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National Federation, 1931

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A REPORT ON THE GOVERNMENT REGULATIONS RESPECTING

SILICOSIS AND ASBESTOSIS

Issued by the National Federation of Associated Paint Colour & Varnish Manufacturers of the United Kingdom.

July 1931.

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The SILICOSIS and ASBESTOSIS Schemes.

(1)

The position of the Paint, Colour & Varnish Industry in relation to the industrial diseases under the schemes.

by

H. TODD THORNBERY, B., Sc.

(a report given to a General Meeting of Members on the 19th June, 1931.)

I have been asked to give you a brief report on the position of the industry in relation to the industrial diseases, Silicosis and Asbestosis.

During the past two years, I have attended on behalf of the Federation, numerous meetings of a large Committee representative of many industries, and convened by the National Confederation of Employers' Organisations. That Committee has examined the various Home Office proposals regarding the control of the industrial diseases, Silicosis and Asbestosis. At the meetings, held during this Spring, I had the valued help of Mr. Graham and also of Dr. Jordan, who had spent considerable time in the study of the technical points involved. Dr. Jordan attended with me the Deputation of Employers to the Home Office and later, alone, interviewed the Chief Medical Officer of the Factory Department of the Home Office on our behalf. The work of that Committee may be regarded now as complete, for compensation schemes in respect of each disease and a Medical Arrangements Scheme covering both have now been issued by the Home Secretary as Statutory Rules and Orders.

It is impossible to state exactly how paint manufacturers will be affected, but I would urge every employer to ascertain the possibility of any of his processes making him subject to the Orders and liable for compensation claims in respect thereof, and I would stress the point that expert advice should be obtained upon the matter.

The fact that an employer has never known of a case of Silicosis or Asbestosis among his employees is no evidence that there has been no such case. The proved incidence of Silicosis in some industries in which schemes have been in operation for some time past has far exceeded all expectations. The possibility of now obtaining substantial compensation will almost certainly cause employees or their representatives to seek a diagnosis which might justify compensation, and to establish the fact that the disease was contracted in their employment. You, as employers, are concerned not only with the possibility of the diseases being contracted in your processes, but also with the possibility of an employee making a case and satisfying a Court that the disease has been so contracted, when in fact it has been contracted elsewhere. Even

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in this latter case it is the *last* employer prior to the discovery of the disease who has to pay compensation. It is not inconceivable that a man who had Silicosis prior to coming into the paint trade might at a later date persuade a County Court judge that the disease had been caused by frequently working with a dry earth colour which contained a percentage of silica..

Each employer should therefore investigate the matter for himself, and for this purpose the following documents, obtainable from the Stationery Office, should be consulted:—

(1) Workmen's Compensation Act, 1925.

This fixes the rates of compensation and certain other matters of procedure, and Section 47 of the Act definitely applies the Act to any subsequent schemes dealing with Silicosis.

(2) The Workmen's Compensation (Silicosis and Asbestosis) Act, 1930.

This extends the Workmen's Compensation Act, 1925, to Asbestosis.

Under the authority of the above Acts, the Home Secretary has issued

(3) The Various Industries (Silicosis) Scheme, 1931, Statutory Rules and Orders (S.R. and O.) 1931, No. 342.

This scheme covers all industries except the refractories, the metal grinding and the sandstone industries.

(4) The Asbestos Industry (Asbestosis) Scheme, 1931. S.R. and O., 1931, No. 344.

This scheme is drawn, in the main, on the same lines as the Various Industries (Silicosis) Scheme. These two schemes set out the processes in which employees are entitled to compensation, and refer to the necessary medical arrangements. The latter are set out in full in

(5) The Silicosis and Asbestosis (Medical Arrangements) Scheme, 1931. S.R. and O., 1931, No. 341.

This gives details of the constitution of the special Medical Boards and the medical examinations to be held; and

(6) The Silicosis and Asbestosis (Medical Fees) Regulations, 1931. S.R. and O., 1931, No. 412.

This sets out the fees payable by employer and employee for the various types of medical examination that may arise under the schemes. These fees, which vary from 6s. to £10 per individual examination, have been arrived at by a Joint Committee of the Home Office, the employers and the employees, after giving consideration to the experience gained under the Refractories and Sandstone Industries Schemes, and estimating approximately the number of cases of each type likely to be dealt with, and to the estimated cost of the medical service. Where an examination

demanded by an employee has a negative result, the cost falls on the employee. The cost of initial and periodic examinations, where required by the Schemes, is borne by the employer. The fee of £10 for a certificate that death was due to the disease, which certificate is issued generally only after post mortem examination, is also payable by the employer, as is the fee of £8 in the case of a certificate of total disablement or of suspension on account of the disease.

The following points in the different schemes are deserving of special attention:

Various Industries (Silicosis) Scheme.

Paragraph 2 applies the Scheme to a large number of processes, including in **Clause V**:

> " *sieving*, *mixing* or packing of silica rock, or of dried quartzose sand *or any dry deposit or dry residue of silica or any dry admixture containing such materials.*"

And in Clause VI:

> " *handling or moving* of silica rock, or of dried quartzose sand *or any dry deposit or dry residue of silica, in or incidental to the processes* mentioned in the foregoing paragraph."

Where dry finely powdered silica is used, there is no question at all as to liability. This material is extremely dangerous and its use in any dry form brings the process under the Scheme. Apart from this, a considerable number of the common pigments contain silica in varying percentages as what might be called a natural concomitant of the material being bought. It appeared to the Committee of which I was a member that the use of such pigments might, *under the wording of the Scheme*, be included in the Order.

Dr. Jordan has applied himself to the very difficult problem of the interpretation and scope of the application clauses.

Paragraphs 4 and 9 give an employee rights to compensation as laid down in the Workmen's Compensation Act, 1925, in the event of death, of total disablement, or of partial disablement, and also in cases in which, while there is no physical impairment, continuance in the process would be dangerous for the employee. In this case, the employee is entitled to compensation at a rate not exceeding half his wages for a period not exceeding thirteen weeks, provided he is unable to obtain other suitable employment at a rate of remuneration not less than he was earning in the processes. This, it will be observed, is a new form of out-of-work pay, and would have been resisted by the employers as an undesirable and back-door extension of unemployment pay, had it not been felt that without this clause, Medical Boards would be

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compelled to certify as " partially disabled " a number of men whom they will now certify as being " physically unimpaired " although affected by Silicosis. Certification as " partially disabled " would throw an unknown and unlimited liability upon the employer, and it was felt better to give the Medical Boards the opportunity of throwing on to the employer a liability limited to half wages for thirteen weeks.

Paragraph 4, Clause (a) may be of importance to us, as it states that no compensation shall be payable " if the Medical Board certify that the Silicosis cannot have been contracted in the processes owing to the shortness of the time during which the workman has been employed therein."

Paragraph 8 makes the compensation payable *by the last employer*, with the right to claim a proportion from employers who employed the workman in any of the processes covered by the Scheme during the previous five years, except when the last employer has admitted liability and waived his right to a Medical Certificate certifying Silicosis. In the latter case, there is no claim allowed on previous employers.

Asbestos Industry (Asbestosis) Scheme.

Included under this Scheme are the following processes:—

Paragraph 2, Clause (I).

" breaking, crushing, disintegrating, opening and *grinding* of asbestos, and the *mixing or sieving of asbestos or any admixture of asbestos* and all processes involving manipulation of asbestos incidental thereto."

Paragraph 2, Clause (V).

" any other manufacturing process carried on in the same room as any of the foregoing processes."

This means that any man more or less continuously handling any admixture containing asbestos in a mill room would bring not only himself but all the others working in the mill under this Scheme. The Scheme does not, however, apply to the mixing of asbestos or any admixture of asbestos if such employment is " occasional only and for not more than eight hours in any week." It is probable, therefore, that many of the paint manufacturers who use asbestos will be able so to arrange their work as to avoid coming under the Scheme.

Paragraph 12 puts on the employer the onus of arranging for initial and periodic medical examination of the employees concerned.

Medical Arrangements Scheme.

Paragraph 3 requires a Medical Board to consist of *specially* qualified medical practitioners. The employers asked for the word " specially " to be inserted in place of the word " duly " qualified,

which means any qualified doctor, because the employers felt that in view of the extreme difficulty of diagnosis and the highly specialized knowledge necessary for dealing with these diseases, it was imperative that they should not be liable to pay compensation on certificates which might be issued by medical men not possessing the special qualifications necessary.

In Paragraph 10 the employers succeeded in obtaining the right for an employer to state a case to any Medical Board prior to the certification of Silicosis by that Board. It was felt that the employer's knowledge of the employee, of his history, and of the work he had been doing, should be available to the Medical Board to be set against the employee's own account of the matter.

Under Paragraph 12 in certain processes, including other than " only occasional " asbestos processes, new employees must be medically examined by a *duly* qualified medical man within two months of engagement. The necessity for periodic examinations applies in the same way to the asbestos industry, but neither initial nor periodic examinations are called for under the Silicosis Scheme as it applies to the paint industry; but there is nothing to prevent an individual employer in the paint trade insisting on medical examination before engaging a new man; and in any case, every employer should, for his own protection, make careful enquiries as to the work in which an applicant for employment has been previously engaged. It will probably be found that many such applicants have been engaged in processes making them liable to Silicosis and Asbestosis, as such liability may arise in metal grinding, sandstone, coal and tin mining, quarrying, glass works, potteries, builders' masons, other building work, chalk crushing, flint crushing, transport of silica materials, electrical and heating engineering, and even among monumental masons, who appear to be the only employers who can hope to make any profit from fatalities caused by these diseases.

Paragraph 17 establishes a Medical Expenses Fund, to which, if you are affected by the Scheme, you will, I assure you, contribute handsomely.

Under Paragraph 22 employers in certain scheduled processes, including other than " only occasional " asbestos processes, but excluding silica processes in the paint trade, are required to notify the Medical Board of the starting of such scheduled industry, and for the purpose of statutory periodic examinations to provide a room and to supply utensils, writing desk, weighing machine, etc.

Under Paragraph 22 (d) no employer in any process under either of the Schemes must engage any man who has at any time refused or wilfully neglected to submit to any examination under the Scheme, or has been certified as partially or totally disabled under this or any other compensation scheme. The penalty for employ-

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ing such a man is not exceeding £5 for every day of such employment. With great difficulty the employers finally succeeded in getting added to this paragraph the proviso that the employer shall not be liable to be convicted in respect of failure to comply with these conditions if he is able to satisfy the Court that he has " taken all reasonable steps to ensure compliance." This paragraph makes it necessary for the employer to ask some searching questions of every applicant for work, and in order to ensure getting the protection of the proviso, probably to confirm the applicant's statements by reference to previous employers. I suggest that employers concerned should get out a questionnaire for new employees and get replies in writing and signed by the applicant.

First Schedule. This gives a list of the industries and/or processes in which initial or periodic medical examinations must be held, and of the starting of which notice must be given to the Medical Board. These requirements do not apply to any other industries or processes under the Scheme.

Third Schedule sets out the facilities to be provided for the Medical Boards at periodic examinations.

In my opinion the extent to which paint manufacturers will be affected by these schemes is uncertain. Manufacturers in our industry may not be affected seriously, but they have to bear in mind that what they are up against is not what was intended by the promoters of the schemes, but the interpretation that the Courts may place upon the wording that these promoters have used.

If you are carrying on any processes involving the use of dry silica or the frequent use of asbestos, there is definitely a serious risk of employees concerned sooner or later contracting one of these terrible diseases. Where such misfortune occurs, it will be agreed that the victim should be compensated. In some cases the risk will be such as to place on the employer a financial liability greater than he is prepared to carry. In this matter, as usual, our benevolent friends, the insurance companies, will readily come to his aid and they will quote rates for insurance against the risk. These rates will probably appear to be utterly exorbitant, but it must be borne in mind that the insurance companies are as much in the dark as to the interpretation which will be placed on these regulations as we are. They have very little in the way of claims records to guide them, and they have the definite knowledge that in some industries the incidence of Silicosis is many times what it was believed to be before any schemes came into operation and specialized diagnosis became possible.

The SILICOSIS and ASBESTOSIS Schemes.

(2)

The technical interpretation and explanation of the Orders as affecting the Paint, Colour and Varnish Industry.

by

L. A. JORDAN, D. Sc., A.R.C.Sc., D.I.C., F.I.C., M.I.Ch.E.

The incidence of the various Orders, relating to Silicosis and Asbestosis, on the pigment and paint-making industries, is a matter of importance. At first sight, the paint industry would appear to be exempt from their provisions, except in so far as silica and asbestos *per se* are used. Then it was observed how gradually the roll of the affected industries grew and, further, it was realised that the provisions of the Orders might easily be construed in such a way as to bring within their scope the manufacture, handling and use of a variety of pigments, and there are many, which contain some silica in greater or less amount.

Recently, during the preparation of the new Medical Arrangements Scheme and Medical Fees Regulations governing the Silicosis and Asbestosis Orders, an opportunity was afforded to make representations to the Home Office on the whole subject. This opportunity was taken by the National Federation of Associated Paint, Colour and Varnish Manufacturers by appointing to a special Committee of the National Confederation of Employers' Organisations as their representative, Mr. H. Todd Thornbery, with whom I had the privilege to act as Scientific Adviser. In due season, on March 12th, 1931, the Home Office Departmental Committee received the Employers' Deputation, when the question of the application of the Orders to this industry was raised. As a result, I was invited to present the case for the industry regarding the Application Clauses before the Chief Medical Officer to the Factory Department of the Home Office, and this I did on March 17th. It may be said at once that many of the proposals made by the Deputation touching the Schemes in general were accepted by the Committee, and shortly thereafter the Revised Orders, 1931, were issued.

Mr. Thornbery in his address interprets, clause by clause, the Orders as they stand to-day, and brings out very clearly those points which a manufacturer, who is operating or thinks he may be liable to operate under the Orders, should particularly note.

It is my duty in a short statement to endeavour to clarify the position regarding the Application Clauses as touching this industry, and the technical aspects of the problems arising therefrom, bearing in mind the nature of the conversations which I have been privileged to hold with the officers responsible for the working of

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the Schemes described in the Orders. My representations at the meeting of March 17th covered the following matters:—

1. Referring to the Various Industries (Silicosis) Scheme, 1928, and the Revised Draft Form, issued 1930, the crux of the whole difficulty lies in the uncertainty of the interpretation of Clause 2 (v), which reads as follows:—

> "*breaking, crushing, grinding, sieving, mixing, or packing of silica rock, or of dried quartzose sand or any dry deposit or dry residue of silica or any admixture containing such materials; or any process ancillary thereto.*"

The words "any admixture containing such materials," to wit, "dry silica," may well include an ochre or any or a number of earth pigments, not on the ground that they contain a large amount of silica in the combined form, which one could successfully argue was not silica, but because one could not prove that some small proportion of the silica content was not present in the free state, and therefore a dry residue of silica within the terms of the clause.

It may be here mentioned, as I have pointed out to the Home Office, and in spite of statements to the contrary, that chemical analysis does not provide a means of establishing whether the silica present is wholly combined or partially free in such mixed systems as the earth pigments.

2. In the 1930 Draft of the Order, under Clause 2 (i), relating to mining and quarrying, "natural" sand is specifically excluded from the Order. It was pointed out that, if this "natural" qualification were extended to the other Application Clauses, particularly 2 (v) much of the objection raised would disappear.

3. In the 1928 Order, Clause (i), still relating to mining and quarrying, says:—

> "*For the purposes of this Scheme silica rock means quartz, etc., . . . but does not include natural sand or rotten rock or any rock containing less than 50 per cent. free silica.*"

(Note: No mention is made as to how the free silica is to be determined.)

The exclusion of natural sand, coupled with the 50 per cent. limitation on any rock would automatically exclude practically everything touching this industry, no matter how the silica was present, except silica powder itself, provided the words printed under Clause 2 (i) could be applied to Clause 2 (v). There would appear to be some doubt about the last point except for the opening words of the paragraph: "For the

purposes of this Scheme," which seemed to justify giving the words a general over-riding application. I pointed out that, in fact, those words had been so interpreted by this industry and therein had lain the justification for the presumed exemption of the industry in general from the Orders. Naturally, therefore, the dropping of the 50 per cent. limitation in the 1930 Draft provoked alarm.

I asked, first for the 50 per cent. limitation to be reinserted into the Order (or failing that some lower figure, 10 per cent. being suggested as satisfactory in the limit) and, secondly, for a clearer definition of the exempting "natural" qualification, particularly in respect of natural clays and earths.

4. Whilst the arguments relating to limiting figures for silica content, as propounded in the preceding paragraph, were particularly applied to the case of those pigments which might contain natural silica adventitiously, I pointed out that some limiting figure would ease the problem to the manufacturer who was occasionally, and only occasionally, called upon to make mixtures which required the addition of a proportion of silica powder as such.

Failing some concession being given on the lines indicated in paragraph 3, I particularly asked for some amelioration of the problem of the occasional user of silica on the basis of intermittency of employment, a point which had been strongly pressed by the Deputation in connection with both the Silicosis and Asbestosis Schemes.

5. Finally, I submitted draft new clauses embodying the above suggestions and defining the limitations suitable to the pigment and paint industry, without impairing the object of the Orders, namely, the control of operations using ground silica as such. I pointed out that already the Orders contain such limiting clauses for several industries and to insert one for pigments and paints would not be exceptional.

From the discussion which took place at the Home Office on these proposals, it was apparent to me that the Authorities never had in mind and never intended specifically to include within the scope of the Orders any aspect of pigment or paint manufacture other than processes involving the use of silica powder or ground asbestos as such. Nevertheless, whilst I received a categorical assurance to that effect, the ultimate arbitor as to what the Orders do or do not include must be the Courts.

In general, I may say that the discussion showed that there was nothing in dispute as between the Chief Medical Officer (Factory Dept.) and myself as to what operations should or should

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not be covered by the Orders and the extent of the Paint Industry's liability under the Orders. The intention of the Home Office, as I understand the matter, was to cover any processes which would involve the alteration of the form of the siliceous material. So long as the silica is left as Nature made it, in massive or rounded and smooth crystalline forms, it is regarded as being inoffensive from the medical point of view; once a particle of silica is broken or is found to be below a certain size it is regarded as a potential source of silicosis. It was intended to exclude natural siliceous rocks and materials if they were used industrially without being ground up or otherwise treated. To illustrate, a man handling natural flints is presumably not subject to the Order, but if a flint gets broken in the process, then he is subject to the Order. It was never intended to cover any of the clays which would include what are called the earth pigments.

The Chief Medical Officer (Factory Dept.) claimed that, in the view of the Home Office, the wording of the relevant Application Clauses, which necessarily have to be wide and general, give a reasonable interpretation of the intentions above stated. It was stated, for example, that the presence of what can best be called adventitious free silica in an ochre, which if it exists at all, is present through having escaped removal by the levigation processes to which such pigments are commonly subjected, has no bearing upon the issue through the use of the word "admixture." In other words, if it were to be established that a certain pigment did contain a few per cent. of free silica, it would not come within the meaning of the Orders, provided it was not an admixture in the sense that the silica was not admixed deliberately by human aid. As before remarked, that kind of interpretation, which was advanced and considered to be acceptable at the Meeting, might not be acceptable to a Court which was determined to pursue the interpretation of the wording of the Order to its logical conclusion.

Referring to specific points mentioned in my statement of the case, the final form of the Orders shows that:—

(*a*) The 50 per cent. limitation was not reinstated and neither is any lower figure inserted.

(*b*) The principle of intermittency of employment is not accepted in the case of silicosis though it is in the case of asbestos mixing, etc., to the extent of 8 hours of any one working week.

(*c*) The word "dry" has been inserted before the word "admixture" and the relevant clause now reads:
"grinding, sieving, mixing or packing of silica rock or of dried quartzose sand or any dry deposit or dry residue of silica or any dry admixture containing such materials; or any process ancillary thereto."

Thus the final edition of the Order is better than the Draft Form, 1930, and though there may still be some doubt, the issue is a good deal clearer than it was by reason of the explanations given to me as described above.

To summarise, it is now reasonably clear that natural clay or clay-like products, which include the ochres, etc., are not intended to be included in the Order.

No difficulty should arise from traces of silica in paint materials because the silica admixture must be admixed in the literal sense by human agency and further to be liable the admixture must be dry.

The paint maker is definitely liable when he uses ground silica powder in the dry form and so long as it remains in the dry form, but I presume that silica used, say, as an oil paste, if such a practice is possible, would be exempt from the operation of the Order.

The paint maker using asbestos is liable except in so far as the intermittency condition may excuse him, but the precise terms of the Order should be consulted for details.

I would add one final paragraph as indicating the source from which trouble may be expected if difficulties do arise. Sooner or later, by the movement of labour, some paint manufacturer is almost certain to employ a person who develops silicosis whilst in his employ but who, in point of fact, contracted that silicosis in some previous employment such as, for example, by working in sandstone quarries or in the pottery industry. Such a person may well endeavour to persuade a Court that he had, in fact, contracted the disease through working with pigments containing some proportion of silica while in the service of the paint manufacturer, and submit that the handling of such dry pigments in the course of a paint manufacturing operation, is, in fact, properly included under the Order. The Court would have to decide, but at any rate it is satisfactory to know the interpretation placed upon the matter by the authorities at the present time.

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