and developing countries and other interested parties to consider whether this extension of existing insurance cover could in principle, be made available from commercial sources.

52. and specifically to advise the Second Consultation Meeting whether the world insurance market was likely to be able to underwrite the risks identified and whether Government support would be required.

7. The risks identified were those referred to in the following clause which paragraph 50 of the Working Group's Report suggested be included in the UNIDO Model Forms of Contract:

In addition to the standard insurance policies required under other articles in the Contract, the Buyer and Contractor shall, to the extent possible, by mutual arrangement obtain an Insurance cover in the name of the Buyer for consequential loss caused by defective design, material or workmanship and defective construction or erection within the control of the contractor or his subcontractors, suppliers or manufacturers. No liability shall, however, attach to the Buyer or the Contractor purely by reason of payment of the premium for such policy.

8. There was close cooperation between the UNIDO and UNCTAD Secretariats in preparing for this meeting. The head of UNCTAD's programme on insurance participated and actively contributed to the discussion and conclusions. It was understood that whilst the needs for insurance in the fertilizer and other industrial sectors could be identified by UNIDO, any further work that might possibly be required to develop new forms of insurance cover for developing countries would be carried out by UNCTAD in cooperation with UNIDO.

I. ORGANIZATION OF THE MEETING

9. The Meeting of Experts on the Insurance of Consequential Losses Incurred by Fertilizer Plants was convened in Vienna from 18 to 20 September 1978. The Meeting was attended by 12 participants whose names are given in Annex F.

10. The Meeting was chaired by the UNIDO Secretariat.

11. The following agenda was adopted:

1. Review of the UNIDO report on the performance of fertilizer plants built in developing countries since 1968.
2. Definition of the risks to be covered and the **ability of insurance policies available at present to cover those risks.**
3. Consideration of whether the world insurance market can provide the full guarantee suggested by the First Working Group on Contracts and Insurance.
4. Recommendations and Conclusions of the Meeting.
5. Adoption of Report of the Meeting.

12. The Meeting considered the working documents and background papers listed in Annex G.

II. CONCLUSIONS AND RECOMMENDATIONS

13. The Meeting was convened to consider whether insurance could cover consequential losses arising from the causes identified in paragraph 50 of the Report of the First Working Group on Contracts and Insurance quoted in paragraph 7 above.

14. On the basis of their analysis of insurance cover available in national and international markets at present, the participants reached the following conclusions:

- (a) Insurance cover is already available to cover consequential losses that arise from a number of the causes listed in paragraph 50 of the Report of the Working Group. However the full guarantee sought through this clause is not available through insurance nor is it an appropriate solution to the problem facing buyers.
- (b) The main causes that cannot be covered for consequential loss by the insurance policies available at present described in this report are:
 - (i) defective material and workmanship which do not result in material damage.
 - (ii) defective design which become evident prior to insurers agreeing to the commencement of fire loss of profits and machinery breakdown loss of profits insurance (normally up to 12 months after performance tests are completed) or which in any event does not result in material damage.
- (c) As regards consequential losses arising from defective design it would be necessary to distinguish between (i) a defect in the know-how or basic engineering (ii) negligence during the detailed engineering (iii) defects in the design of different items of equipment, and to establish whether any responsibility rests on any party to the contract.
- (d) If insurance cover was needed by the contractor to help him meet part of the liability for consequential losses described in (c) above, insurance cover could be sought under professional indemnity cover. The contractor would be expected to meet part of the liability himself. The international insurance market for professional indemnity cover at present has only a restricted capacity to insure this type of risk and approaches such insurance on a highly selective basis.

- (e) In cases when defective design results in a plant not being able to produce at the specified capacity, there was often no material damage which would have made the cause insurable. In this connection, it was noted that the contractual guarantees included in the draft UNIDO form of cost reimbursable contract would be discussed at the Second Consultation Meeting.
- (f) If in the absence of the full guarantee proposed under paragraph 50 of the Report of the First Working Group on Contracts and Insurance, contracts provided that contractors pay penalties limited by amount, it would be a matter for the insurance industry to consider whether or not in individual cases it would be possible for a contractor to insure part of this liability.

15. The meeting recommended that for the benefit of future projects, UNIDO should constitute a complete file for each and every incident which gives rise to substantial losses of this type in fertilizer plants in order to obtain a better picture of the type and frequency of incidents causing consequential losses. For this purpose, information should be requested from both purchasers and contractors for fertilizer plants built throughout the world.

III. THE COMPENSATION THAT EXISTING INSURANCE COVERS MIGHT HAVE PROVIDED FOR CONSEQUENTIAL LOSSES INCURRED BY SOME FERTILIZER PLANTS BUILT IN DEVELOPING COUNTRIES BETWEEN 1968 TO 1977

16. The Meeting considered a document (Annex A of this Report) entitled "Evaluation of the Answer to the UNIDO Questionnaire on Consequential Losses Arising from Poor Performance of Fertilizer Plants built in Developing Countries between 1968 and 1977".
17. The UNIDO Secretariat asked the meeting to consider whether the consequential losses, described in this document in terms of volume of output lost and caused by what were termed "design defects" and "equipment defects" or "failures of equipment" could have been covered by forms of insurance cover currently available provided that the plant owner availed himself of such insurance.
18. The meeting considered the availability of insurance to cover the incidents reported. It was found that details of the cases listed in Sections C and D of the report, are inadequate to enable a full assessment to be made in each case. The details provided by many of the answers to the questionnaires are insufficient to give a definite decision as to whether the losses incurred could have been covered by insurance policies.
19. In order to give a more realistic assessment, the meeting suggested it would be useful to have a very detailed answer to question number 16 of the questionnaire which asked for "the reason for failure". It is difficult to reach any conclusion, if the answer given to this question is merely "design" or "breakdown". To answer the UNIDO Secretariat's question, a detailed description of the damage, if any, together with particulars of the incident and a breakdown of the values and costs of the items involved would be required.
20. The meeting from its study of the answers, concluded that some of the incidents could have been covered partially or totally by insurance, provided that the full range of insurance policies currently available in the national and international markets had been purchased by the parties concerned.
21. The meeting recommended that for the benefit of future projects, UNIDO should constitute a complete file for each and every incident which gives rise to substantial losses of this type in order to obtain a better picture of the type and frequency of incidents causing consequential losses. For this purpose, information should be requested from both purchasers and contractors for fertilizer plants built throughout the world.

IV. AWARENESS IN DEVELOPING COUNTRIES OF THE AVAILABILITY OF INSURANCE COVER FOR FERTILIZER PLANTS

22. The participants at the meeting from the developing countries were of the view that owners of fertilizer plants in developing countries were generally not in a position to be aware of some of the covers available in the insurance market. It may be possible for insurance companies in these countries, backed by international reinsurers, to make the owners of fertilizer plants aware of such covers so that they can make their decision about the covers to be bought.

23. The participant from one country mentioned that in his country the owners of fertilizer plants were aware of the covers available but some of them had taken a deliberate and conscious decision not to buy available insurance particularly consequential loss covers, considering the economics involved.

24. The covers available to fertilizer plant owners in developing countries are considered in the following parts of this Report.

V. DESCRIPTION OF EXISTING INSURANCE COVERS AVAILABLE AND AREAS
IN WHICH COVER MIGHT POSSIBLY BE EXTENDED

25. The Meeting agreed that insurance available to cover material damage and consequential losses incurred by fertilizer plant; could be summarised as shown in Table 1. The cover is available to plants located anywhere in the world. This Table divides the period of cover into (a) the period up to the provisional handover^{1/} of the plant from the contractor to the purchaser and (b) the period of operation which follows after handover.

26. The Meeting noted that some of policies covering consequential loss which are listed as being available for the period after handover might not be available immediately at handover; for example, insurers are at present not willing to offer policies covering consequential losses arising from machinery breakdown until the plant had shown that it was operating successfully, say for a period of up to twelve months after the passing of its performance test.

27. For the period during which the plant is constructed and the performance tests are conducted, it is normal practice for an Erection All Risks policy (EAR Policy) to be taken out in the joint name of the contractor and the purchaser. Whether the purchaser or the contractor pays the premium would be decided by the wording of the contract. The Meeting noted that in the draft UNIDO cost reimbursable form of model contract, the purchaser is responsible and that in the UNIDO lump-sum form of contract the contractor is responsible.

^{1/} The performance test has been completed and the plant has been provisionally accepted by the buyer who is henceforth responsible for the plant.

INSURANCE AVAILABLE TO COVER MATERIAL DAMAGE AND CONSEQUENTIAL LOSSES ARISING FROM THE EVENTS LISTED IN PARAGRAPH 50 OF THE REPORT OF THE FIRST WORKING GROUP ON CONTRACTS AND INSURANCE (ID/MG/269/2/REV.1)

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
	<u>UP TO HANDOVER</u>	<u>MATERIAL DAMAGE AFTER HANDOVER</u>	<u>UP TO HANDOVER</u>	<u>CONSEQUENTIAL LOSS AFTER TO HANDOVER</u>
1. Fire and Allied Perils	Standard EAR Policy	Fire Policy	Advance Loss of Profits Policy	Fire Loss of Profits Policy
2. Mechanical and Electrical Breakdown	Standard EAR Policy	Machinery Breakdown Policy	EAR Advance Loss of Profits Policy	Machinery Breakdown Loss of Profits Policy
3. Faults in Erection	Standard EAR Policy	Machinery Breakdown Policy	EAR Advance Loss of Profits Policy	Machinery Breakdown Loss of Profits Policy
4. Manufacturers Risk	Endorsement to Standard EAR Policy (see Annex B page 33)	After expiry of guarantee period included in Machinery Breakdown	Not available for design faults	After expiry of guarantee period included in Machinery Breakdown Loss of Profits Policy
a) Material damage resulting from faulty design, faulty workmanship and faulty material	Not applicable	Not applicable	Not available	Not available
b) Financial Losses due to faulty design, faulty workmanship and faulty material without material damage	Not applicable	Not applicable	Not available	Not available

28. The coverage of an Erection All Risks Policy is illustrated by a specimen of an EAR Policy attached as Annex B. On the French and Spanish version of this paper the English text has been translated even through a different wording might be used to fit the law and market practice of the country in which the policy is written.

29. The EAR Policy coverage is for material damage. The EAR Policy does not cover costs related to repair or replacement of equipment directly affected by faulty design, defective material, bad workmanship. This is the responsibility of the main contractor, designer, manufacturers or suppliers (henceforth called the contractor); however, the policy does cover material damage to the rest of the plant under construction which might occur as a result of this defective equipment as well as any fire, explosion or other damage it may cause. An EAR Policy will however cover damage resulting from faulty workmanship (faults in erection) at the site. The standard EAR Policy does not cover the rectifying of faulty design which must be at the expense of the contractor; however, if an accident from faulty design results in material damage to other parts of the plant, this material damage is covered by the EAR Policy.

30. A material damage caused by the events discussed in the paragraph above could lead to the completion of the plant being delayed. In this case, there would occur financial losses in the form of standing charges and loss of anticipated profits. These consequential losses can be covered if the EAR Policy is supplemented by an Advance Loss of Profits Policy (an example of which is attached as Annex C). This policy would provide the purchaser with compensation for consequential losses from causes insured under the EAR Policy.

In line with the EAR Policy, cover would exclude business interruption directly produced by faulty design, defective material and bad workmanship. Cover includes business interruption caused by other material damage (for which liability is admitted under the EAR Policy) due to defective material and bad workmanship but excludes the business interruption caused by other damage due to faulty design.

31. After the plant has passed its performance test and is provisionally handed over, responsibility for the plant passes from the contractor to the purchaser. At this point it is in the interests of the purchaser to take out a new set of insurance policies in his name covering (a) fire and allied perils and (b) machinery breakdown (an example is attached as Annex D). These policies which cover material damage are available as soon as the plant has passed its performance test. So long as guarantees given in the contract or by law relating to the equipment purchased are in force (usually for a period of twelve months after start-up), damage due to the equipment still under the guarantee of the manufacturer is not reimbursable under a Machinery Breakdown Policy.

32. The extension of these Machinery Breakdown policies to cover consequential losses arising from mechanical and electrical breakdown are at present not immediately available. Usually during a period of twelve months, cover for consequential loss is not available because it is common experience during this period that plants all over the world have many teething problems when also the operating personnel is not fully trained. However if the insurers are satisfied at an earlier date, say after six months, that the plant is operating well, they may be prepared to offer insurance cover for loss of profits arising from machinery breakdown at an earlier date.

33. In this connection, it was pointed out that the possibility of reducing the usual 12 months observation period after take-over, would be enhanced if the following prerequisites were satisfied.:

- (a) Only conventional, time-tested designs are used (existing plants of this design and their records are to be indicated to the insurers).
- (b) For the plant to be insured, there must be a favourable record of erection and testing procedures (all documents, e.g. log books, instruments readings etc. to be accessible to insurers).

- (c) Risk minimization programme, as proposed by an independent risk management consultant has been drawn up and is enforced.
- (d) The owner must give proof that operation is entrusted to competent staff, trained in meeting emergencies.
- (e) The owner is strictly adhering to manufacturers' recommendations for maintenance and overhaul.
- (f) Adequate stock and arrangements for prompt supply of spare parts is secured according to manufacturers' recommendations.

34. The Meeting stated quite clearly that if, due to faults in design, it was found either at the time of the performance test or subsequently, that the plant was unable to operate at the capacity specified in the contract, the financial losses arising from this could not be insured under existing policies. However, if the contract provided that the contractor pays penalties for these design defects, then it might be possible at some stage in the future that the contractor could insure part of his liability to meet such obligations.

1/ Risk management programmes for projects comprise :

- (a) Enumerating and investigating the hazards which will possibly beset the plant, from inception of the erection works to industrial operation, stemming both from external causes and from the erection, testing and operation procedures adopted.
- (b) Listing recommendations to the buyer which aim at minimizing the accident proneness of the project through safer design and other loss prevention measures.
- (c) Recommend ways and means to handle the residual risk.

VI. ESTIMATED COST OF EXISTING INSURANCE COVER AVAILABLE

35. The cost of insurance for fertilizer plants in course of erection and during operation after the commissioning period will depend upon a number of factors. The main factors are the type of plant, location, nature and period of the contract and the contract value.

36. To give some idea of the costs involved, an example has been taken of a standard ammonia/urea plant built in an area where there is no unusual degree of natural hazard from earthquake, hurricane, cyclone, flooding, avalanche, etc.

37. For the example, the following assumptions were made:

<u>Contract value:</u>	US\$ 200 million
<u>Breakdown of value:</u>	Ammonia plant US\$ 133 million Urea plant US\$ 67 million
<u>Capacity:</u>	900 tons/day Ammonia 1,500 tons/day Urea
<u>Periods:</u>	36 months construction 3 months testing and start up
<u>Insured:</u>	Experienced, capable and reputable Contractors and Sub-Contractors and Principal.
<u>General:</u>	Natural Gas or Naptha feedstock for Ammonia processes. No prototype or unusual features. All experienced and reputable suppliers and sub-contractors.

To calculate loss of profits, an estimated amount of US\$ 42 million per annum for standing charges (fixed costs which can not be reduced when operation stops) and US\$5 million per annum for net profit is assumed. In the event of a total stoppage due to an insured incident, the owner of the plant could receive compensation for consequential losses up to the maximum sum insured based on the above estimate of standing charges and estimated net profit.

38. It is estimated that the cost of providing insurance covers for such a plant would be approximately as follows:

	<u>Insurance Cover for Loss or Damage</u>	<u>Insurance Cover for Consequential Losses</u>	
		<u>For 12 months indemnity</u>	<u>For 24 months indemnity</u>
	US \$ mm	US \$ mm	US \$ mm
A <u>During plant construction</u>^{1/}			
Erection All Risks (EAR)	1.35	-	-
Loss of Advanced Profits (LAP) due to delay in start-up	-	0.63	0.85
B <u>During Operation of Plant</u>^{2/}			
Fire and other insured Perils	1.70	-	-
Loss of profits due to fire etc.	-	0.45	0.70
Machinery breakdown	0.88	-	-
Loss of profits due to machinery breakdown	-	0.37	0.51

For this illustrative example,

^{1/} The premiums quoted under A above cover the construction period of 36 months plus a testing period of 3 months.

^{2/} All premiums quoted under B above are annual premiums.

VII MAJOR GAPS BETWEEN EXISTING INSURANCE COVERS AND BUYER'S REQUIREMENTS

39. The major exclusions in the forms of cover described above are outlined in the following Table.

40. In defining gaps in the insurance cover available, note should also be taken of other exclusions listed in the policies since they set out other areas which are not covered by these policies. In the case of these other exclusions, cover is often available under other types of insurance, for example, workmen's compensation insurance; such types of insurance are not considered in this report.

41. It should also be emphasized that it is a pre-requisite that before any claim can be considered there must be an unforeseeable accident which causes damage or loss to the plant.

MAJOR EXCLUSIONS IN EXISTING INSURANCE COVER

	Material Damage up to Handover	Material Damage after Handover	Consequential Losses before Handover	Consequential Losses after Handover First 12 Months 1/	Consequential Losses after final Handover
1. War, major political risks and nuclear incidents	x	x	x	x	x
2. Normal wear and tear including corrosion	x	x	x	x	x
3. Defective material or workmanship	2/		x 2/	x	
4. Defective design	2/		x 3/		

1/ This period could be reduced in the event that insurers are satisfied at any earlier date (see para. 33 above).

2/ Defective material or workmanship and defective design are excluded from the Erection All Risks Policy; however this policy does cover resultant material damage arising from that defective design, material or workmanship. The effect of this is that a substantial amount of protection in this field is provided by existing insurance cover.

3/ The Loss of Advance Profits (LAP) Policy which covers consequential losses prior to handover of a plant has, currently, a total exclusion of all losses arising from defective design. (See Exception 2 of the LAP Policy attached as Annex C). However insurers may be prepared to extend the cover to include the consequences of defective design (thereby providing similar cover to the EAR Policy) subject to their being totally satisfied that only time-tested designs and experienced contractors are involved.

VIII. PERFORMANCE BONDS

42. Performance bonds are quite widely used throughout the world for all types of construction and supply contracts. The purpose of the bond is to guarantee for the purchaser that the contractor will carry out and complete the work of constructing the plant as detailed in specifications, drawings, etc. The bond does not guarantee that the plant once completed will operate successfully, achieve the capacity that was specified, and conform with other technical specifications. ^{1/}

43. The company issuing a performance bond frequently develops a permanent and long standing relationship with the contractor. The bonding company knows in detail the commitments and resources, including financial resources, of the contractor and will not be willing to issue a bond if it appears that in the undertaking of a new contract the contractor might over extend his capabilities and resources. A requirement by the purchaser that such a bond be granted is one way of selecting contractors who have demonstrated their reliable performance in executing such contracts in the past.

44. As regards the extent of bonding required, the meeting noted the conclusion of the First Working Group on Contracts and Insurance namely that: "performance bonds of 8 to 10 per cent and even up to 15 per cent are requested and given in present conditions. Since performance bonds of 25 per cent or more are used in the United States in construction, engineering and defence industry contracts, it was suggested that this level might also be considered for contracts to construct fertilizer plants in developing countries". When the insurance or surety company issues the bond, it asks for and receives a counter guarantee from the contractor under which he promises to reimburse any expense arising out of the issue of the bond.

45. The meeting considered that the performance bond was a useful means for the purchaser to obtain a guarantee that the

^{1/} This applies to bonds provided by insurance companies. However, the meeting noted that some bank guarantees may provide wider guarantees depending on the contractor's status with his bank.

^{2/} Report of the Meeting, ID/WG.269/2 Rev.1, paragraph

work of constructing the plant will be completed, but the performance bond would not do more than this. If the purchaser required wider guarantees (for example, regarding the performance of the plant in terms of capacity, quality of product, raw materials, etc.), the performance bond would need to be supplemented.

EVALUATION OF THE ANSWERS TO THE UNIDO
QUESTIONNAIRE ON CONSEQUENTIAL LOSSES
ARISING FROM POOR PERFORMANCE OF
FERTILIZER PLANTS BUILT IN DEVELOPING COUNTRIES
BETWEEN 1968 AND 1977

Prepared by

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4. General Analysis of the Answers Received by UNIDO

1. 21 companies from different developing countries returned an answer to the UNIDO questionnaire on consequential losses. The answers

came from:

- 1 company in Argentina
- 1 company in Bangladesh
- 2 companies in Brazil
- 1 company in Egypt
- 8 companies in India
- 1 company in Indonesia
- 1 company in Kuwait
- 1 company in Nigeria
- 1 company in Pakistan
- 1 company in Republic of Korea
- 1 company in Senegal
- 1 company in Tunisia
- 1 company in Uganda

2. These answers contain data of 33 producing plants built between 1968 and 1977, as follows:

Ammonia - Urea	16 plants
Ammonia	2 plants
SSP, TSP and NP/NPK	11 plants
Ammonium nitrate	2 plants
Ammonium sulfate	<u>2 plants</u>
	33 plants

3. In the phosphate fertilizer plants, with the exception of one, there was practically no design defect; and the various reasons for mechanical breakdown or failure of equipment - apart from four exceptions - are not specified in the papers.

4. The small number of ammonium nitrate and ammonium sulfate plants gives insufficient basis on which to draw general conclusions.

5. The answers on the ammonia - urea plants are suitable for evaluation. The failures of equipment or defects in design of the ammonia plants are the same as for the ammonia production units of urea plants.

B. Evaluation of the Answers on the Ammonia - Urea Plants

6. Design of the plant:

No defects	9 cases
Defects in design	<u>7 cases</u>
	16 cases

7. Failure of equipment:

No failure	6 cases
Specified items	8 cases
No exact data provided	<u>2 cases</u>
	16 cases

C. Detailed Analysis of Design Defects in Ammonia - Urea Plants

Type of Defect	Production Loss	Percent of Plant capacity
	Urea tonnes	
1. Reforming plant waste heat recovery system below optimum performance (2 cases)	yearly 70,000	21%
	yearly 53,000	16%
2. Detailed engineering of steam and instrumentation system	1st year 51,500	25%
	2nd year 35,000	10%
3. Capacity deficiency of cooling tower, inert-gas generator	no loss of production reported	
4. Capacity deficiency of cooling tower, ammonia condenser, pure water unit	yearly 51,000	15%
5. Design of primary reformer tubes	21,000 tonnes of ammonia	32%
6. Design of secondary reformer	no loss of production reported	
7. Design of condenser unit in urea plant	4,000	4%

D. Detailed Analysis of Failures of Specific Items of Equipment

Type of Defect	Case	Production loss
1. Waste heat boiler	1	39,200 MT Urea
2. Different parts of primary reformer and waste heat recovery system (3 cases)	1	200,000 MT Urea
	2	15,000 MT Urea
	3	No exact data

Type of Defect	Case	Production Loss
3. Synthesis gas compressor (4 cases)	1	37,000 MT Urea
	2	23,600 MT Urea
	3	No exact data
	4	25,000 MT Ammonia
4. Air compressor (2 cases)	1	5,000 MT Urea
	2	17,300 MT Urea
5. Three main compressors	1	35,000 MT Ammonia
6. Feed gas booster compressor	1	3,500 MT Urea
7. Turbines	1	5,000 MT Urea
8. CO ₂ system solution pumps	1	No exact data
9. CO ₂ system instrumentation (two cases)	1	27,500 MT Urea
	2	23,000 MT Urea
10. Refrigeration unit	1	No exact data
11. Defects of various equipment in ammonia plant (2 cases)	1	54,000 MT Urea
	2	21,000 MT Ammonia
12. Corrosion of various equipment in ammonia plant (3 cases)	1	26,600 MT Urea
	2	14,200 MT Urea
	3	No exact data
13. CO ₂ compressors (5 cases)	1	40,000 MT Urea
	2	35,100 MT Urea
	3	3,700 MT Urea
	4 and 5	No exact data
14. Carbamate and ammonia pumps (2 cases)	1	1,000 MT Urea
	2	No exact data
15. Corrosion of various equipment in urea plant (3 cases)	1	18,400 MT Urea
	2 and 3	No exact data
16. Defects in various equipment in urea plant (2 cases)	1	6,000 MT Urea
	2	300 MT Urea

5. Analysis of performance of ammonia - urea plants according to year in which the plant was built.

Case	Date plant completed	Normal capacity of plant MT Urea/Y	Loss of production MT of Urea		Period covered years
			Design defects	Equipment defects	
1	1967	132.000	Nil	Nil	4/68-71
2	1968	180.000	Nil	Nil	4(69-72)
3	1968	53.500	21.000*	35.000*	4(68-71)
4	1970	90.000	4.000	5.000 61.000*	4(70-74)
5	1970	340.000	197.000	no exact data	4(70-74)
6	1971	345.000	Nil	Nil	4
7	1971	330.000	212.000	200.000	4(74-77)
8	1971	330.000	280.000	no exact data	4(74-78)
9	1971	292.000	Nil	Nil	4(72-75)
10	1972	376.000	Nil	Nil	4
11	1974	380.000	Nil	56.000	2(75-76)
12	1974	396.000	Nil	40.000	3
13	1975	340.000	86.500	124.500	2(76-77)
14	1975	134.000	Nil	Nil	2(76-77)
15	1977	570.000	Nil	151.000	1(77-78)
16	1977	570.000	Nil	24.200	90 days

* MT of Ammonia

F. Evaluation of the Answers on Phosphate and Compound Fertilizer Plants.

17. Design of the plant:

No defects	9 cases
Defects in design	<u>2 cases</u>
	11 cases

18. Failure of equipment:

No failure	6 cases
Specified items	<u>5 cases</u>
	11 cases

19. Defects in design:

- Equipment was of poor quality and without adequate lining.
- Improper design of instrumentation.

20. Failure of equipment in specified cases:

- Defects of various equipment, such as distillers, drying furnaces, agitators, pumps, air blowers
- Corrosion of various equipment such as tubes.

21. Analysis of performance of phosphate plants according to the year in which the plant was built.

Case	Date Plant Completed	Produce	Nominal Capacity MT/Y		Loss of Production in MT		Period Covered Years
					Design Defect	Equipment Defect	
1.	1967	NP 20/20 or 28/28	300,000 420,000	-	Nil	Nil	4
2.	1968	DAP, MAP	90,000 120,000	-	Nil	Nil	4
3.	1969	TSP	32,000		64,000	No exact data	2
4.	1970	TSP	120,000		Nil	No exact data	4
5.	1970	NP 28/28	160,000		Nil	Nil	4
6.	1971	NPK 17/17/17	200,000		Nil	Nil	4
7.	1972	P ₂ O ₅	110,000		Nil	11,000	4
8.	1974	NP/NPK	360,000 540,000	-	Nil	Nil	3
9.	1975	SSP	100,000		Nil	16,000	2
10.	1975	TSP	150,000		Nil	5,000	2
11.	1976	NPK	485,000		No exact data	Nil	0

9. Answers to the questions of the UNIDO Secretariat

22. Is it possible for insurers to identify clearly what is a "design defect" and what constitutes "equipment break-down"? It should be possible, provided that adequate expertise is used. In some cases the break-down of plant may be due to both a "design defect" and "equipment break-down". Since in these cases it is difficult for the technical expert to determine which of these two types is the more important, it would be appropriate for insurance to cover both types of defect.

23. What is a definition of "design defect"? Those defects which can be considered as "design defects" are those which arise from inadequate data determined, or calculated by the design engineering group against the purchasers contract requirements. The most common defects in design are mistakes in calculation of material and energy balances, imperfect specification of machines and equipment, mistakes in detailed engineering work.

EXAMPLE OF AN ERECTION ALL RISKS (EAR) POLICY

Erection All Risks Policy

No. _____

Whereas the Insured named in the Schedule hereto has made to the

(hereinafter called "the Insurers") a written proposal by completing a Questionnaire which together with any other statements made in writing by the Insured for the purpose of this Policy is deemed to be incorporated herein,

Now this Policy of Insurance witnesseth that subject to the Insured having paid to the Insurers the premium mentioned in the Schedule and subject to the terms, exclusions, provisions and conditions contained herein or endorsed hereon the Insurers will indemnify the Insured in the manner and to the extent hereinafter provided.

General Exclusions

The Insurers will not indemnify the Insured in respect of loss, damage or liability directly or indirectly caused by or arising out of or aggravated by

- a) war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, mutiny, riot, strike, lock-out, civil commotion, military or usurped power, a group of malicious persons or persons acting on behalf of or in connection with any political organisation, conspiracy, confiscation, commandeering, requisition or destruction or damage by order of any government de jure or de facto or by any public authority;
- b) nuclear reaction, nuclear radiation or radioactive contamination;
- c) wilful act or wilful negligence of the Insured or of his representatives;
- d) cessation of work whether total or partial.

In any action, suit or other proceeding where the Insurers allege that by reason of the provisions of Exclusion a) above any loss, destruction, damage or liability is not covered by this insurance the burden of proving that such loss, destruction, damage or liability is covered shall be upon the Insured.

Period of Cover

The liability of the Insurers shall commence notwithstanding any date to the contrary specified in the Schedule, directly upon commencement of work or after the unloading of the items entered in the Schedule at the site and shall continue until immediately after taking over or after the first test operation or test loading is completed whichever is the earlier, but not beyond four weeks (unless otherwise agreed in writing) from the date of commencement of the test. If, however, a part of a plant or one or several machine(s) is or are tested and/or put into operation or taken over, the cover for that particular part of the plant or machine(s) and any liability resulting therefrom ceases whereas the cover continues for the remaining parts.

In the case of second-hand items, the insurance hereunder shall, however, cease immediately on the commencement of the test.

At the latest the insurance shall expire on the date specified in the Schedule. Any extensions of the Period of Insurance are subject to the prior written consent of the Insurers.

General Conditions

1. The due observance and fulfillment of the terms of this Policy in so far as they relate to anything to be done or complied with by the Insured and the truth of the statements and answers in the questionnaire and proposal made by the Insured shall be a condition precedent to any liability of the Insurers.
2. The Schedule and the Section(s) shall be deemed to be incorporated in and form part of this Policy and the expression "this Policy" wherever used in this contract shall be read as including the Schedule and the Section(s). Any word or expression to which a specific meaning has been attached in any part of this Policy or of the Schedule or of the Section(s) shall bear such meaning wherever it may appear.
3. The Insured shall at his own expense take all reasonable precautions and comply with all reasonable recommendations of the Insurers to prevent loss, damage or liability and comply with statutory requirements and manufacturers' recommendations.
4. a) Representatives of the Insurers shall at any reasonable time have the right to inspect and examine the risk and the Insured shall provide the representatives of the Insurers with all details and information necessary for the assessment of the risk.
b) The Insured shall immediately notify the Insurers by telegram and in writing of any material change in the risk and cause at his own expense such additional precautions to be taken as circumstances may require, and the scope of cover and or premium shall, if necessary, be adjusted accordingly.
No material alteration shall be made or admitted by the Insured whereby the risk is increased, unless the continuance of the insurance be confirmed in writing by the Insurers.
5. In the event of any occurrence which might give rise to a claim under this Policy, the Insured shall
 - a) immediately notify the Insurers by telephone or telegram as well as in writing, giving an indication as to the nature and extent of loss or damage.
 - b) take all steps within his power to minimize the extent of the loss or damage.
 - c) preserve the parts affected and make them available for inspection by a representative or surveyor of the Insurers.
 - d) furnish all such information and documentary evidence as the Insurers may require.
 - e) inform the police authorities in case of loss or damage due to theft or burglary.The Insurers shall not in any case be liable for loss, damage or liability of which no notice has been received by the Insurers within 14 days of its occurrence.
Upon notification being given to the Insurers under this condition, the Insured may carry out the repairs or replacement of any minor damage; in all other cases a representative of the Insurers shall have the opportunity of inspecting the loss or damage before any repairs or alterations are effected. If a representative of the Insurers does not carry out the inspection within a period of time which could be considered as adequate under the circumstances the Insured is entitled to proceed with the repairs or replacement.
The liability of the Insurers under this Policy in respect of any item sustaining damage shall cease if said item is not repaired properly without delay.
6. The Insured shall at the expense of the Insurers do and concur in doing and permit to be done all such acts and things as may be necessary or required by the Insurers in the interest of any rights or remedies, or of obtaining relief or indemnity from parties (other than those insured under this Policy) to which the Insurers shall be or would become entitled or subrogated upon their paying for or making good any loss or damage under this Policy, whether such acts and things shall be or become necessary or required before or after the Insured's indemnification by the Insurers.
7. If any difference shall arise as to the amount to be paid under this Policy (liability being otherwise admitted) such difference shall be referred to the decision of an Arbitrator to be appointed in writing by the parties in difference or if they cannot agree upon a single Arbitrator to the decision of two Arbitrators, one to be appointed in writing by each of the parties, within one calendar month after having been required in writing so to do by either of the parties or, in case the Arbitrators do not agree, of an Umpire to be appointed in writing by the Arbitrators before entering upon the reference. The Umpire shall sit with the Arbitrators and preside at their meetings. The making of an award shall be a condition precedent to any right of action against the Insurers.
8. If a claim is in any respect fraudulent, or if any false declaration is made or used in support thereof, or if any fraudulent means or devices are used by the Insured or anyone acting on his behalf to obtain any benefit under this Policy, or if a claim is made and rejected and no action or suit is commenced within three months after such rejection or, in case of arbitration taking place as provided herein, within three months after the Arbitrator or Arbitrators or Umpire have made their award, all benefit under this Policy shall be forfeited.
9. If at the time any claim arises under the Policy there be any other insurance covering the same loss, damage or liability the Insurers shall not be liable to pay or contribute more than their rateable proportion of any claim for such loss, damage or liability.

Section I - Material Damage

Policy No.

The Insurers hereby agree with the Insured that if at any time during the period of cover the items or any part thereof entered in the Schedule shall suffer any unforeseen and sudden physical loss or damage from any cause, other than those specifically excluded, in a manner necessitating repair or replacement, the Insurers will indemnify the Insured in respect of such loss or damage as hereinafter provided by payment in cash, replacement or repair (at their own option) up to an amount not exceeding in respect of each of the items specified in the Schedule the sum set opposite thereto and not exceeding in any one event the limit of indemnity where applicable and not exceeding in all the total sum expressed in the Schedule as insured hereby.

The Insurers will also reimburse the Insured for the cost of clearance of debris following upon any event giving rise to a claim under this Policy provided a separate sum therefore has been entered in the Schedule.

Special Exclusions to Section I

The Insurers shall not, however, be liable for

- a) the deductible stated in the Schedule to be borne by the Insured in any one occurrence;
- b) consequential loss of any kind or description whatsoever including penalties, losses due to delay, lack of performance, loss of contract;
- c) loss or damage due to faulty design, defective material or casting, bad workmanship other than faults in erection;
- d) wear and tear, corrosion, oxidation, incrustation;
- e) loss of or damage to files, drawings, accounts, bills, currency, stamps, deeds, evidences of debt, notes, securities, cheques, packing materials such as cases, boxes, crates;
- f) loss discovered only at the time of taking an inventory.

Provisions Applying to Section I

Memo 1 - Sums Insured: It is a requirement of this insurance that the sums insured stated in the Schedule (under items 1 and 2) shall not be less than the full value of each item at the completion of the erection, inclusive of freight, customs duties, duty, erection cost, and the Insured undertakes to increase or decrease the amounts of insurance in the event of any material fluctuation in the level of wages or prices

provided always that such increase or decrease shall take effect only after the same has been recorded on the Policy by the Insurers.

If, in the event of loss or damage, it is found that the sums insured are less than the amounts required to be insured, then the amount recoverable by the Insured under this Policy shall be reduced in such proportion as the sums insured bear to the amounts required to be insured. Every object and cost item is subject to this condition separately.

Memo 2 - Basis of Loss Settlement: In the event of any loss or damage the basis of any settlement under this Policy shall be

a) in the case of damage which can be repaired the cost of repairs necessary to restore the items to their condition immediately before the occurrence of the damage less salvage, or

b) in the case of a total loss - the actual value of the items immediately before the occurrence of the loss less salvage.

however, only to the extent the costs claimed had to be borne by the Insured and to the extent they are included in the sums insured and provided always that the provisions and conditions have been complied with.

The Insurers will make payments only after being satisfied by production of the necessary bills and documents that the repairs have been effected or replacement has taken place, as the case may be. All damage which can be repaired shall be repaired, but if the cost of repairing any damage equals or exceeds the value of the items immediately before the occurrence of the damage, the settlement shall be made on the basis provided for in b) above.

The cost of any provisional repairs will be borne by the Insurers if such repairs constitute part of the final repairs and do not increase the total repair expenses.

The cost of any alterations, additions and or improvements shall not be recoverable under this Policy.

Memo 3 - Extension of Cover: Extra charges for overtime, nightwork, work on public holidays, express freight are covered by this insurance only if previously and specially agreed upon in writing.

Memo 4 - Surrounding Property: Loss or damage to property located on or adjacent to the site and belonging to or held in care, custody or control of the Principal(s) or the Contractor(s) shall only be covered if occurring in direct connection with the erection, construction or testing of the items insured under Section 1 and happening during the Period of Cover, and provided that a separate sum therefor has been entered in the Schedule under Section 1, item 4. This cover does not apply to construction/erection machinery and construction/erection plant and equipment.

Section II - Third Party Liability Policy No.

The Insurers will indemnify the Insured up to but not exceeding the amounts specified in the Schedule against such sums which the Insured shall become legally liable to pay as damages consequent upon

- a) accidental bodily injury to or illness of third parties (whether fatal or not)
- b) accidental loss of or damage to property belonging to third parties occurring in direct connection with the erection, construction or testing of the items insured under Section I and happening on or in the immediate vicinity of the site during the Period of Cover.

In respect of a claim for compensation to which the indemnity provided herein applies, the Insurers will in addition indemnify the Insured against

- a) all costs and expenses of litigation recovered by any claimant from the Insured, and
 - b) all costs and expenses incurred with the written consent of the Insurers,
- provided always that the liability of the Insurers under this section shall not exceed the limits of indemnity stated in the Schedule

Special Exclusions to Section II

The Insurers will not indemnify the Insured in respect of

1. the deductible stated in the Schedule to be borne by the Insured in any one occurrence.
2. expenditure incurred in doing or redoing or making good or repairing or replacing anything covered or coverable under Section I of this Policy;
3. liability consequent upon
 - a) bodily injury to or illness of employees or workmen of the Contractor(s) or the Principal(s) or any other firm connected with the project which or part of which is insured under Section I, or members of their families.
 - b) loss of or damage to property belonging to or held in care, custody or control of the Contractor(s), the Principal(s) or any other firm connected with the project which or part of which is insured under Section I, or an employee or workman of one of the aforesaid;
 - c) any accident caused by vehicles licensed for general road use or by waterborne vessels or aircraft.
 - d) any agreement by the insured to pay any sum by way of indemnity or otherwise unless such liability would have attached also in the absence of such agreement.

Special Conditions Applying to Section II

1. No admission, offer, promise, payment or indemnity shall be made or given by or on behalf of the Insured without the written consent of the Insurers who shall be entitled, if they so desire, to take over and conduct in the name of the Insured the defence or settlement of any claim or to prosecute for their own benefit in the name of the Insured any claim for indemnity or damages or otherwise and shall have full discretion in the conduct of any proceedings or in the settlement of any claim and the Insured shall give all such information and assistance as the Insurers may require
2. The Insurers may so far as any accident is concerned pay to the Insured the limit of indemnity for any one accident (but deducting therefrom in such case any sum or sums already paid as compensation in respect thereof) or any lesser sum for which the claim or claims arising from such accident can be settled and the Insurers shall thereafter be under no further liability in respect of such accident under this section.

Endorsement 200

Cover of Manufacturer's Risk

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon and subject to the Insured having paid the agreed extra premium, lit. c under "Special Exclusions to Section 1" shall be replaced by the following wording:

"c. all costs related to repair and/or replacement of parts and/or items directly affected by faulty design, defective material or casting, bad workmanship other than faults in erection, which the Insured would have incurred for rectifying the original fault had such fault been discovered before the loss occurred;"

This Endorsement does, however, not apply to parts and items of civil engineering sections.

Extra Premium

EXAMPLE OF AN EAR LOSS OF ADVANCED PROFITS (LAP) POLICY

MACHINERY CONSEQUENTIAL LOSS (INTERRUPTION) INSURANCE

WHEREAS the Insured by a proposal and declaration which shall be the basis of this contract and is deemed to be incorporated herein has applied to the Insurers for the Indemnity hereinafter expressed and has paid or agreed to pay the First Premium as consideration for such Indemnity

The Insurers agree that subject to the terms exceptions limits and conditions contained herein or endorsed hereon if during any Period of Insurance the Business carried on by the Insured at the Premises be interrupted or interfered with and or property is damaged in consequence of an Accident then the Insurers will in respect of each item in the Specification indemnify the Insured against the amount of loss resulting from such Interruption or Interference or damage

PROVIDED that the liability of the Insurers shall in no case exceed in respect of each item the sum expressed in the Specification to be insured thereon or in the whole the Total Sum Insured hereby or such other sum or sums as may hereafter be substituted therefor by memorandum signed by or on behalf of the Insurers

MACHINERY CONSEQUENTIAL LOSS (INTERRUPTION) INSURANCE

Branch:

Agency:

Policy No.

THE SCHEDULE		
The Insurers:		
The Insured: Name Address		
Period of Insurance: (a) From the— to the— (b) Any subsequent period for which the Insured shall pay and the Insurers shall agree to accept a renewal premium		Renewal date } both dates Inclusive
First Premium	Renewal Premium	
Indemnity Period Limit	Excess Period	
The Business: The Premises:		
The Machinery is insured by this Policy only whilst within the Premises at the following situation: Situation:		
Description of Machinery		

DATED in _____ the _____ day of _____ 19_____

Examined _____

For

Specification referred to in Policy No.

In the name of

Item No.		Sum Insured
1.	GROSS PROFIT	£
2.		£
3.		£
TOTAL SUM INSURED ...		£

THE INSURANCE UNDER ITEM NO. 1 is limited to loss of Gross Profit due to Reduction in Turnover and Increase in Cost of Working and the amount payable as indemnity thereunder shall be:-

- (a) IN RESPECT OF REDUCTION IN TURNOVER: the sum produced by applying the Rate of Gross Profit to the amount by which the Turnover during the Indemnity Period shall, in consequence of the Accident, fall short of the Standard Turnover,
- (b) IN RESPECT OF INCREASE IN COST OF WORKING: the additional expenditure necessarily and reasonably incurred for the sole purpose of avoiding or diminishing the reduction in Turnover which but for that expenditure would have taken place during the Indemnity Period in consequence of the Accident, but not exceeding the sum produced by applying the Rate of Gross Profit to the amount of the reduction thereby avoided.

less any sum saved during the Indemnity Period in respect of such of the charges and expenses of the Business insured under this Item as may cease or be reduced in consequence of the Accident, provided that if the Sum Insured by this Item be less than the sum produced by applying the Rate of Gross Profit to the Annual Turnover, the amount payable shall be proportionately reduced.

DEFINITIONS

GROSS PROFIT.-The amount by which the sum of the value of the Turnover and the value of the Closing Stock shall exceed the sum of the value of Opening Stock and the amount of the Specified Working Expenses. The values of the Opening and Closing Stocks shall be arrived at in accordance with the Insured's normal accountancy methods, due provision being made for depreciation.

SPECIFIED WORKING EXPENSES (which are not insured by this Policy)

- 1. 100% of Purchases (less discounts received).
- 2. 100% of Carriage, Packing and Freight.

The words and expressions used in this Definition shall have the meaning usually attached to them in the books and accounts of the Insured.

TURNOVER.-The Money paid or payable to the Insured for goods sold and delivered and for services rendered in course of the Business at the Premises.

INDEMNITY PERIOD.-The period not exceeding the Indemnity Period Limit stated in the Schedule commencing with the occurrence of the Accident during which the results of the Business are affected in consequence of the Accident, providing always that the Insurers shall not be liable for the amount of the loss arising during the Excess Period.

RATE OF GROSS PROFIT.-The rate of Gross Profit earned on the Turnover during the financial year immediately before the date of the Accident

ANNUAL TURNOVER.-The Turnover during the twelve months immediately before the date of the Accident

STANDARD TURNOVER.-The Turnover during that period in the twelve months immediately before the date of the Accident which corresponds with the Indemnity Period

to which such adjustments shall be made as may be necessary to provide for the trend of the Business and for variations in or special circumstances affecting the Business either before or after the Accident or which would have affected the Business had the Accident not occurred so that the figures thus adjusted shall represent as nearly as may be reasonably practicable the results which but for the Accident would have been obtained during the relative period after the Accident.

MEMO. 1.-If during the Indemnity Period goods shall be sold or services shall be rendered elsewhere than at the Premises for the benefit of the Business either by the Insured or by others on his behalf the money paid or payable in respect of such sales or services shall be brought into account in arriving at the Turnover during the Indemnity Period.

DEFINITION

ACCIDENT: - Physical loss of or damage to the Machinery described in the Schedule from any cause covered under Policy No. issued by the Insurers liability under which Policy shall be a condition precedent to liability under this Policy except for the application of the excess

EXCEPTIONS

This Policy does not cover loss resulting from interruption or interference directly or indirectly due to any of the following causes:-

1. Electrical or mechanical breakdown or explosion of any machinery which occurs later than from the commencement of testing
2. Defective design
3. Wasting wearing away or wearing out rust gradual deterioration scratching of painted or polished surfaces derangement defective material or workmanship. This exception shall be limited to the machine structure or work immediately affected and shall not apply to interruption or interference as a result of damage due to an Accident arising out of such wear derangement or defect
4. Loss or destruction of or damage to any property whatsoever or any loss or expense whatsoever resulting or arising therefrom or any consequential loss directly or indirectly caused by or contributed to by or arising from ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel
5. War, Invasion, Act of Foreign Enemy, Hostilities (whether war be declared or not), Civil War, Rebellion, Revolution, Insurrection, Military or Usurped Power, Confiscation or Destruction or Requisition by order of the Government or any Public Authority, Riot, Strike, Lock-out, Civil Commotion or persons taking part in Labour Disturbances or malicious persons acting on behalf of or in connection with any Political Organisation

DEFINITIONS

INDEMNITY PERIOD: - The period beginning with the date upon which but for the Accident the Business would have commenced at the Premises and ending not later than thereafter, during which the results of the Business shall be affected in consequence of the Accident but the Company shall not be liable for the amount of the loss arising during the first days immediately following the date which but for the Accident the Business would have commenced at the Premises

NOTE: Where the Business is a New Venture the definitions of Rate of Gross Profit, Annual Turnover and Standard Turnover shall be amended as follows:-

<u>RATE OF GROSS PROFIT:</u>	The rate of Gross Profit which but for the Accident would have been earned on the Turnover during the Indemnity Period) based upon the estimated production) of the Business, and costs and) prices relating thereto, to which) such adjustments shall be made as) may be necessary to provide for the) trend of the Business and for) variations in or special circumstances) affecting the Business, either before) or after the Accident, or which) would have affected the Business had) the Accident not occurred, so that) the figures thus adjusted shall) represent as nearly as may be) reasonably practicable the results) which but for the Accident would) have been obtained
<u>ANNUAL TURNOVER:</u>	The proportional equivalent for a period of twelve months of the Standard Turnover	
<u>STANDARD TURNOVER:</u>	The Turnover which but for the Accident would have resulted during the Indemnity Period	

CONDITIONS

1. This Policy Schedule and Specification shall be read together as one contract and any word or expression to which a specific meaning has been attached in any part of this Policy Schedule and Specification shall bear such specific meaning wherever it may appear.

2. On the happening of any event giving rise or likely to give rise to a claim under this Policy coming to the knowledge of the Insured the Insured shall:

- (a) give immediate notice thereof to the Insurers by telephone or telegram and send written confirmation thereof within forty-eight hours of the event to the Insurers.
- (b) do and concur in doing and permit to be done all things which may be reasonably practicable to minimise or check any interruption of or interference with the Business or to avoid or diminish the loss.
- (c) discontinue the use of any damaged Machinery unless the Insurers authorise otherwise (the Insurers shall not be liable in respect of any further interruption or interference arising out of the continued use of any damaged Machinery without the prior authority of the Insurers until such Machinery shall have been repaired to the satisfaction of the Insurers).
- (d) so far as may be reasonably practicable without causing any increase in the period of interruption or interference take precautions to preserve any things which might prove necessary or useful by way of evidence in connection with any claim.
- (e) In the event of a claim being made under this Policy not later than thirty days after the expiry of the Indemnity Period or within such further time as the Insurers may in writing allow at his own expense deliver to the Insurers in writing a statement setting forth particulars of his claim together with details of all other insurances covering the Accident or any part of it or consequential loss of any kind resulting therefrom and at his own expense also produce and furnish to the Insurers such books of account and other business books such as invoices balance sheets and other documents proofs information explanation and other evidence as may reasonably be required by the Insurers for the purpose of investigating or verifying the claim together with if required a statutory declaration of the truth of the claim and of any matters connected therewith.
- (f) at the expense of the Insurers do or permit to be done all such acts and things as may be necessary or reasonably required by the Insurers for the purpose of enforcing any rights or remedies or obtaining relief or indemnity from other parties to which the Insurers shall be or would become entitled or subrogated upon their paying for or making good any loss under this Policy whether such acts and things shall be or become necessary or required before or after his indemnification by the Insurers.

No claim under this Policy shall be payable unless the terms of this condition have been complied with and in the event of non-compliance therewith any payment on account already made shall be repaid to the Insurers forthwith.

3. If any claim be in any respect fraudulent or if any fraudulent means or devices be used by the Insured or anyone acting on his behalf to obtain any benefit under this Policy or if any Accident be occasioned with the connivance of the Insured all benefit under this Policy shall be forfeited.

4. In the event of an Accident to any insured Machinery likely to give rise to a claim hereunder the Insurers shall have the right to take over and control all necessary repairs.

5. On the happening of any event in respect of which a claim is or may be made under this Policy the Insurers and every person authorised by the Insurers may without thereby incurring any liability and without diminishing the right of the Insurers to rely upon any condition of this Policy enter any building where the loss has happened and may take possession of or require to be delivered to them any of the Machinery and may keep possession of and deal with such Machinery for all reasonable purposes and in any reasonable manner. This condition shall be evidence of the leave and licence of the Insured to the Insurers so to do. If the Insured or anyone acting on his behalf shall not comply with the requirements of the Insurers or shall hinder or obstruct the Insurers during any of the above mentioned acts then all benefit under this Policy shall be forfeited.

6. If at the time of any Accident resulting in a loss covered by this Policy there be any other insurance effected by the Insured or by any other person on behalf of the Insured covering such loss the Insurers shall not be liable to pay more than their rateable proportion of the whole of such loss. If such other insurance is subject to any condition of advantage to the Insurer this Policy shall be subject to such condition of advantage in like manner. The Insurers shall not be liable to pay for or contribute to any loss which is or would but for the existence of this Policy be insured by any Consequential Loss Policy covering Marine risks or Fire and/or explosion risks.

7. The Insurers' officials or representatives shall have the right at all reasonable times to inspect and examine the Machinery. Dismantling and reassembling in connection with any examinations shall be carried out by the Insured on such rate or dates as the Insurers and the Insured shall mutually agree for the making of such examinations.

8. The Insured shall take precautions to keep the Machinery in good working order to enforce the observance by all persons of all proper safeguards against damage to the Machinery and ensure that statutory or other regulations relating to the operation and inspection of the Machinery are obeyed.

9. The Insured shall notify the Insurers of any defects or conditions of working which affect the risk of Accident and shall cause such additional precautions to be taken as the circumstances require. The Insurers shall not be liable for any Accident caused by a departure from normal working conditions with the Insured's approval and which create an aggravated risk unless the Insurers shall have given prior consent.

10. If at any time after commencement of this Insurance

- (a) the Business be wound up or carried on by liquidator or receiver or permanently discontinued
- (b) the Insured's interest cease otherwise than by death.
- (c) any alteration be made whereby the risk of Accident is increased.
- (d) the retention of standby or spare machinery or any other loss minimising factors in existence when the insurance was effected be reduced discontinued or not maintained at the Premises in an efficient working condition and available for immediate use

this Policy shall be avoided unless its continuance be admitted by endorsement signed by or on behalf of the Insurers.

11. The Insurers may cancel this Policy by sending ten days' notice by registered letter to the Insured at his last known address and in such event will return to the Insured a proportionate part of the premium corresponding to the unexpired Period of Insurance.

12. The due observance and fulfillment of the terms and conditions of this Policy insofar as they relate to anything to be done or complied with by the Insured and the truth of the statements and answers in the Proposal and Declaration shall be conditions precedent to any liability of the Insurers to make any payment under this Policy.

13. All differences arising out of this Policy shall be referred to the arbitration of some person to be appointed by both parties or if they cannot agree upon a single Arbitrator to the decision of two Arbitrators one to be appointed in writing by each party and in the case of disagreement between the Arbitrators to the decision of an Umpire who shall have been appointed in writing by the Arbitrators before entering on the reference. The Umpire shall sit with the Arbitrators and preside at their meeting and the making of an award shall be a condition precedent to any right of action against the Insurers. If the Insurers shall disclaim liability to the Insured or his personal representatives for any claim hereunder and such claim shall not within twelve calendar months from the date of such disclaimer have been referred to Arbitration under the provisions herein contained then the claim shall for all purposes be deemed to have been abandoned and shall not thereafter be recoverable hereunder.

EXAMPLE OF MACHINERY BREAKDOWN POLICY

Machinery Insurance Policy No.

Whereas the insured named in the Schedule hereto has made to the

(hereinafter called "the Insurers") a written proposal by completing a questionnaire which, together with any other statements made in writing by the Insured for the purpose of this Policy, is deemed to be incorporated herein.

Now this Policy of Insurance witnesses that, subject to the Insured having paid to the Insurers the premium mentioned in the Schedule and subject to the terms, exclusions, provisions and conditions contained herein or endorsed hereon,

The Insurers hereby agree with the Insured that if at any time during the period of insurance stated in the Schedule or during any subsequent period for which the Insured pays and the Insurers may accept the premium for the renewal of this Policy, the items (or any part thereof) entered in the Schedule, whilst on the premises mentioned thereon, suffer any unforeseen and sudden physical loss or damage from causes such as defects in casting and material, faulty design, faults at workshop or in erection, bad workmanship, lack of skill, carelessness, shortage of water in boilers, physical explosion, tearing apart on account of centrifugal force, short-circuit, storm, or from any other cause not specifically excluded hereinafter, in a manner necessitating repair or replacement,

The Insurers will indemnify the Insured in respect of such loss or damage, as hereinafter provided, by payment in cash, replacement or repair (at the Insurers' option) up to an amount not exceeding in any one year of insurance in respect of each of the items specified in the Schedule the sum set opposite thereto and not exceeding in all the total sum expressed in the Schedule as insured hereby.

This Policy shall apply to the insured items after successful completion of their performance acceptance tests whether they are at work or at rest, or being dismantled for the purpose of cleaning or overhauling, or in the course of the aforesaid operations themselves, or when being shifted within the premises, or during subsequent re-erection.

Exclusions

The Insurers shall not be liable for

1. the deductible stated in the Schedule to be borne by the Insured in any one occurrence; if more than one item is lost or damaged in one occurrence, the Insured shall not, however, be called upon to bear more than the highest single deductible applicable to such items;
 2. loss of or damage to exchangeable tools, e.g. dies, moulds, engraved cylinders, parts which by their use and/or nature suffer a high rate of wear or depreciation, e.g. refractory linings, crushing hammers, objects made of glass, belts, ropes, wires, rubber tyres, operating media, e.g. lubricants, fuels, catalysts;
 3. loss or damage due to fire, direct lightning, chemical explosion (except flue gas explosions in boilers), extinguishing of a fire or subsequent demolition, aircraft or other aerial devices or articles dropped therefrom, theft, burglary or attempts thereof, collapse of buildings, flood, inundation, earthquake, subsidence, landslide, avalanche, hurricane, cyclone, volcanic eruption or similar natural catastrophes;
 4. loss or damage for which a supplier, contractor or repairer is responsible either by law or under contract;
 5. loss or damage caused by any faults or defects existing at the time of commencement of this Policy within the knowledge of the Insured or his representatives, whether such faults or defects were known to the Insurers or not;
 6. loss or damage arising out of the wilful act or gross negligence of the Insured or his representatives;
 7. any consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, mutiny, riot, strike, lock-out, civil commotion, military or usurped power, a group of malicious persons or persons acting on behalf of or in connection with any political organization, conspiracy, confiscation, commandeering, requisition or destruction of or damage to property by order of any government de jure or de facto or by any public authority;
 8. any consequence of nuclear reaction, nuclear radiation or radioactive contamination;
 9. loss or damage as a direct consequence of the continual influence of operation (e.g. wear and tear, cavitation, erosion, corrosion, rust, boiler scale);
 10. consequential loss or liability of any kind or description, any payments over and above the indemnity for material damage as provided herein;
- In any action, suit or other proceeding where the Insurers allege that, by reason of the provision of Exclusion 7 above, any loss or damage is not covered by this Policy, the burden of proving that such loss or damage is covered shall be upon the Insured.

Provisions

Clause 1 - Sum Insured

It shall be a requirement of this Policy that the sum insured is equal to the cost of replacement of the insured machinery by new machinery of the same kind and capacity, which means its cost of replacement including, e.g., freight, dues and customs duties, if any, and cost of erection. If the sum insured is less than the amount required to be insured, the Insurers shall pay only in such proportion as the sum insured bears to the amount required to be insured. Every item if more than one shall be subject to this condition separately.

Clause 2 - Basis of Indemnity

a) In cases where damage to an insured item can be repaired - the Insurers shall pay expenses necessarily incurred to restore the damaged machine to its former state of serviceability plus the cost of dismantling and re-erection incurred for the purpose of effecting the repairs as well as ordinary freight to and from a repair shop, customs duties and dues, if any, to the extent such expenses have been included in the sum insured. If the repairs are executed at a workshop owned by the Insured, the Insurers shall pay the cost of materials and wages incurred for the purpose of the repairs plus a reasonable percentage to cover overhead charges.

No deduction shall be made for depreciation in respect of parts replaced, but the value of any salvage shall be taken into account.

If the cost of repairs as detailed hereinabove equals or exceeds the actual value of the machinery insured immediately before the occurrence of the damage, the item shall be regarded as destroyed and settlement shall be made on the basis provided for in b) below.

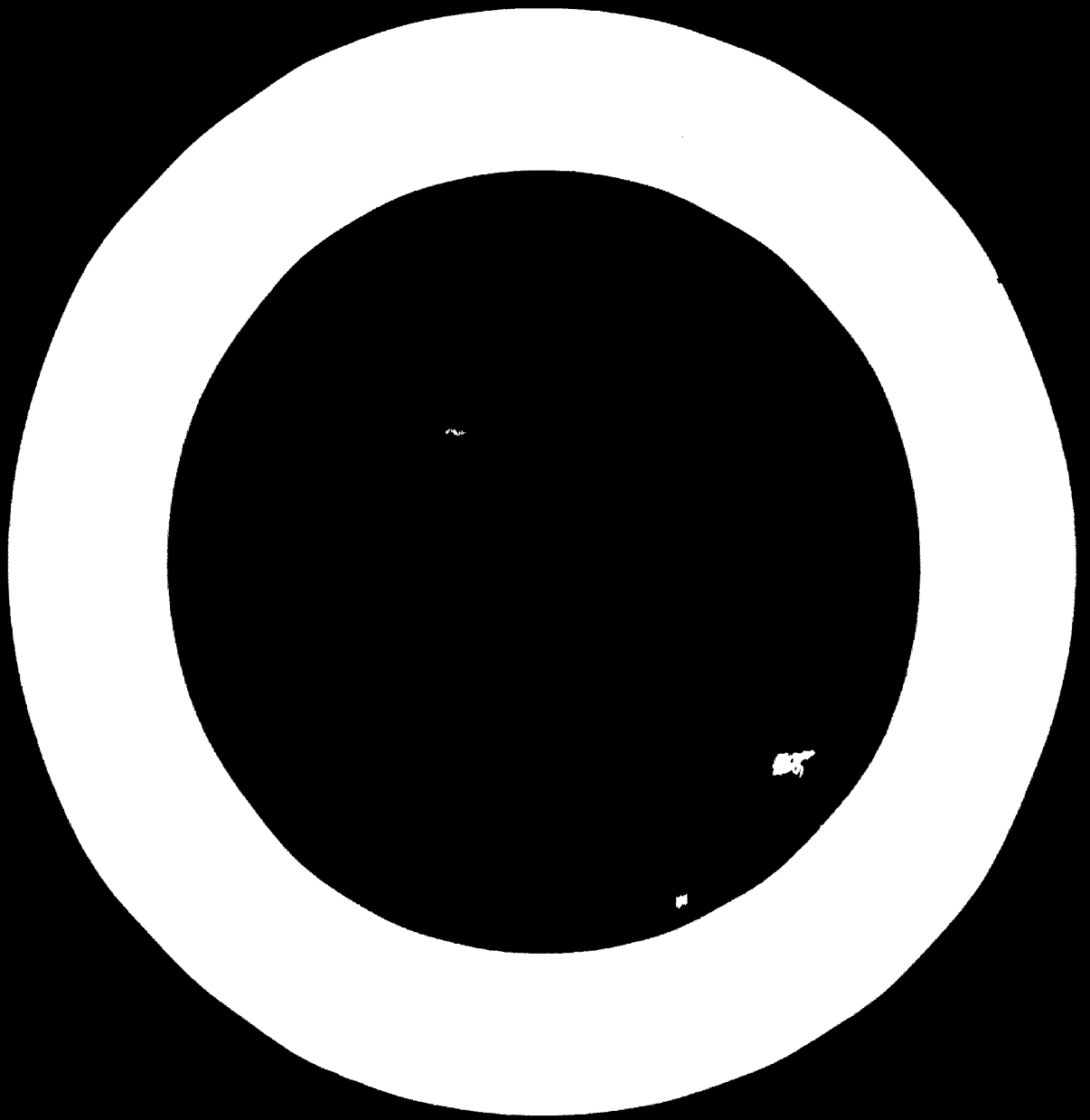
b) In cases where an insured item is destroyed - the Insurers shall pay the actual value of the item immediately before the occurrence of the loss, including charges for ordinary freight, cost of erection and customs duties, if any, provided such expenses have been included in the sum insured, such actual value to be calculated by deducting proper depreciation from the replacement value of the item. The Insurers shall also pay any normal charges for the dismantling of the machinery destroyed, but the salvage shall be taken into account.

Any extra charges incurred for overtime, night work, work on public holidays, and express freight shall be covered by this Policy only if especially agreed in writing.

The cost of any alterations, additions, improvements or overhauls shall not be recoverable under this Policy.

The cost of any provisional repairs shall be borne by the Insurers if such repairs constitute part of the final repairs and do not increase the total cost of repair.

The Insurers shall make payments only after being satisfied by production of the necessary bills and documents that the repairs have been effected or replacement has taken place, as the case may be.



**Loss of Profits
following Machinery Breakdown
Insurance Policy**

Whereas the Insured named in the schedule(s) hereto has made to the

(hereinafter called "the Insurers") a written proposal by completing a questionnaire which together with any other statements made in writing by the Insured for the purpose of this Policy is deemed to be incorporated herein

Now this Policy of Insurance witnesses that in consideration of the Insured having paid or agreed to pay the premium mentioned in the schedule(s) and subject to the terms, exclusions, provisions and conditions contained herein or endorsed hereon

The Insurers hereby agree with the Insured that if during the period of insurance or any renewal thereof the business carried on by the Insured at the premises specified in the schedule(s) is interrupted or interfered with in consequence of an accident (as hereinafter defined) of any machinery described in the list of machinery and plant insured, then the Insurers shall in respect of each subject matter insured indemnify the Insured against the amount of loss as hereinafter defined resulting from such interruption or interference

Provided that the liability of the Insurers in no case exceeds in respect of each subject matter insured in any one year of insurance the sum expressed in the schedule(s) to be insured thereon or in the whole the total sum insured hereby or such other sum or sums as may hereinafter be substituted therefor by endorsement signed by or on behalf of the Insurers

In witness whereof the Undersigned being duly authorized by the Insurers and on behalf of the Insurers has (have) hereunto set his (their) hand(s)

this _____ day of _____ 19____
Signature _____

Exclusions

This Policy shall not cover any loss resulting from interruption of or interference with the business directly or indirectly attributable to any of the following causes:

- 1. loss or damage due to fire, direct lightning, chemical explosion, extinguishing of a fire or subsequent demolition, aircraft or other aerial devices or articles dropped therefrom, theft or attempts thereof, collapse of buildings, flood, inundation, earthquake, subsidence, landslide, avalanche, hurricane, cyclone, volcanic eruption or similar natural catastrophes;**
- 2. loss or damage due to the imposition of abnormal conditions directly or indirectly resulting from testing, intentional overloading or experiments;**
- 3. loss or damage for which a supplier, contractor or repairer is responsible either by law or under contract;**
- 4. loss or damage caused by any faults or defects existing at the time of commencement of this Policy within the knowledge of the Insured or his representatives, whether such faults or defects were known to the Insurers or not;**
- 5. loss or damage arising out of the willful act or gross negligence of the Insured or his representatives;**
- 6. any consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, mutiny, riot, strike, lock-out, civil commotion, military or usurped power, a group of malicious persons or persons acting on behalf of or in connection with any political organization, conspiracy, confiscation, commandeering,**

ing, requisition or destruction of or damage to property by order of any government de jure or de facto, or by any public authority;

- 7. any consequence of nuclear reaction, nuclear radiation or radioactive contamination;**
- 8. loss of or damage to**
 - a) foundations and masonry, unless specifically included and described in the list of machinery and plant insured;**
 - b) exchangeable and replaceable parts such as bits, drills, knives, saw blades;**
 - c) dies, moulds, patterns, blocks, stamps, punches, coatings or engravings on cylinders and rolls;**
 - d) parts which by their use and/or nature suffer a high rate of wear or depreciation such as crushing surfaces, balls, hammers, screens and sieves, engraved soft metal cylinders, wear plates, elevator and conveyor belts or bands, chains, flexible pipes, jointing and packing materials, litter cloths, parts made of glass, rubber, textile or synthetics, grinding wheels, ropes, belts, straps, cables other than electrical conductors, brushes, batteries, tyres, refractory materials, grate bars, burner jets;**
 - a) operating media such as fuels, chemicals, catalysts, filter substances, heat transfer media, cleansing agents, lubricants;**
- 9. repair or replacement necessitated by direct damage due to wear and tear, corrosion, erosion, deposits of scale, sludge or other sediment, rust or scratching of painted or polished surfaces, or by any other direct consequences of progressive or continuous influences from working or atmospheric or chemical action, but the Insurers shall be liable for any loss resulting from interruption or interference caused**

by damage arising from such causes and otherwise insured by this Policy;

- 10. shortage, destruction, deterioration of or damage to raw materials, semi-finished or finished products or other materials required for proper operation, even if the consequence of material damage to an item indicated in the list of machinery and plant insured is involved;**
- 11. any restrictions on reconstruction or operation imposed by any public authority;**
- 12. the Insured not having at his disposal in good time sufficient capital for repairing or replacing destroyed or damaged machinery;**
- 13. loss of or damage to machinery, mechanical installations and their additional installations or other items which are not listed in the list of machinery and plant insured, even if the consequence of material damage to an item indicated in the list of machinery and plant insured is involved.**
- 14. loss of business due to causes such as suspension, lapse or cancellation of a lease, licence or order, etc. which occurs after the date when the machinery affected by an accident is again in operating condition and the business could have been resumed, if said lease, licence or order, etc. had not lapsed or had not been suspended or cancelled.**

In any action, suit or other proceeding where the Insurers allege that by reason of the provisions of exclusions 3.-7. above any loss is not covered by this Policy, the burden of proving that such loss is covered shall be upon the Insured.

Conditions

1. The due observance and fulfillment of the terms of this Policy in so far as they relate to anything to be done or complied with by the Insured and the truth of the statements and answers in the questionnaire and proposal made by the Insured shall be a condition precedent to any liability of the Insurers.

2. The schedule(s) shall be deemed to be incorporated in and form part of this Policy and the expression "this Policy" wherever used in this contract shall be read as including the schedule(s). Any word or expression to which a specific meaning has been attached in any part of this Policy or of the schedule(s) shall bear such meaning wherever it may appear.

3. The Insured shall at his own expense take all reasonable precautions and comply with all reasonable recommendations of the Insurers to prevent loss or damage and comply with statutory requirements and manufacturers' recommendations.

4. a) Representatives of the Insurers shall at any reasonable time have the right to inspect and examine the risk and the Insured shall provide the representatives of the Insurers with all details and information necessary for the assessment of the risk.
b) The Insured shall immediately notify the Insurers by telegram and in writing of any material change in the risk and cause at his own expense such additional precautions to be taken as circumstances may require, and the scope of cover and/or premium shall, if necessary, be adjusted accordingly.
c) Dismantling and reassembling in connection with any examinations shall be carried out by the Insured on such date or dates as the Insurers and the Insured mutually agree upon for the making of such examinations.

No material alteration shall be made or admitted by the Insured whereby the risk is increased, unless the continuance of the cover provided under this Policy is confirmed in writing by the Insurers.

5. The Insured shall be obliged to keep complete records. All records, e. g. inventories, production and balance sheets, for the three preceding years shall be held in safe keeping or, as a precaution against their being simultaneously destroyed, the Insured shall keep separate sets of such records.

6. In the event of any occurrence which gives rise or is likely to give rise to a claim under this Policy, the Insured shall

a) immediately notify the Insurers by telephone or telegram and send them written confirmation thereof within forty-eight hours of the occurrence;
b) do and concur in doing and permit to be done all such things as may be reasonably practicable to minimize or establish the extent of any interruption of or interference with the business or to avoid or diminish the loss resulting therefrom;
c) as far as may be reasonably practicable, without causing any increase in the period of interruption or interference, take precautions to preserve any things which might prove necessary or useful by way of evidence in connection with any claim;
d) discontinue the use of any damaged machinery unless the Insurers authorize otherwise, and the Insurers shall not be liable in respect of any further interruption or interference arising out of the continued use of any damaged machinery without their having given their consent to such use until said machinery has been repaired to the satisfaction of the Insurers.

7. In the event of a claim being made under this Policy not later than thirty days after the expiry of the indemnity period or within such further times as the Insurers may allow in writing, the Insured shall at his own expense deliver to the Insurers a written statement setting forth particulars of his claim together with details of all other policies covering the accident or any part of it or consequential loss of any kind resulting therefrom, and the Insured shall at his own expense also produce and furnish to the Insurers such books of account and other business books, e. g. invoices, balance sheets and other documents, proofs, information, explanation and other evidence as may reasonably be required by the Insurers for the purpose of investigating or verifying the claim, together with - if required - a statutory declaration of the truth of the claim and of any matters connected therewith.

8. In the event of an accident to any Insured machinery likely to give rise to a claim hereunder the Insurers shall have the right to take over and control all necessary repairs or replacements.

9. In the event of any occurrence in respect of which a claim is or may be made under this Policy the Insurers and every person authorized by the Insurers may, without thereby incurring any liability and without diminishing the right of the Insurers to rely upon any condition of this Policy, enter any building where the loss has happened and may take possession of or require that any of the machinery be rendered to them and may keep possession of and deal with such machinery for all reasonable purposes and in any reasonable manner. This condition shall be evidence of the leave and licence of the Insured to the Insurers so to do. If the Insured or anyone acting on his behalf does not comply with the requirements of the Insurers or hinders or obstructs the Insurers during any of the above-mentioned acts, then all benefit under this Policy shall be forfeited.

10. The Insured shall at the expense of the Insurers do and concur in doing and permit to be done all such acts and things as may be necessary or required by the Insurers in the interest of any right or remedy or of obtaining relief or indemnity from parties (other than those insured under this Policy) to which the Insurers are or would become entitled or which would be subrogated to them on paying for or making good any loss or damage under this Policy, whether such acts and things are or become necessary or required before or after the Insured's indemnification by the Insurers.

11. If any difference arises as to the amount to be paid under this Policy (liability being otherwise admitted), such difference shall be referred to the decision of an arbitrator to be appointed in writing by the parties in difference or, if they cannot agree upon a single arbitrator, to the decision of two arbitrators, one to be appointed in writing by each of the parties, within one calendar month after having been required in writing so to do by either of the parties, or, in case the arbitrators do not agree, of an umpire to be appointed in writing by the arbitrators before entering upon the reference. The umpire shall sit with the arbitrators and preside at their meetings. The making of an award shall be a condition precedent to any right of action against the Insurers.

12. a) If any claim made is fraudulent or substantially exaggerated, or if any false declaration or statement is made in support thereof, then this Policy shall be void and the Insurers shall not be liable to make any payment hereunder.
b) In the event of the Insurers disclaiming liability in respect of any claim and if an action or suit is not commenced within three months after such disclaimer or (in the case of arbitration taking place in pursuance of condition 11 of this Policy) within three months after the arbitrators or umpire have made their award, all benefit under this Policy in respect of such claim shall be forfeited.

13. If at the time any claim arises under this Policy there is any other insurance covering the same loss or damage, the Insurers shall not be liable to pay or contribute more than their rateable proportion of any claim for such loss or damage.

The Insurers shall not be liable to pay for or contribute to any loss which but for the existence of this Policy is or would be insured by any Loss of Profit policy covering Marine risks or Fire and/or Explosion risks.

14. The indemnity shall fall due two weeks after its final determination. If after the expiry of one month since the beginning of an interruption of or interference with the business and after the expiry of each further month it is possible to determine the minimum amount which the Insurers are liable to pay for the elapsed period of interruption, the Insured shall be entitled to demand that such amount be paid to him as an instalment of the total indemnity.

The Insurers shall be entitled to postpone payment
a) if there is any doubt as to the Insured's right to receive payment, until the necessary proof is furnished;
b) if, as a result of any physical loss or damage or any interruption of or interference with the business, police or penal investigations have been initiated against the Insured, until the completion of such investigations.

The Insurers shall not be liable to pay interest other than interest for default.

15. Should at any time after the commencement of this Policy
a) the business be wound up or carried on by a liquidator or receiver or be permanently discontinued,

b) the Insured's interest cease otherwise than by death,
c) any alteration be made whereby the risk of accident is increased,
d) the retention of standby or spare machinery or any other loss-minimizing factors in existence when the insurance was effected be reduced or discontinued, or such standby or spare machinery be not maintained in an efficient working condition and available for immediate use, then this Policy shall be avoided unless its continuance is admitted by a special written statement signed by or on behalf of the Insurers.

16. This Policy may be terminated at the request of the insured at any time, in which case the Insurers shall retain the customary short-period rate for the time this Policy has been in force. This Policy may equally be terminated at the option of the Insurers by seven days' notice to that effect being given to the insured, in which case the Insurers shall be liable to repay on demand a rateable proportion of the premium for the unexpired term from the date of cancellation less any reasonable inspection charges the Insurers may have incurred.

Basis of Insurance

The cover provided under this Policy shall be limited to loss of gross profit due to reduction in turnover and increase in cost of working and the amount payable as indemnity hereunder shall be:

- In respect of reduction in turnover: the sum produced by applying the rate of gross profit to the amount by which the turnover during the indemnity period, in consequence of the accident, falls short of the standard turnover;

- in respect of increase in cost of working: the additional expenditure necessarily and reasonably incurred for the sole purpose of avoiding or diminishing the reduction in turnover which but for that expenditure would have taken place during the indemnity period in consequence of the accident, but not exceeding the sum produced by applying the rate of gross profit to the amount of the reduction thereby avoided;

less any sum saved during the indemnity period in respect of such of the charges and expenses of the business payable as the gross profit as may cease or be reduced in consequence of the accident;

provided that if the sum insured hereunder is less than the sum produced by applying the rate of gross profit to the standard turnover, the amount payable is proportionately reduced.

Definitions

Gross Profit	The amount by which the sum of the value of the turnover and the value of the closing stock exceed the sum of the value of the opening stock and the amount of the specified working expenses. The values of the opening and closing stocks shall be arrived at in accordance with the insured's normal accountancy methods, due provision being made for depreciation.
Specified Working Expenses	The variable expenses of the business which are not insured by this Policy: <ol style="list-style-type: none"> 1. turnover and purchase taxes 2. purchases (less discounts received) 3. carriage, packing and freight 4. 5.
Turnover	The money (less discounts allowed) paid or payable to the Insured for goods sold and delivered and for services rendered in the course of the business at the premises.
Indemnity Period and Time Excess	The period not exceeding the indemnity period limit stated in the list of machinery and plant insured commencing with the occurrence of the accident during which the results of the business are affected in consequence of such accident, provided always that the Insurers are not liable for the amount of loss arising during the time excess, such time excess to commence as from the beginning of the interruption of or interference with the business resulting in a claim under this Policy.

Rate of Gross Profit	The rate of gross profit earned on the turnover during the financial year immediately before the date of the accident	to which such adjustments are made as may be necessary to provide for the trend of the business and for variations in or special circumstances affecting the business either before or after the accident or which would have affected the business had the accident not occurred, so that the figures thus adjusted represent as nearly as may be reasonably practicable the results which but for the accident would have been obtained during the relative period after the accident.
Standard Turnover	The turnover during that period in the twelve months immediately before the date of the accident which corresponds to the indemnity period	
Annual Turnover	The turnover which the Insured would have been able to obtain but for the accident during the twelve months immediately before either the date when the business is no longer affected or when the indemnity period ends, whichever occurs first.	
Accident	Unforeseen and sudden physical loss or damage occurring to the insured machinery and necessitating its immediate repair or replacement due to causes such as defects in casting and material, faulty design, faults at workshop or in erection, bad workmanship, lack of skill, carelessness, malice, shortage of water in boilers, physical explosion, tearing apart on account of centrifugal force, short circuit, storm, or any other cause not specifically excluded hereinafter whilst such machinery is - working or at rest, - being dismantled, moved or re-erected for the purpose of cleaning, inspection, repair or installation at another location within the premises, provided such machinery has successfully completed its performance acceptance tests.	

Provisions

Memo 1 - Benefits from Other Premises	If during the indemnity period goods are sold or services are rendered elsewhere than at the premises for the benefit of the business either by the insured or by others acting on his behalf, the money paid or payable in respect of such sales or services shall be taken into account in arriving at the turnover during the indemnity period.
Memo 2 - Return of Premium	If the insured declares at the latest six months after the expiry of any policy year that the gross profit earned during the accounting period of twelve months most nearly concurrent with any period of insurance, as certified by the insured's auditors, was less than the sum insured thereon, a pro rata return of premium not exceeding one third of the premium paid on such sum insured for such period of insurance shall be made in respect of the difference. If any accident has occurred giving rise to a claim under this Policy, such return shall be made in respect only of so much of said difference as is not due to such accident.
Memo 3 - Relative Importance	The term "relative importance" referred to in the list of machinery and plant insured shall be the percentage effect which a breakdown of a particular machine will have on the total gross profit, disregarding any loss-minimizing measures. If in the event of an accident affecting an insured item of machinery the percentage of relative importance stated in the list of machinery and plant insured for this item is lower than the actual percentage of relative importance subsequently arrived at for the period of interruption, the insurers shall only be liable to indemnify the proportion which the percentage of relative importance stated in the list of machinery and plant insured bears to the actual percentage.
Memo 4 - Overhauls	In calculating the loss, due allowance shall be made for the time spent on any overhauls, inspections or modifications carried out during any period of interruption.
Memo 5 - Benefits after Recommissioning	If during a period of six months immediately following the recommissioning of insured machinery after an accident, the insured derives benefits from deferred sales or from increased production and/or profits as a consequence of an interruption, such benefits shall be taken into account in determining the indemnity payable under this Policy.
Memo 6 - Reinstatement of Sum Insured	For the period following the occurrence of an accident up to the end of the policy period the sum insured shall be reinstated by payment of an additional premium on a pro rata basis, such premium to be calculated from that part of the sum insured which corresponds to the indemnity paid; the agreed sum insured shall remain unaltered.
Memo 7 - Material Damage Cover for Machinery Insured	The machinery described in the list of machinery and plant insured shall be covered against machinery breakdown during the currency of this Policy.

Schedule

Policy No.: Name and address of Insured:

Incorporated in this Policy is (are) Questionnaire(s) and Proposal(s) No(s):

The following endorsements are attached to and form part of this Policy:

The business:

Period of insurance:
from (noon) to (noon)
and any subsequent period for which the Insured pays and the Insurers agree to accept a renewal premium

The premises:

Renewal date:

Subject matter insured: **Gross profit**

Annual sum insured:

First premium:

Time excess:

Annual premium:

List of Machinery and Plant Insured

Item No.	Qty.	Description of machine or plant	Year of manufacture	Indemnity period (months)	Relative importance	Spare parts available, replacement period for machine or plant

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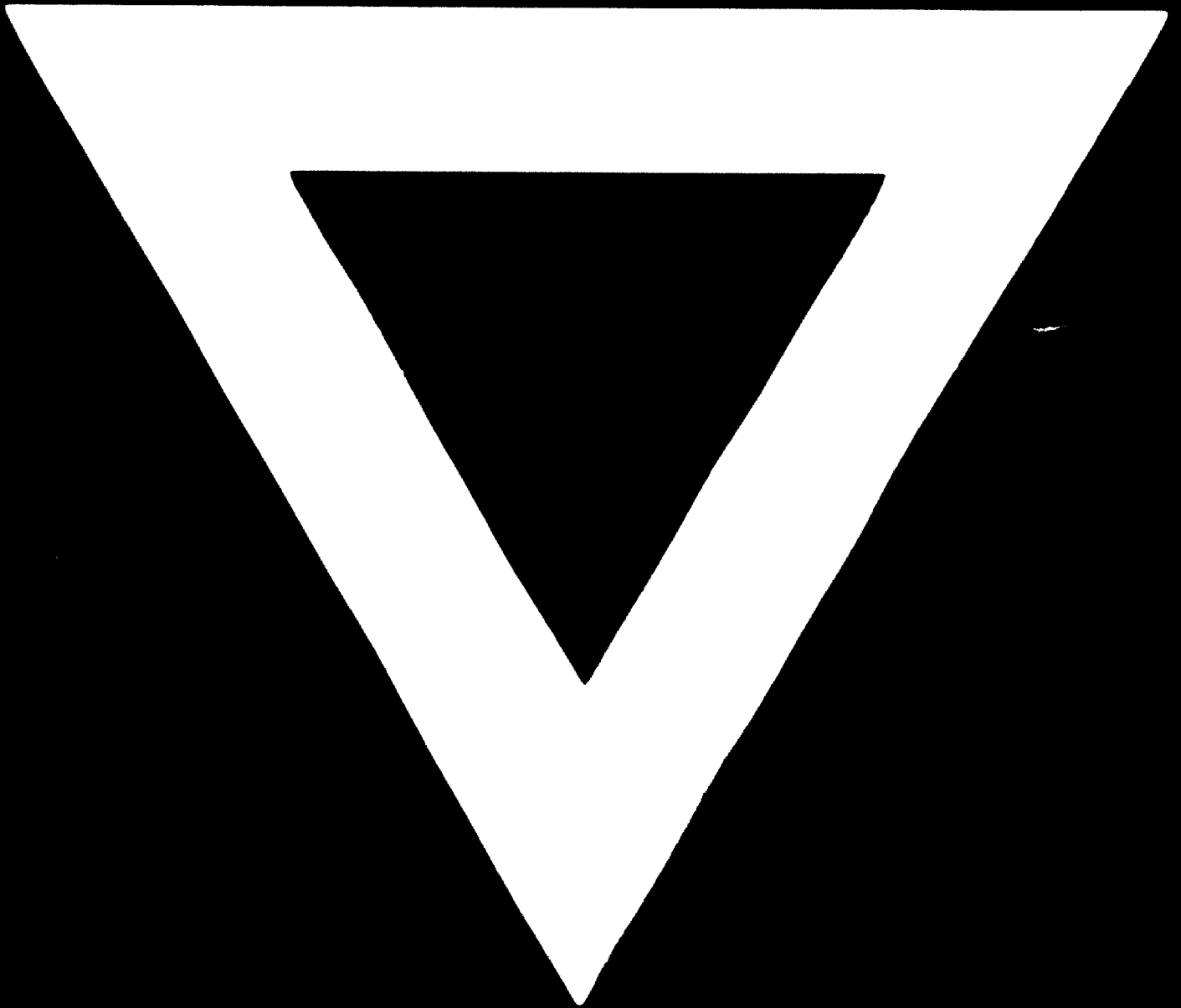
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LIST OF WORKING DOCUMENTS AND BACKGROUND PAPERS

- ID/WG/242/8/Rev.1 Report of the First Consultation Meeting on the Fertilizer Industry.
- ID/WG/259/5 Insurance cover available from commercial sources relating to the construction and initial operation of Fertilizer Plants proposed by Hogg Robinson and Gardner Mountain Reinsurance Limited.
- CRP/1 A Commercial Insurance Policy that might be used to provide cover for consequential losses incurred by Fertilizer Plants arising from certain defined events prepared by Hogg Robinson and Gardner Mountain Reinsurance Limited.
- ID/WG/269/2/Rev.1 Report of the First Working Group on Contracts and Insurance for Fertilizer Plants, Vienna 14-17 February 1978.
- Annex A to this report Evaluation of the answers to the UNIDO questionnaire on consequential losses arising from poor performance of Fertilizer Plants built in developed countries.
- ID/WG.281/12 Article 19. Guarantee and Performance Guarantee Tests of Preliminary Draft of the UNIDO Model Form of Cost Reimbursable Contract for the Construction of a Fertilizer Plant.
- UNCTAD
TD/B/C.3/137 Invisibles: Insurance
Insurance of large risks in developing countries.
- UNCTAD
TD/B/C.3/143 Report of the Committee on Invisibles and Financing Related to Trade on the first part of its eighth session, Geneva 5-19 December 1977

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