

INTERNATIONAL LABOUR OFFICE

REPORT FORM
FOR THE
ASBESTOS CONVENTION, 1986 (No. 162)

The present report form is for the use of countries which have ratified the Convention. It has been approved by the Governing Body of the International Labour Office, in accordance with article 22 of the ILO Constitution, which reads as follows: "Each of the Members agrees to make an annual report to the International Labour Office on the measures which it has taken to give effect to the provisions of Conventions to which it is a party. These reports shall be made in such form and shall contain such particulars as the Governing Body may request."

The Government may deem it useful to consult the appended text of the Asbestos Recommendation, 1986 (No. 172), the provisions of which supplement the present Convention and can contribute to a better understanding of its requirements and facilitate its application.

PRACTICAL GUIDANCE FOR DRAWING UP REPORTS

First reports

If this is your Government's first report following the entry into force of the Convention in your country, full information should be given on each of the provisions of the Convention and on each of the questions set out in the report form.

Subsequent reports

In subsequent reports, information need normally be given only on the following points:

- (a) any new legislative or other measures affecting the application of the Convention;

- (b) replies to the questions in the report form on the practical application of the Convention (for example, statistics, results of inspections, judicial or administrative decisions) and on the communication of copies of the report to the representative organisations of employers and workers and on any observations received from these organisations;

- (c) **replies to comments by supervisory bodies:** the report must contain replies to any comments regarding the application of the Convention in your country which may have been addressed to your Government by the Committee of Experts or by the Conference Committee on the Application of Conventions and Recommendations.
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Article 22 of the Constitution of the ILO

Report for the period to
made by the Government of

on the

ASBESTOS CONVENTION, 1986 (No. 162)

(ratification registered on))

- I. Please give a list of laws, regulations, collective agreements and other documents which give effect to the provisions of the Convention. Where this has not already been done, please forward copies of these texts to the International Labour Office with this report.

Please give any available information concerning the extent to which the above-mentioned texts have been enacted or modified to permit, or as a result of, ratification.

- II. Please indicate in detail the above-mentioned measures which give effect to each of the following Articles of the Convention. Please also give the information specifically requested below under each Article.

If in your country ratification of the Convention gives the force of national law to its terms, please indicate by virtue of what constitutional provisions the ratification has had this effect. Please also specify what steps have been taken to implement the provisions of the Convention requiring action by the competent authority or authorities.

If the Committee of Experts or the Conference Committee on the Application of Conventions and Recommendations has requested additional information or has made an observation on the measures adopted to apply the Convention, please supply the information asked for or indicate the action taken by your Government to settle the points in question.

Article 1

1. This Convention applies to all activities involving exposure of workers to asbestos in the course of work.

2. A Member ratifying this Convention may, after consultation with the most representative organisations of employers and workers concerned, and on the basis of an assessment of the health hazards involved and the safety measures applied, exclude particular branches of economic activity or particular undertakings from the application of certain provisions of the Convention when it is satisfied that their application to these branches or undertakings is unnecessary.

3. The competent authority, when deciding on the exclusion of particular branches of economic activity or particular undertakings, shall take into account the frequency, duration and level of exposure, as well as the type of work and the conditions at the workplace.

Please indicate the provisions which ensure that the Convention applies to all activities referred to in paragraph 1.

If recourse has been had to paragraphs 2 and 3, please indicate the branches of economic activity or undertakings excluded from the application of the Convention, and the reasons for the exclusion.

See also under Article 4.

Article 2

For the purpose of this Convention:

- (a) the term "asbestos" means the fibrous form of mineral silicates belonging to rock-forming minerals of the serpentine group, i.e. chrysotile (white asbestos), and of the amphibole group, i.e. actinolite, amosite (brown asbestos, cummingtonite-grunerite), anthophyllite, crocidolite (blue asbestos), tremolite, or any mixture containing one or more of these;
- (b) the term "asbestos dust" means airborne particles of asbestos or settled particles of asbestos which are liable to become airborne in the working environment;

- (c) the term “airborne asbestos dust” means, for purposes of measurement, dust particles measured by gravimetric assessment or other equivalent method;
- (d) the term “respirable asbestos fibres” means asbestos fibres having a diameter of less than 3 µm and a length-to-diameter ratio greater than 3 : 1. Only fibres of a length greater than 5 µm shall be taken into account for purposes of measurement;
- (e) the term “exposure to asbestos” means exposure at work to airborne respirable asbestos fibres or asbestos dust, whether originating from asbestos or from minerals, materials or products containing asbestos;
- (f) the term “workers” includes the members of production co-operatives;
- (g) the term “workers’ representatives” means the workers’ representatives recognised as such by national law or practice, in conformity with the Workers’ Representatives Convention, 1971.

Please indicate the meaning given in national law and practice to the terms defined in subparagraphs (a) to (g) of this Article.

Article 3

1. National laws or regulations shall prescribe the measures to be taken for the prevention and control of, and protection of workers against, health hazards due to occupational exposure to asbestos.

2. National laws and regulations drawn up in pursuance of paragraph 1 of this Article shall be periodically reviewed in the light of technical progress and advances in scientific knowledge.

3. The competent authority may permit temporary derogations from the measures prescribed pursuant to paragraph 1 of this Article, under conditions and within limits of time to be determined after consultation with the most representative organisations of employers and workers concerned.

4. In granting derogations in pursuance of paragraph 3 of this Article, the competent authority shall ensure that the necessary precautions are taken to protect the workers’ health.

Please describe the national laws and regulations which give effect to paragraph 1 and indicate the manner in which they are periodically reviewed.

If recourse has been had to paragraphs 3 and 4, please indicate:

- (a) the authority competent to permit temporary derogations;
- (b) the number and nature of the derogations granted; the conditions and limits of time for such derogations and the precautions taken to protect workers’ health.

See also under Article 4.

Article 4

The competent authority shall consult the most representative organisations of employers and workers concerned on the measures to be taken to give effect to the provisions of this Convention.

Please describe the consultation which has taken place with the most representative organisations of employers and workers concerned, as required by the Convention.

Article 5

1. The enforcement of the laws and regulations adopted pursuant to Article 3 of this Convention shall be secured by an adequate and appropriate system of inspection.

2. National laws and regulations shall provide for the necessary measures, including appropriate penalties, to ensure effective enforcement of and compliance with the provisions of the Convention.

Please provide information on the organisation and functioning of the inspection services responsible and on measures to ensure effective enforcement, including appropriate penalties.

Article 6

1. Employers shall be made responsible for compliance with the prescribed measures.

2. Whenever two or more employers undertake activities simultaneously at one workplace, they shall co-operate in order to comply with the prescribed measures, without prejudice to the responsibility of each employer for the health and safety of the workers he employs. The competent authority shall prescribe the general procedures of this co-operation when it is necessary.

3. Employers shall, in co-operation with the occupational safety and health services, and after consultation with the workers' representatives concerned, prepare procedures for dealing with emergency situations.

Please describe the procedures prescribed in pursuance of paragraph 2 of this Article.

Article 7

1. Workers shall be required, within the limits of their responsibility, to comply with prescribed safety and hygiene procedures relating to the prevention and control of, and protection against, health hazards due to occupational exposure to asbestos.

Article 8

Employers and workers or their representatives shall co-operate as closely as possible at all levels in the undertaking in the application of the measures prescribed pursuant to this Convention.

Article 9

The national laws or regulations adopted pursuant to Article 3 of this Convention shall provide that exposure to asbestos shall be prevented or controlled by one or more of the following measures:

- (a) making work in which exposure to asbestos may occur subject to regulations prescribing adequate engineering controls and work practices, including workplace hygiene;
- (b) prescribing special rules and procedures, including authorisation, for the use of asbestos or of certain types of asbestos or products containing asbestos or for certain work processes.

Article 10

Where necessary to protect the health of workers and technically practicable, national laws or regulations shall provide for one or more of the following measures:

- (a) replacement of asbestos or of certain types of asbestos or products containing asbestos by other materials or products or the use of alternative technology, scientifically evaluated as harmless or less harmful, whenever this is possible;
- (b) total or partial prohibition of the use of asbestos or of certain types of asbestos or products containing asbestos in certain work processes.

Article 11

1. The use of crocidolite and products containing this fibre shall be prohibited.

2. The competent authority shall be empowered, after consultation with the most representative organisations of employers and workers concerned, to permit derogations from the prohibition contained in paragraph 1 of this Article when replacement is not reasonably practicable, provided that steps are taken to ensure that the health of workers is not placed at risk.

Please indicate whether any derogations have been permitted under paragraph 2 and if so, the steps taken to protect the health of workers.

See also under Article 4.

Article 12

1. Spraying of all forms of asbestos shall be prohibited.

2. The competent authority shall be empowered, after consultation with the most representative organisations of employers and workers concerned, to permit derogations from the prohibition contained in paragraph 1 of this Article when alternative methods are not reasonably practicable, provided that steps are taken to ensure that the health of workers is not placed at risk.

Please indicate whether any derogations have been permitted under paragraph 2 and if so, the steps taken to protect the health of workers.

See also under Article 4.

Article 13

National laws and regulations shall provide that employers shall notify to the competent authority, in a manner and to the extent prescribed by it, certain types of work involving exposure to asbestos.

Please specify the types of work which shall be notified to the competent authority.

Article 14

Producers and suppliers of asbestos and manufacturers and suppliers of products containing asbestos shall be made responsible for adequate labelling of the container and, where appropriate, the product, in a language and manner easily understood by the workers and the users concerned, as prescribed by the competent authority.

Article 15

1. The competent authority shall prescribe limits for the exposure of workers to asbestos or other exposure criteria for the evaluation of the working environment.

2. The exposure limits or other exposure criteria shall be fixed and periodically reviewed and updated in the light of technological progress and advances in technological and scientific knowledge.

3. In all workplaces where workers are exposed to asbestos, the employer shall take all appropriate measures to prevent or control the release of asbestos dust into the air, to ensure that the exposure limits or other exposure criteria are complied with and also to reduce exposure to as low a level as is reasonably practicable.

4. When the measures taken in pursuance of paragraph 3 of this Article do not bring exposure to asbestos within the exposure limits or do not comply with the other exposure criteria specified in pursuance of paragraph 1 of this Article, the employer shall provide and maintain and replace, as necessary, at no cost to the workers, adequate respiratory protective equipment and special protective clothing as appropriate. Respiratory equipment shall comply with standards set by the competent authority, and be used only as a supplementary, temporary, emergency or exceptional measure and not as an alternative to technical control.

Please indicate: the exposure limits or other exposure criteria prescribed; the measures to ensure compliance therewith; and any measures taken under paragraph 4.

Article 16

Each employer shall be made responsible for the establishment and implementation of practical measures for the prevention and control of the exposure of the workers he employs to asbestos and for their protection against the hazards due to asbestos.

Article 17

1. Demolition of plants or structures containing friable asbestos insulation materials, and removal of asbestos from buildings or structures in which asbestos is liable to become airborne, shall be undertaken only by employers or contractors who are recognised by the competent authority as qualified to carry out such work in accordance with the provisions of this Convention and who have been empowered to undertake such work.

2. The employer or contractor shall be required before starting demolition work to draw up a work plan specifying the measures to be taken, including measures to:

- (a) provide all necessary protection to the workers;
- (b) limit the release of asbestos dust into the air; and
- (c) provide for the disposal of waste containing asbestos in accordance with Article 19 of this Convention.

3. The workers or their representatives shall be consulted on the work plan referred to in paragraph 2 of this Article.

Article 18

1. Where workers' personal clothing may become contaminated with asbestos dust, the employer, in accordance with national laws or regulations and in consultation with the workers' representatives, shall provide appropriate work clothing, which shall not be worn outside the workplace.

2. The handling and cleaning of used work clothing and special protective clothing shall be carried out under controlled conditions, as required by the competent authority, to prevent the release of asbestos dust.

3. National laws or regulations shall prohibit the taking home of work clothing and special protective clothing and of personal protective equipment.

4. The employer shall be responsible for the cleaning, maintenance and storage of work clothing, special protective clothing and personal protective equipment.

5. The employer shall provide facilities for workers exposed to asbestos to wash, take a bath or shower at the workplace, as appropriate.

Article 19

1. In accordance with national law and practice, employers shall dispose of waste containing asbestos in a manner that does not pose a health risk to the workers concerned, including those handling asbestos waste, or to the population in the vicinity of the enterprise.

2. Appropriate measures shall be taken by the competent authority and by employers to prevent pollution of the general environment by asbestos dust released from the workplace.

Article 20

1. Where it is necessary for the protection of the health of workers, the employer shall measure the concentrations of airborne asbestos dust in workplaces, and shall monitor the exposure of workers to asbestos at intervals and using methods specified by the competent authority.

2. The records of the monitoring of the working environment and of the exposure of workers to asbestos shall be kept for a period prescribed by the competent authority.

3. The workers concerned, their representatives and the inspection services shall have access to these records.

4. The workers or their representatives shall have the right to request the monitoring of the working environment and to appeal to the competent authority concerning the results of the monitoring.

Please indicate the circumstances in which the employer is required to measure the concentration of asbestos dust in workplaces, and to monitor the exposure of workers to asbestos and give particulars of intervals and methods specified by the competent authority.

Please indicate the period prescribed for keeping the monitoring records.

Article 21

1. Workers who are or have been exposed to asbestos shall be provided, in accordance with national law and practice, with such medical examinations as are necessary to supervise their health in relation to the occupational hazard, and to diagnose occupational diseases caused by exposure to asbestos.

2. The monitoring of workers' health in connection with the use of asbestos shall not result in any loss of earnings for them. It shall be free of charge and, as far as possible, shall take place during working hours.

3. Workers shall be informed in an adequate and appropriate manner of the results of their medical examinations and receive individual advice concerning their health in relation to their work.

4. When continued assignment to work involving exposure to asbestos is found to be medically inadvisable, every effort shall be made, consistent with national conditions and practice, to provide the workers concerned with other means of maintaining their income.

5. The competent authority shall develop a system of notification of occupational diseases caused by asbestos.

Please indicate the nature of prescribed medical examinations.

Please give details of the system of notification of occupational diseases caused by asbestos.

Article 22

1. The competent authority shall make appropriate arrangements, in consultation and collaboration with the most representative organisations of employers and workers concerned, to promote the dissemination of information and the education of all concerned with regard to health hazards due to exposure to asbestos and to methods of prevention and control.

2. The competent authority shall ensure that employers have established written policies and procedures on measures for the education and periodic training of workers on asbestos hazards and methods of prevention and control.

3. The employer shall ensure that all workers exposed or likely to be exposed to asbestos are informed about the health hazards related to their work, instructed in preventive measures and correct work practices and receive continuing training in these fields.

Please describe the arrangements made in pursuance of paragraph 1 and the measures taken to give effect to paragraphs 2 and 3.

- III. Please state whether courts of law or other tribunals have given decisions involving questions of principle relating to the application of the Convention. If so, please supply the text of these decisions.
- IV. If your country has received assistance or advice within the context of a technical co-operation project being carried out by the ILO, please indicate what action was taken as a result. Please indicate also any factors which may have prevented or delayed such action.
- V. Please give also a general appreciation of the manner in which the Convention is applied in your country, and attach—in so far as the information in question has not already been supplied in connection with other questions in this form—extracts from inspection reports and, where such statistics exist, information on the number of workers covered by the legislation, the number and nature of the contraventions reported, the number of occupational diseases reported as being caused by asbestos, etc.
- VI. Please indicate the representative organisations of employers and workers to which copies of the present report have been communicated in accordance with article 23, paragraph 2, of the Constitution of the International Labour Organisation.¹ If copies of the report have not been communicated to representative organisations of employers and/or workers, or if they have been communicated to bodies other than such organisations, please supply information on any particular circumstances existing in your country which explain the procedure followed.

Please indicate whether you have received from the organisations of employers or workers concerned any observations, either of a general kind or in connection with the present or the previous report, regarding the practical application of the provisions of the Convention or the application of the legislation or other measures implementing the Convention. If so, please communicate a copy of the observations received, together with any comments that you consider useful.

¹ Article 23, paragraph 2, of the Constitution reads as follows: "Each Member shall communicate to the representative organisations recognised for the purpose of article 3 copies of the information and reports communicated to the Director-General in pursuance of articles 19 and 22."

APPENDIX

THE ASBESTOS RECOMMENDATION, 1986 (No. 172)

I. SCOPE AND DEFINITIONS

1. (1) The provisions of the Asbestos Convention, 1986, and of this Recommendation should be applied to all activities involving a risk of exposure of workers to asbestos in the course of work.

(2) Measures should be taken, in accordance with national law and practice, to afford to self-employed persons protection analogous to that provided for in the Asbestos Convention, 1986, and in this Recommendation.

(3) Employment of young persons of less than 18 years of age in activities involving a risk of occupational exposure to asbestos should receive special attention, as required by the competent authority.

2. Activities involving a risk of occupational exposure to asbestos should include in particular —

- (a) mining and milling of minerals containing asbestos;
- (b) manufacture of materials or products containing asbestos;
- (c) use or application of products containing asbestos;
- (d) stripping, repair or maintenance of products containing asbestos;
- (e) demolition or repair of plant or structure containing asbestos;
- (f) transportation, storage and handling of asbestos or materials containing asbestos;
- (g) other activities involving a risk of exposure to airborne asbestos dust.

3. For the purpose of this Recommendation —

- (a) the term “asbestos” means the fibrous form of mineral silicate belonging to rock-forming minerals of the serpentine group, i.e. chrysotile (white asbestos), and of the amphibole group, i.e. actinolite amosite (brown asbestos, cummingtonite-grunerite), anthophyllite, crocidolite (blue asbestos), tremolite, or any mixture containing one or more of these;
- (b) the term “asbestos dust” means airborne particles of asbestos or settled particles of asbestos which are liable to become airborne in the working environment;
- (c) the term “airborne asbestos dust” means, for purposes of measurement, dust particles measured by gravimetric assessment or other equivalent method;
- (d) the term “respirable asbestos fibres” means asbestos fibres having a diameter of less than 3 μm , and a length-to-diameter ratio greater than 3 : 1. Only fibres of a length greater than 5 μm should be taken into account for the purpose of measurement;
- (e) the term “exposure to asbestos” means exposure at work to airborne respirable asbestos fibres or asbestos dust, whether originating from asbestos or from minerals, materials or products containing asbestos;
- (f) the term “workers” includes the members of production co-operatives;
- (g) the term “workers’ representatives” means the workers’ representatives recognised as such by national law or practice, in conformity with the Workers’ Representatives Convention, 1971.

II. GENERAL PRINCIPLES

4. The measures prescribed pursuant to Article 3 of the Asbestos Convention, 1986, should be so framed as to cover the diversity of risks of occupational exposure to asbestos in all branches of economic activity, and should be drawn up with due regard to Articles 1 and 2 of the Occupational Cancer Convention, 1974.

5. The competent authority should periodically review the measures prescribed, taking into account the *Code of practice on safety in the use of asbestos* published by the International Labour Office and other codes of practice or guides which may be established by the International Labour Office and the conclusions of meetings of experts which may be convened by it, as well as information from other competent bodies on asbestos and substitute materials.

6. The competent authority, in the application of provisions of this Recommendation, should act after consultation with the most representative organisations of employers and workers.

7. (1) The employer should use all appropriate measures, in consultation and co-operation with the workers concerned or their representatives and in the light of advice from competent sources, including occupational health services, to prevent or control exposure to asbestos.

(2) In accordance with national law and practice, consultation and co-operation between an employer and the workers he employs might be carried out through —

- (a) workers’ safety delegates;
- (b) workers’ safety and health committees or joint safety and health committees;
- (c) other workers’ representatives.

8. Workers engaged in work with asbestos or products containing asbestos should be required within the limits of their responsibility to comply with the prescribed safety and hygiene procedures, including the use of adequate protective equipment.

9. (1) A worker who has removed himself from a work situation which he has reasonable justification to believe presents serious danger to his life or health should —

- (a) alert his immediate supervisor;
- (b) be protected from retaliatory or disciplinary measures, in accordance with national conditions and practice.

(2) No measure prejudicial to a worker should be taken by reference to the fact that, in good faith, he complained of what he considered to be a breach of statutory requirements or a serious inadequacy in the measures taken by the employer in respect of occupational health and the working environment.

III. PROTECTIVE AND PREVENTIVE MEASURES

10. (1) The competent authority should ensure that exposure to asbestos is prevented or controlled by prescribing engineering controls and work practices, including workplace hygiene, which afford maximum protection to workers.

(2) The competent authority should periodically determine, on the basis of the level of exposure and the

circumstances and conditions prevailing in the working environment, and in the light of scientific research and technological progress —

- (a) the types of asbestos and products containing asbestos whose use should be subject to authorisation and the work processes which should be subject to authorisation;
- (b) the types of asbestos and products containing asbestos whose use should be totally or partially prohibited and the work processes in which the use of asbestos or certain types of asbestos or products containing asbestos should be prohibited.

(3) The prohibition or authorisation of the use of certain types of asbestos or products containing asbestos and their replacement by other substances should be based on scientific assessment of their danger to health.

11. (1) The competent authority should encourage research into technical and health problems relating to exposure to asbestos, substitute materials and alternative technologies.

(2) The competent authority should encourage research into and development of products containing asbestos, other substitute materials or alternative technologies which are harmless or less harmful, with a view to eliminating or decreasing the risk for the workers.

12. (1) The competent authority, wherever necessary for the protection of the workers, should require the replacement of asbestos by substitute materials, wherever possible.

(2) Before being accepted for use in any process, all potential substitute materials should be thoroughly evaluated for their possible harmful effects on health. The health of workers exposed to such materials should be continuously supervised, if judged necessary.

13. (1) With a view to the effective enforcement of the national laws and regulations, the competent authority should prescribe the information to be supplied in the notifications of work with asbestos provided for in Article 13 of the Asbestos Convention, 1986.

(2) This information should include in particular the following:

- (a) the type and quantity of asbestos used;
- (b) the activities and processes carried out;
- (c) the products manufactured;
- (d) the number of workers exposed and the level and frequency of their exposure;
- (e) the preventive and protective measures taken to comply with the national laws and regulations;
- (f) any other information necessary to safeguard the workers' health.

14. (1) Demolition of those parts of plants or structures which contain friable asbestos insulation materials, and removal of asbestos from buildings or structures in which asbestos is liable to become airborne, should be subject to authorisation, which should be granted only to employers or contractors who are recognised by the competent authority as qualified to carry out such work in accordance with the provisions of this Recommendation.

(2) The employer or contractor should be required before starting demolition or removal work to draw up a work plan specifying the measures to be taken before the commencement of work, including measures to—

- (a) provide all necessary protection to the workers;
- (b) limit the release of asbestos dust into the air;

(c) inform workers who may be affected of the possible release of asbestos dust into the air, of the general procedures and equipment to be used, and of the precautions to be taken; and

(d) provide for the disposal of waste containing asbestos in accordance with Paragraph 28 of this Recommendation.

(3) The workers or their representatives should be consulted concerning the work plan referred to in subparagraph (2) above.

15. (1) Each employer should establish and implement, with the participation of the workers he employs, a programme for the prevention and control of the workers' exposure to asbestos. This programme should be reviewed at regular intervals and in the light of changes in the work processes and machinery used or in the techniques and methods of prevention and control.

(2) The competent authority should, in accordance with national practice, undertake activities to assist in particular small undertakings, where technical knowledge or means may be lacking, with the establishment of preventive programmes in cases in which exposure to asbestos may occur.

16. Technical protective appliances and appropriate work practices should be adopted to prevent the release of asbestos dust into the air of workplaces. Even where exposure limits or other criteria are complied with, such measures should be taken so as to reduce the exposure to as low a level as is reasonably practicable.

17. The measures to be taken to prevent or control the exposure, and to avoid exposure, of workers to asbestos should include in particular the following —

- (a) asbestos should be used only when its risks can be prevented or controlled; otherwise, it should be replaced, when technically feasible, by other materials or the use of alternative technologies, scientifically evaluated as harmless or less harmful;
- (b) the number of persons assigned to work involving exposure to asbestos and the duration of their exposure should be kept to the minimum required for the safe performance of the task;
- (c) machinery, equipment and work processes should be used which eliminate or minimise the formation of asbestos dust, and particularly its release into the working and general environment;
- (d) workplaces where the use of asbestos may result in the release of asbestos dust into the air should be separated from the general working environment in order to avoid possible exposure of other workers to asbestos;
- (e) the areas of activity which involve exposure to asbestos should be clearly demarcated and indicated by warning signs restricting unauthorised access;
- (f) the location of asbestos used in the construction of premises should be recorded.

18. (1) The use of crocidolite and products containing this fibre should be prohibited.

(2) The competent authority should be empowered, after consultation with the most representative organisations of employers and workers concerned, to permit derogations from the prohibition contained in subparagraph (1) above when replacement is not reasonably practicable, provided that steps are taken to ensure that the health of workers is not placed at risk.

19. (1) Spraying of all forms of asbestos should be prohibited.

(2) The installation of friable asbestos insulation materials should be prohibited.

(3) The competent authority should be empowered, after consultation with the most representative organisations of employers and workers concerned, to permit derogations from the prohibition contained in subparagraphs (1) and (2) above when alternative methods are not reasonably practicable, provided that steps are taken to ensure that the health of workers is not placed at risk.

20. (1) Producers and suppliers of asbestos and manufacturers and suppliers of products containing asbestos should be made responsible for the appropriate and adequate labelling of the container or product.

(2) National laws or regulations should require that the label be printed in the language or languages in common use in the country concerned and indicate that the container or product contains asbestos, that the inhalation of asbestos dust carries a health risk, and that appropriate protective measures should be taken.

(3) National laws or regulations should require producers and suppliers of asbestos and manufacturers and suppliers of products containing asbestos to develop and provide a data sheet listing the asbestos content, health hazards and appropriate protective measures for the material or product.

21. The system of inspection provided for in Article 5 of the Asbestos Convention, 1986, should be based on the provisions of the Labour Inspection Convention, 1947. Inspection should be carried out by qualified personnel. The inspection services should be able to obtain from the employer the information referred to in Paragraph 13 above.

22. (1) The exposure limits should be fixed by reference to the time-weighted concentration of airborne asbestos dust, commonly expressed in terms of an eight-hour day and a 40-hour week, and to a recognised method of sampling and measuring.

(2) The exposure limits should be periodically reviewed and updated in the light of technological progress and advances in technical and medical knowledge.

23. The installations, ventilation systems, machinery and protective appliances for asbestos dust control should be regularly checked and maintained in good working order.

24. Workplaces should be cleaned by a safe method as frequently as is necessary to prevent the accumulation of asbestos dust on surfaces. The provisions of the Asbestos Convention, 1986, and this Recommendation should apply to the cleaning staff.

25. (1) When hazards from airborne asbestos dust cannot be otherwise prevented or controlled, the employer should provide, maintain and replace as necessary, at no cost to the workers, adequate respiratory protective equipment and special clothing as appropriate. In such situations, the workers should be required to use such equipment.

(2) Respiratory protective equipment should comply with standards set by the competent authority and be used only as a supplementary, temporary, emergency or exceptional measure and not as an alternative to technical control.

(3) When the use of respiratory equipment is required, adequate rest breaks in appropriate rest areas should be provided for, taking into account the physical strain caused by the use of such equipment.

26. (1) Where workers' personal clothing may become contaminated with asbestos dust, the employer, in accordance with national laws or

regulations and in consultation with the workers' representatives, should provide at no cost to the worker appropriate work clothing, which should not be worn outside the workplace.

(2) Employers should provide workers with adequate information in an appropriate form on the health hazards to their families or others which could result from taking home clothing contaminated by asbestos dust.

(3) The handling and cleaning of used work clothing and special protective clothing should be carried out under controlled conditions, as required by the competent authority, to prevent the release of asbestos dust.

27. (1) For workers who are exposed to asbestos, double changing rooms, washing facilities, showers and rest areas, as appropriate, should be provided.

(2) Adequate time should be allowed, within working hours, for changing, showering or washing after the work shift, in accordance with national practice.

28. (1) In accordance with national law and practice, employers should dispose of waste containing asbestos in a manner that does not pose a health risk to the workers concerned, including those handling asbestos waste, or to the population in the vicinity of the enterprise.

(2) Appropriate measures should be taken by the competent authority and by employers to prevent pollution of the general environment by asbestos dust released from the workplace.

IV. SURVEILLANCE OF THE WORKING ENVIRONMENT AND WORKERS' HEALTH

29. In cases determined by the competent authority, the employer should make arrangements for systematic surveillance of the concentration of airborne asbestos dust in the workplace and of the duration and level of exposure of workers to asbestos and for the surveillance of the workers' health.

30. (1) The level of exposure of workers to asbestos should be measured or calculated in terms of time-weighted average concentrations for a specific reference period.

(2) The sampling and measurement of the concentration of airborne asbestos dust should be carried out by qualified personnel, using methods approved by the competent authority.

(3) The frequency and extent of sampling and measurement should be related to the level of risk, to changes in the work processes or other relevant circumstances.

(4) In evaluating the risk the competent authority should take into consideration the risk posed by all sizes of asbestos fibres.

31. (1) For the prevention of disease and functional impairment related to exposure to asbestos, all workers assigned to work involving exposure to asbestos should be provided, as appropriate, with —

- (a) a pre-assignment medical examination;
- (b) periodic medical examinations at appropriate intervals;
- (c) other tests and investigations, in particular chest radiographs and lung function tests, which may be necessary to supervise their state of health in relation to the occupational hazard and to identify early indicators of disease caused by asbestos.

(2) The intervals between medical examinations should be determined by the competent authority,

taking into account the level of exposure and the workers' state of health in relation to the occupational hazard.

(3) The competent authority should ensure that provision is made, in accordance with national law and practice, for appropriate medical examinations to continue to be available to workers after termination of an assignment involving exposure to asbestos.

(4) The examinations, tests and investigations provided for in subparagraphs (1) and (3) above should be carried out as far as possible in working hours and should entail no cost to the worker.

(5) Where the results of medical tests or investigations reveal clinical or preclinical effects, measures should be taken to prevent or reduce exposure of the workers concerned and to prevent further deterioration of their health.

(6) Results of medical examinations should be used to determine health status with regard to exposure to asbestos and should not be used to discriminate against the worker.

(7) The results of medical examinations should be used to help place the worker in a job which is compatible with the status of his health.

(8) Workers subject to supervision of their health should have —

- (a) the right to confidentiality of personal and medical information;
- (b) the right to full and detailed explanations of the purposes and results of the supervision;
- (c) the right to refuse invasive medical procedures which infringe on their corporal integrity.

32. Workers should be informed in an adequate and appropriate manner, in accordance with national practice, of the results of the medical examinations and receive individual advice concerning their health in relation to their work.

33. When an occupational disease caused by asbestos has been detected by health surveillance, the competent authority should be notified in conformity with national law and practice.

34. When continued assignment to work involving exposure to asbestos is found to be medically inadvisable every effort should be made, consistent with national conditions and practice, to provide the workers concerned with other means of maintaining their income.

35. National laws or regulations should provide for the compensation of workers who contract a disease or develop a functional impairment related to occupational exposure to asbestos, in accordance with the Employment Injury Benefits Convention, 1964.

36. (1) The records of the monitoring of the working environment should be kept for a period of not less than 30 years.

(2) Records of the monitoring of exposure of workers as well as the sections of their medical files

relevant to health hazards due to exposure to asbestos and chest radiographs should be kept for a period of not less than 30 years following termination of an assignment involving exposure to asbestos.

37. The workers concerned, their representatives and the inspection services should have access to the records of the monitoring of the working environment.

38. In the case of closure of an undertaking, or after termination of engagement of a worker, records and information kept in accordance with Paragraph 36 above should be deposited in accordance with the directions of the competent authority.

39. In accordance with the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy, adopted by the Governing Body of the International Labour Office, a national or multinational enterprise with more than one establishment should be required to provide safety measures relating to the prevention and control of, and protection against, health hazards due to occupational exposure to asbestos, without discrimination, to the workers in all its establishments regardless of the place or country in which they are situated.

V. INFORMATION AND EDUCATION

40. The competent authority should take measures to promote the training and information of all persons concerned with respect to the prevention and control of, and protection against, health hazards due to occupational exposure to asbestos.

41. The competent authority, in consultation with the most representative organisations of employers and workers concerned, should draw up suitable educational guides for employers, workers and others.

42. Employers should ensure that workers liable to be exposed to asbestos receive periodic training and instructions, at no cost to them, in a language and manner which are easily understood by them, on the effects of such exposure on health, on measures to be taken to prevent and control exposure to asbestos, especially on correct work practices which prevent and control the formation and release of asbestos dust into the air and on the use of the general and personal protective equipment placed at the workers' disposal.

43. Educational measures should draw attention to the particular danger to the health of workers created by the combination of smoking and exposure to asbestos.

44. Employers' and workers' organisations should take positive action to co-operate in and contribute to programmes of training, information, prevention, control and protection in relation to occupational hazards due to exposure to asbestos.