ENCLOSURE 1

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ENCLOSURE I

DENMARK

Draft of Measures for working with asbestos, and asbestos products.

Introduction: Asbestos is fibrous silicate and is found in various forms e.g.:

1. White Chrysotile, magnesium silicate is 95% of the asbestos employed.
2. The brownish-yellow Amosite magnesium iron silicate and
3. The blue Crocidolite sodium iron silicate.

The qualities of asbestos - isolating, fire-proof and resistent towards physical and chemical exposures justifies its use for protective clothing, isolation bats, brake linings, gaskets and as addition to furnace padding, floor and roof covering material, building plates and tubes e.g. eternite.

Work with asbestos produces dust, mostly fibres 25-250 µ long and 1-3 µ large. By crushing and milling a., in a. bats production, in the repair and removal of old a. the particularly dangerous fine dust is produced, i.e. fibres 20-50 µ long and less than 1 µ large which may penetrate to the alveoli.

A. may produce asbestosis, which develops slowly; in 10-20 years definite X-ray changes are found. A. has no acute stage and cannot be cured. The first fatal case was described in 1907.

It has been observed that persons with asbestosis have greater risk of bronchial cancer-. It seems that inhalation of Crocidolite in small amounts may produce mesotheliome as long as 30 years after the exposure.

The question of a. dust in workplaces is therefore of the greatest importance.

In the British Asb.Regul. 1969 which will be in force 14 May 1970, rules are found for work with a. products such as ventilation (machine exhaust)

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possible without sharp bends. The dust shall be blown directly into open air where this can be done without nuisance to the surroundings.

7) Rooms with exhaust shall have sufficient amount of make-up air provided without draught; if necessary by heating the make-up air.

8) Rooms where asbestos is handled should have smooth walls or floors. Beams, lists, niches, shelves where dust may accumulate should be avoided as if this is not possible have an upper surface with an angle of at least 60° to horisontal plane.

9) The cleaning of rooms where a. dust is produced shall be done regularly and carefully, usually in such a way that all dust, refuse etc. is removed once a day from floors, tables, machines etc. and once a week from walls, roof, beams, shelves etc.

10) In cleaning the spreading of dust shall be avoided by damping or by using a vacuum cleaning plant.

11) Workers exposed to a. dust should wear overalls without open pockets which can be kept in and clean, dust-free condition. Working and wearing, clothing shall be separated.
Working clothing exposed to a. dust shall be kept in a separate room where no other clothing is found.

12) Young persons under 18 years are not allowed to work with the production of a. products and may not work in dustproducing handling of a.products.

13) Regular medical examination shall be carried out of workers exposed to asbestosis hazard.

14) A. waste shall be collected in closed containers to prevent the spreading of a. dust. If crocidolite is found, the containers shall be clearly marked "Blue Asbestos". "Avoid inhalation of dust"
The local factory inspector shall be notified when work with crocidolite is commanded.

Special rules.
Carding, milling and mixing a.

15) Machines for carding, milling or mixing dry a. shall as far as possible be enclosed with dust extraction, up para 4 and 6.

Note:

The places of dust production shall be enclosed as well as possible. Exhaust shall be constructed in such a way that an air velocity of 0,5 to 1.0 m/s is found in the openings in the container which are necessary for feeding the machines. When the machine is fed from sacks hoods should be provided or other measures to prevent the spreading of dust when the sack is opened. The empty sacks should be folded under a hood or in open air as this procedure may produce much dusts.

16) Machines which are not enclosed according ~~to~~ to para 15 shall be provided with a suitable hood with efficient exhaust over the feeding opening. If dust may be produced by the finished product the exit opening of the machine shall also be provided with dust suppressing arrangement.

17) If the a. during processing is damped the requirements in para 15 and 16 may be modified.

Manufacture of yarn, ribbon or fabrication of a.

18) In twinning, winding, warping or weaving of a. effective measures should be carried out for preventing dust dispersal, e.g. by enclosure with exhaust or local exhaust (cp para4) or by damping (cp. para 3).

Note:

It may be necessary to combine these measures. In weaving it is thus not sufficient to damp the a. yarn as this passes the loom slowly and it is thus not possible to keep if sufficiently moist.

Exhaust is thus usually necessary.

Processing a. plate, pipes, brake linings etc.

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19) By processing a. slabs, pieces, cups, brake linings etc. in stationary machines exhaust or enclosure with exhaust shall be provided (cp para 4).
If the processing is done by transportable machines or by hand and exhaust cannot be provided respirators (dust mask) shall if necessary be provided (cp para 5).

Insulation with a.

20) The workers shall if necessary use respirators (cp. para 5) while preparing by hand insulation material containing a. if this work is carried out indoors without local exhaust.

Note:

Preparing the insulation material by hand produces a considerable amount of dust both in emptying the sacks and initially in the mixing of a. with water. If the work is carried out in the open air with suitable wind directed, respirators is not necessary.

Empty sacks should be folded in open air.

21) By insulation with a. blocks, material, a. and other other preformed , thread etc. respirators (approved dust mask) should be worn. A. fabric. cords etc. should be damped and kept moist during the working process. In the manipulation of blocks, cups etc. the measures in para 2o should be observed.

22) The manufacture of a. insulation/where both the fabric and filling is a. may only be carried out on special working tables which are enclosed and provided with exhaust. The enclosure shall be carried out in such a way that sacks can be cut and emptied within the enclosure. If the a. fabric and thread is kept moist before and during the processing of the bats, this can be carried out without such special working tables.

Note:

The enclosure should have working openings ab. 25 cm high and ab. 100 cm broads provided with shutters. A window should be found above the

material should be contained in a hollow in the table. The exhaust shall be of such dimensions that air velocity in the working opening is 0,5 to 1,0 m/s.

23) The manufacture of insulation bats where the fabric is a. and the filling other materials, e.g. rockwool or glasswool, may be carried out without enclosure of the working table provided the fabric and the thread is kept moist during the processing.

24) In a. spraying in enclosed rooms the following measures shall be observed:

a) The machines used for the fine carding of the material shall be provided with damping arrangements both for the uncarded material at the filling of the machine and for the finely carded materials unless other measures prevent the escape of dust.

b) Valves for the supply of a. and water at the spray nozzle shall be coupled in such a way that water is supplied first and stops last.

c) In feeding the machine and spraying respirators (approved dust mask) shall be worn.

Note:

By spn spraying the material is not completely wetted in the spray jet and considerable amount of a. dust is dispersed. It is therefore necessary to wet the material already in the machine. The coupling of the valves is necessary to prevent the spraying of unwetted a. at the start and stop causing a. high dust content in the air.

Research has shown that the dust content of the air is high in spite of the measures indicated in a) and b). Respirators are thus necessary.

25) By a. spraying in closed rooms no other than the persons carrying out the spraying may be present in the room without special reason and provided that those persons are wearing respirators (approved dust mask).

26) After a. spraying in small enclosed rooms at least

30 minutes must pass before anybody may stay or work in the room without respirators (approved dust mask).

27) A. dust on the floor, shelves etc. produced by spraying shall be removed as soon as possible. To prevent the drying and stirring of the dust it should be damped e.g. by the spraying of water from the spray gun.

28) In removing or repairing a. insulation respirators (dust mask) shall be worn.
The material shall as far as possible be damped before and during its removal.

Note:

During the removal great quantities of dust may be produced since adequate damping is not possible.

Other work.

29) By other work with a. than the above mentioned e.g. machine cutting of fabric for a. protection clothing the measures mentioned in para 15 to 28 should be observed as far as considered necessary in each case.

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