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Occupational Dermatitis in Railroad Cases

Howard L. Oleck* and Elmer I. Schwartz**

TWO-THIRDS OF ALL INDUSTRIAL DISEASES are occupational skin diseases, according to most medical authorities, and most of the cases result from chemically-caused trauma.¹ This fact now is so widely known that it is found in popular newspaper articles of the medicine-for-laymen variety,² as well as in technical medical journals³ and in legal journals.⁴

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¹ Alvarez, Chemicals May Irritate Skin, Cleveland Plain Dealer, p. 8C (Dec. 23, 1956); Schwartz, Dermatitis in Railroad Roundhouses and Machine Shops (June 10-12, 1952, West Disinfecting Co. pamphlet), and see n. 3, below. Another says that silicosis and lead poisoning are the leading causes of occupational diseases: Lanza, Industrial Medicine, 7 Cyc. Med. 213, 221 (1956).

² E.g., n. 1: Dr. Walter C. Alvarez, Emeritus Consultant in Medicine of Mayo Clinic, and Emeritus Professor of Medicine of Mayo Foundation, whose nationally syndicated newspaper column is well-known, writes of practical everyday medical facts in language that a layman can understand. He also is Advisory Medical Editor-in-Chief of the Cleveland-Marshall Law Review.

³ Foerster, Industrial Dermatoses, 7 Cyc. Medicine 235 (1956) (speaks of "the numerical superiority of occupational dermatoses over other industrial diseases" and "their frequent disabling nature," but points out that in industrial compensation awards they nevertheless have been receiving only one to three percent of the total number of awards. He also lists "chemical materials" as first on the list of causes.) Also see, Schwartz, Tulipan & Peck, Occupational Diseases of the Skin (2d ed., Lea & Febiger, Phila., 1947); Winer, The Prevention of Contact Dermatitis, 54 N. Y. J. Med. 2591 (1954); Meirowsky, Notes on the Etiology of Certain Skin Disorders, 13 Experimental Med. & Surg. (4) 373 (1955); Mikol, Dermatoses Professionnelles d'Origine Chimique (Occupational Dermatitis of Chemical Origin), 18 France Medicale (Paris) (12) 53 (Dec. 1955); Haeblerlin, Dermatitis in the Railroad Industry, 24 Indust. M. & S. (5) 225 (May 1955); Note, 24 Indust. Med. 413 (1955); Jambor & Suskind, Etiologic Appraisal of Hand Dermatitis (soaps and detergents), 24 J. Investig. Derm. 379 (1955); Goldberg, Practical Patch Testing, 53 J. Med. Soc. N. J. (4) 166 (Apr. 1956); Forsman, Nilzen & Wikstrom, Silikon Som Hudskyddande Medel (Silicone as a Skin-Protective Substance), 52 Svenska Lakartidningen (Stockholm) (51) 3153 (Dec. 1955); Morrow, Note on silicote protection, 80 Calif. Med. 21 (1954); Sutton, Diseases of the Skin (Mosby Co., St. Louis, 1956); Waldbott, Contact Dermatitis (C. C. Thomas Co., Springfield, Ill., 1953); Klauder, Some Aspects of Occupational Dermatoses, 160 J. A. M. A. (6) (1956); Becker, A New Interpretation of Some So-Called Positive Patch Tests, with Special Reference to Metal Used in Industry, 45 J. Mich. Med.

(Continued on next page).

Typical of the problem, and a subject of great and growing importance, is the matter of occupational dermatitis among railroad shop workers. And of paramount current interest in this category of occupational diseases is the problem of contact dermatoses caused by diesel fuel oil and lubricants, and coolants and solvents—usually the latter are sodium dichromates. A discussion of this particular problem involves most of the major elements of medicolegal analysis of occupational diseases.

In workmen's compensation cases, the compensability of occupational diseases now is widely recognized, and is still growing, after being viewed by the courts with grave doubt in the past.⁵

(Continued from preceding page)

Soc. 65 (1946); Sulzberger & Finnerud, *Industrial Dermatitis*, 111 J. A. M. A. 1528 (1938); Ratner, *Occupational Dermatoses*, 22 *Indust. Med. & Surg.* (5) 198 (May 1953); Epstein & Allen, *Dermatitis of Hands in Industry*, 75 *Calif. Med.* 300 (Oct. 1951).

⁴ Note, *Medicolegal Atlas of Occupational Diseases*, 1 *Curr. Med. Attys.* (5) 45 (Sept. 1954); Note, May 1953 *Insur. L. J.* 341; Pound, *Comment*, 14 *NACCA L. J.* 168 (Nov. 1954); Oleck, *Notes*, 2 *Negl. & Comp. Serv.* 84, 143, 151 (1957); Kornblitt, *Medico-Legal Reports*, 19, 36, 156 (1956); Cornbleet & Barsky, *Dermatitis in Diesel Engine Maintenance Men*, 3 *Med. Tr. T. Q.* 1 (Mar. 1957); Oleck, *Damages to Persons & Property*, Sec. 146 (1957 revision); Puxon, *Dermatitis and the Lawyer*, 101 *Sol. J.* (London) 619 (Aug. 10, 1957).

⁵ 1 Larson, *Workmen's Compensation Law*, Secs. 41.00-41.62 (1957 cum. supp. ed.); Schneider, *Workmen's Compensation Text*, Vols. 5, 6 (1956 supp. ed.). But occupational dermatitis still is not accurately shown in compensation statistics because most cases are not sufficiently disabling to appear before boards. Schwartz, *Dermatitis in Railroad Roundhouses & Machine Shops*, n. 1, above.

This is a highly statutory matter, however, and will not be discussed here. Under the modern workmen's compensation statutes, generally speaking, compensation is granted when the occupational disease is "work-accident-caused"—which is closely analogous to the common law requirement of *proximate causation* proof in negligence cases. A typical statute is Ohio Rev. Code, Sec. 4123.68. This provision lists specifically (among the itemized compensable diseases): "Chrome ulceration of the skin or nasal passages. Any industrial process involving the use of or direct contact with chromic acid or bichromates of ammonium, potassium, or sodium or their preparations." Ohio Rev. Code, Sec. 4123.68 (S). As to *proximate cause*, see, Prosser, *Law of Torts*, Sec. 44 (2d ed., 1955); and Averbach, *Causation: A Medico-Legal Battlefield*, 6 *Clev.-Mar. L. R.* 209 (1957).

The common law requirements of *due care* by a master in furnishing to his servants *safe tools* and *safe places to work* are somewhat analogous to compensation statute provisions increasing employers' premium rates in proportion to increased work hazards. As to safe places and tools see, Prosser, *Law of Torts*, Secs. 67-69 (2d ed., 1955) for discussion of a master's duty of care as to his servants' working conditions. As to statutory premium rates see, Ohio Rev. Code, Secs. 4123.29, 4123.34(C).

In some compensation statutes very detailed provisions are made as to an employer's duty to provide safety devices for work with such substances as lead compounds, including lead chromates. E.g., Ohio Rev. Code, Secs. 4125.01-4125.99.

Discussion here is couched in terms of common law primarily, with treatment of specially applicable statutes such as the Federal Employers' Liability Act. It is, however, generally applicable to compensation cases, as well.

Definitions

Dermatitis is an "inflammation of the skin * * * *industrial d.*, various types of dermatitis that are caused by substances used in the industries * * * *contact d.*, the same as dermatitis *venenata* * * * *occupational d.*, dermatitis caused by various substances with which a person works * * * *d. venenata*, inflammation of the skin caused by coming in contact with various substances of a chemical, animal, or vegetable nature."⁶

Dermatosis is "any disease of the skin; any disease of the true skin, *industrial d.*, the same as occupational dermatitis."⁷

Dermatitis cases may be generally divided according to degree of inflammation, into *acute dermatitis*: severe eruption with vesicles (blisters), weeping (oozing) and crusts; and *chronic dermatitis*: less severe, with dryness, scaliness or thickening. Also, a *generalized* (or *universal*) *dermatitis* involves all or almost all of the body skin surface, while a *local* (or *localized*) *dermatitis* refers to inflammation of only part or one side of the body surface.⁸

Unfortunately, the word "dermatitis" is a broad medical term. Sometimes it is applied by physicians to any kind of skin irritation or inflammation, regardless of what caused the trouble. Lack of more precise terminology therefore may lead to indiscriminate medical classification in which "causation" is indicated either casually or not at all. As to this see the discussion of Damages below.

Chemical materials may be classified as *primary irritants* or as *allergenic agents*. Many chemicals may act as either, depending on their degree of concentration or duration of contact. *Primary irritants* are "chemicals that may cause dermatitis in any individual under certain circumstances, frequently after the first contact * * *. *Allergenic agents* are chemicals innocuous to most skins but capable of producing dermatitis in the susceptible

⁶ Maloy, *Medical Dictionary for Lawyers*, 173, 174 (2d ed., 1951).

⁷ *Ibid.*

⁸ Cornbleet & Barsky, *Dermatitis in Diesel Engine Maintenance Men*, 3 *Med. Tr. T. Q.* (3) 1, 2 (Mar. 1957). And see, Foerster, *Industrial Dermatoses*, 7 *Cyc. Med.* 235 (1956).

individual following an initial single contact and a variable latent period during which an allergenic (sensitized) response is developed. Sensitization may not occur until after many exposures occurring over periods of weeks or months.”⁹

It is obvious, from these definitions, that any chemical known or which should be known to be a primary irritant requires proper safety precautions in its use, as a matter of law. Equally obvious is the fact that allergenic agents require similar care as soon as any appreciable number of persons are known to be or to be likely to *become* sensitive (allergic) to them. As will be shown below, it now is well known that diesel fuel oils, coolants, solvents and lubricants often contain chromates and other chemicals of a dangerous nature; and thus now generally are viewed as primary irritants.¹⁰ Even were they viewed as allergens, however, they would require quite high standards of care in their use.

Petroleum, Oils and Chromates

Diesel engine fuel oil, coolants, solvents and lubricants have been the most dramatic causes of industrial skin diseases in recent years. Petroleum and its derivatives and other oils long have been known to be injurious to the skin of many individuals. In fact the United States Public Health Service lists petroleum as first among causators of industrial dermatitis.¹¹ It also lists, as fourth among such causators, chromic acid and salts.¹²

Combination of these two dangerous substances, in diesel work materials, obviously increases their menace to workers. The advent of diesel engines in the railroad industry sharply raised the incidence of serious dermatitis among railroad workers. In a railroad shop or roundhouse practically everything is

⁹ Foerster, n. 8, pp. 235, 236; and see, Maloy, *Medical Dict. for Lawyers*, 27 (2d ed., 1951), defining “allergen” as “any substance which produces allergy or susceptibility,” and “allergy” as “unusual or increased susceptibility to a substance.” Foerster also mentions the importance of removing persons with allergenic sensitivities from any contact with the offending substance, and the severity of recurrences caused by re-exposure.

¹⁰ See, Sax, *Dangerous Properties of Industrial Materials*, 486 (Rev. ed., 1957), as to chromium compounds and for many detailed descriptions of common industrial substances. Chromium is listed as “Irritant 3 (high).” Petroleum is also listed as an acute irritant-toxic; kerosene, one of its derivatives, also is an irritant: See, *Rodgers v. Boland*, 92 F. Supp. 507 (D. C. Pa., 1950) (\$10,000 award to sailor for hand sensitization).

¹¹ Foerster, n. 8, p. 235.

¹² *Ibid.*

contaminated with petroleum products. As use of diesels has grown since the early 1940's, contamination by diesel fuel and chromate coolants has become an added danger.¹³

Beginning in 1931 the dangers of chromate compounds began to be known. Since the early forties and especially in the past ten years the dangers of diesel fuel oils and of chromates have been widely discussed in industry. One of the leading medical authorities on the subject, Dr. Louis Schwartz, has particularly conveyed this information to safety officials and attorneys in the railroad industry.¹⁴

Diesel fuel oil is a petroleum distillate. It dissolves skin oils and thus acts as a primary irritant. But sodium dichromate, an antioxidant (anti-corrosion material), used in diesel radiator cooling systems, is by far more commonly and more seriously the cause of contact dermatitis in railroad workers. Leakage, spillage and splatter endanger many workers besides those who work on the diesels themselves.¹⁵

Since 1946 sodium dichromate has been used in diesel engines, usually in powder containing 66% sodium dichromate, and 24% soda ash (both primary irritants) plus other chemicals. It often produces ulcers (open sores) on the hands, tongue, and mouth and nose septa. In the ordinary concentration of .08% it is a sensitizer. In 1947 its dermatic dangers first began to be

¹³ Cornbleet & Barsky, n. 8, p. 4.

¹⁴ See, below, the discussion of *Employer's Knowledge of Danger*. Dr. Schwartz is no relation to the co-author of this article.

As early as 1931 the *Journal of the American Medical Association* contained articles about skin sensitization by chromate compounds (in the printing industry). See, Issue of Oct. 10, 1931, cited in *Crowley v. Elgin, J. & E. Ry. Co.*, 1 Ill. App. 2d 481, 117 N. E. 2d 843 (1954) (a leading diesel contact dermatitis case). In 1939 a book by Dr. Schwartz (see below) and others discussed *Petroleum Dermatitis*. (Cited in the *Crowley* case.) In 1942 an article (Schwartz) in the *Journal of Industrial Medicine* dealt with dermatitis in air conditioning equipment work (also cited in the *Crowley* case). In 1945 the *J. A. M. A.* again posed the question of diesel fuel oils as a cause of dermatitis. (Issue of Aug. 25, 1945, "Queries" Section, also cited in the *Crowley* case). Thereafter many articles appeared in many publications (See note 3). Dr. Louis Schwartz is the retired Medical Director of the United States Public Health Service, now Dermatoses Consultant of West Disinfecting Company; the organizer in 1930 and until his retirement therefrom in 1947 the head of the dermatology department of U. S. P. H. S. (So described in the *Crowley* case). He is the author of the outstanding text on *Occupational Diseases of the Skin* (See note 3). From 1930 on he compiled and had published by the Government Printing Office, almost a dozen pamphlets on petroleum and derivatives, their effect on the skin, and protective measures. These were distributed in industry as well as published in medical and trade journals (Also cited in the *Crowley* case).

¹⁵ Cornbleet & Barsky, n. 8, pp. 2, 3.

generally known in the railroad industry.¹⁶ Another authority says that, as commonly used in a ratio of 50 oz. of compound to 100 gal. of water (1 to 384, or under 3/10 of one percent solution) it is harmful.¹⁷

Sensitization is reported in from 4 to 27% of exposed workers, sometimes not noticed until after comparatively long exposure to chromates. It tends to increase with re-exposure.¹⁸

Damages

The *definitions* above indicate generally the extent and duration of direct injury in dermatitis cases. Subsequent effects also are briefly indicated in the preceding discussion.

Healing may take weeks, months or years after removal from all contact with the causating substance(s). Period of disability also varies with severity or duration of an eruption when it first receives treatment and with duration and severity of exposure. A second attack usually is more severe and of longer duration. Even under therapy, recovery response usually is slow. Treatment includes bland ointments, wet dressings, x-rays, cortisone and corticotrophin (A. C. T. H.), the latter of which themselves involve some risk. Once sensitivity develops, it tends to increase, and is reactivated by many things, even by chrome furniture.¹⁹

Recurrence often follows re-exposure to chromates in photographic agents, resins, plastics, dyes, drugs, explosives, plants, cosmetics, cement, glue, leather, and other substances. Increasing industrial use of chromates, in many fields, aggravates the problem.²⁰ Pre-existing infections and skin diseases of other and non-chemical origin, and other diseases, seem to predispose blondes to dermatitis more than others; but this latter matter is not yet well settled.²¹

¹⁶ Ibid.

¹⁷ Described in Crowley case, n. 14; also in Evinger v. Thompson, 364 Mo. 658, 265 S. W. 2d 726 (1954) (another railroad dermatitis case).

It is sold under the trade name "No. 517" by Dearborn Chemical Company of Chicago, and under the trade name "Nalco" by National Aluminum Company, as well as by other companies. Usually it is a yellow powder or pellet.

¹⁸ See, Crowley case, n. 14; Evinger case, n. 17; Foerster, n. 8; Cornbleet & Barsky, n. 8.

¹⁹ Cornbleet & Barsky, n. 8, at p. 3; Foerster, n. 8, at p. 236.

²⁰ Ibid.

²¹ Ibid.; and Foerster, n. 8, at p. 237.

Previous skin trouble of other origin may increase sensitivity to dermatitis generally, while similar dermatitis of similar origin is accepted as definitely increasing sensitivity. Typically, a man who has had contact dermatitis and has returned to work is far more susceptible to dermatosis if reexposed.²² Thus one authority says that workers known to have "allergenic sensitivities should be placed at other work as promptly as possible and should not be returned to the same work because of the likelihood of early recurrences of greater intensity and extent than the original dermatitis."²³

At first mention this fact seems to suggest a logical defense against actions for traumatic dermatosis in industry. But on more careful scrutiny and thought exactly the opposite conclusion becomes apparent. A worker is "entitled" to his weaknesses, for one thing; and it is just as wrong to aggravate an incipient weakness as to inflict a new one. Knowledge on the part of an employer that a worker once had some kind of dermatosis (in the broad sense of that term) does not necessarily indicate certain sensitivity to industrial contact dermatosis unless the past cause is known to have been a chromate or petroleum compound. But it is a clear warning of danger, to the employer. If the employer does know the past attack to have been chromate or petroleum caused, then re-exposure of the employee to the same danger constitutes strong evidence of negligence. Nor (as is shown below) does the employee then "assume the risk" of such re-exposure.

Prevention of further exposure, by placing in "dry" jobs any employees with any history of dermatosis of any kind, is necessary in order to minimize both danger and damage.²⁴

Obviously the degree and duration of disability will vary from case to case.²⁵ See the typical awards, below (*Leading Cases*).

As to diminution of damages awards, for contributory negligence; see below (*Application of F. E. L. A.*).

²² *Ibid.*

²³ Foerster, n. 8, at pp. 236, 237.

²⁴ Cornbleet & Barsky, n. 8; Foerster, n. 8; Crowley case, n. 14; Evinger case, n. 17; various articles, n. 3; Notes, 1 *Curr. Med. Attys.* (8) 39, (5) 46; (6) 28 (1956). As to reactivation, see especially the record (T. 43, 158, 162, 167, 233-234) in *Evinger v. Thompson*, n. 17 above.

²⁵ See, Oleck, *Damages to Persons & Property*, Sec. 146 et passim (1957 revision); and cases discussed below.

Tests of Causation

Patch tests are valuable primarily in order to ascertain and confirm various causes of skin contact-sensitivity, and to distinguish them from primary irritation. These tests involve the placing of the suspect material or a .25% sodium dichromate solution on $\frac{1}{4}$ sq. inch of skin for one or two days. Positive test results usually occur in persons hypersensitive at the end of this time. They are more significant than negative reactions, but do not prove sensitivity to have existed prior to exposure. Not duplicating clinical exposure, they are not conclusive. Interpretation of results, on the basis of history and clinical findings, by medical experts, is necessary in each case. In conjunction with other data, patch tests do provide a most useful basis for medical expert testimony.²⁶

The traumatic origin of chromium and petroleum compound-caused dermatoses is clearly shown by the very nature of such chemical irritants, which are classed as *dangerous: viz.*, "toxic," "hazard," "acute," "irritant," "corrosive," "dangerous," etc.²⁷

It hardly needs to be added that investigation of the scene, of materials used, of customary practices in the work, etc., must be exhaustive.²⁸

Employer's Knowledge of Danger

As has already been mentioned, knowledge of the dangers of diesel fuel oil, chromates and other such railroad industry substances now is of nearly thirty years duration. In the railroad industry it now definitely is of at least ten years duration.²⁹ Certainly professional industrial engineers and safety supervisors should have had knowledge of these dangers by 1948, if they kept abreast of their duties at all. Today there is no ex-

²⁶ Note 24; and see articles cited in n. 3; also, Edmundson, Chrome Ulcers, etc. and Patch Testing, 17 *J. Invest. Dermat.* 17 (July 1951); Guy, Dermatologic Problems in the Railroad Industry, etc., 70 *Arch. Derm. & Syph.* 289 (Sept. 1954). Sometimes a patch test using the offending substance may be extremely hazardous. See, *Roberts v. Beitler*, 112 A. 2d 797 (N. J. 1955) (cleaning compound).

²⁷ Sax, *Dangerous Properties of Industrial Materials*, 486 (Rev. ed., 1957). See also, Symposium, *Relation of Trauma, Disease and Law*, 8 *Clev.-Mar. L. R.* 22 (1958).

²⁸ See works on negligence investigation techniques.

²⁹ Crowley case, n. 14.

cuse for ignorance, in the railroad industry and many other industries, of the dangers of these and kindred industrial materials.

Interesting evidence of awareness of the dangers on the part of the railroad industry is found in the following facts:

On Oct. 10, 1951, at the Morrison Hotel in Chicago, and under the auspices of the West Disinfecting Company (Railroad Dept., Charles S. Gravatt, Mgr.) there was held a "Conference Meeting on Occupational Dermatitis and Skin Irritations Among Railroad Shop Workers—Causes and Prevention." The speaker was Dr. Louis Schwartz, who has been described above. This was a National Safety Conference. Present as registered participants were the Claims Attorneys and Superintendents of Safety of some 130 railroads, as well as railway association and publication editors. In short, substantially all the railroads were there—and, presumably, listening.

Dr. Schwartz delivered a superb address, covering every aspect of occupational skin injuries in the railroad industry. Questions from the audience were answered. It was a good conference. Copies of the minutes were (and are still being) distributed to participants and to anyone whose name was on the sponsoring company's mailing list or who requested a copy.

On June 10, 1952, and lasting through June 12th, another conference, under the same auspices and with the same speaker, was held at the Mount Royal Hotel, Montreal, Canada. Its subject was "Dermatitis in Railroad Roundhouses and Machine Shops." The participants were the members of the Association of Railway Claim Agents as well as many railroad counsel.

Again, a comprehensive lecture and discussion was had. Copies of the minutes were distributed by the sponsor (and may be obtained on request from West Disinfecting Co., Railroad Dept.).

With these two published records of active discussion by safety supervisors, claim agents, and attorneys of the railroads, the railroads are clearly estopped to deny knowledge of the subject. Even without them, however, by this time the railroads cannot in decency pretend not to know facts of such wide general knowledge. They actually know, or should know. As a matter of law they must be presumed to know.

Discussed at the first conference were these matters:³⁰

³⁰ Schwartz, Occupational Dermatoses, etc. (Oct. 10, 1951, West Disinfecting Co. pamphlet.)

Causes of Dermatitis Among Machinists and Helpers,³¹ Electricians and Helpers,³² Boiler Makers and Helpers,³³ Sheet Metal Workers,³⁴ Laborers,³⁵ and Railroad Shop Workers.³⁶

Discussed at the second conference were these matters:³⁷

Machine Shops, Round House Inspection, Causes of Dermatitis Among Various Types of Work, Prevention of Dermatitis Among Railroad Shop Workers, Protective Clothing, Washing Facilities, Protective Ointments, Education of Workers, and Treatment.

Final proof of knowledge on the part of the railroads is found in their changing practices. Many now have discontinued use of chromates in diesels, while others forbid direct handling of chromates by employees. Borates, nitrates and nitrites are being substituted for chromates as rust inhibitors in some cases. Protective clothing is required. Clear, though tacit acknowledgment of awareness of the danger is becoming evident.³⁸ A decline in the number of injuries also has occurred.³⁹

- | | | |
|----|--|--|
| 31 | "Diesel Fuel Oil
Crankcase Oils
Greases
Petroleum Solvents
Carbon Tetrachloride
(and cutting oils) | Trichlorethylene
Chromates
Soda Ash
Caustic Soda
H ₂ SO ₄ (Sulphuric Acid)
HCL (Hydrochloric Acid)" |
| 32 | "Degreasers
Petroleum Solvents
Chlorinated Hydrocarbons
Halowax
(and chlorinated Napthalenes) | Acids
Battery H ₂ SO ₄
Soldering HCL
Zinc Chloride
(and fluorides)" |
| 33 | "Petroleum Oils
Diesel
Crankcase | Oakites
9. 32. 50.90
(and anti-rust coolants)" |
| 34 | "Hydrochloric Acid
Zinc Chloride
Oakites
Lex. Sol.—Emulsified Petrol. Solvent" | Fluxes
Fluorides
(and solvent cleaners) |
| 35 | All those given in the above charts, plus
"Lye Vat Cleaners
Car Body Cleaners" | Disinfectants |
| 36 | "Lack of Proper Cleansing Facilities
Inadequate and Distant Wash Bowls
Lack of Proper Industrial Cleansers
The Use of Irritant Petroleum Solvents
Irritant Chlorinated Hydrocarbon Solvents as skin cleansers
Lack of Clean Towels, Wipe Cloths or Clean Waste to Dry Hands." | |
| 37 | Schwartz, Dermatitis in Railroad Roundhouses, etc. (June 10-12, 1952, West Disinfecting Co. pamphlet). | |
| 38 | Schwartz, n. 30, 37; Cornbleet & Barsky, n. 8, at p. 5. | |
| 39 | Ibid. | |

Adequate Safety Measures

In his list of Causes of Dermatitis Among Railroad Shop Workers (above), Dr. Schwartz indicates the general minimum safety measures required, by implication. Here, and in lists made by other authorities, one factor always appears: *Safety depends on removal from exposure to the offending substances, and on then staying out of direct contact, or at least in minimizing any contact duration or concentration.*

One late list of adequate safety measures, as to chromate salts, is as follows: ⁴⁰

- “1. Wearing of rubber gloves, rubber boots, waterproof aprons and sleeves, and use of protective creams. (*Sic!* How can a man work thus swaddled?) ⁴¹
2. Workers found sensitive to chromates should be removed from all possible contact with these chemicals.
3. Leaks in the diesel radiator system should be repaired promptly by adequately protected personnel and all contaminated parts should be thoroughly washed.
4. The use of substitute radiator coolants with less sensitizing potential than dichromate solution.
5. Redesign of diesel locomotives to afford minimum chance for contamination with sensitizing chemicals while filling and draining the radiators.”

A more general list, for all railroad dermatitis cases (by Schwartz) mentions most of the above items, plus: ⁴²

Adequate, and strategically placed wash basins (never over 50 ft. from the work place), Proper cleansers, such as Lan-O-Kleen or Sulpho-Cleaner, Liquid soap dispensers above wash bowls, Adequate hot and cold water, Paper towels, Use of special protective ointments for special chemicals,⁴³ Goggles and masks, Education of workers, Inspection of roundhouses.

⁴⁰ Cornbleet & Barsky, n. 8, at p. 5.

⁴¹ See n. 3; Schwartz, Mason & Albritten, *Method for the Evaluation of Protective Ointments*, 15 *Occupational Med.* 376 (Apr. 1946).

Obviously a machinist or mechanic cannot make nice adjustments on a dial, nut, valve or other machine part while wearing this regalia, especially gloves. He is almost compelled to remove at least the gloves in order to do his work properly.

⁴² Notes 30, 37.

⁴³ Dr. Schwartz, in his lectures, suggested: West #55 or #56 for alkalis, oakite, acids, chromates; West #33 or #23 for petroleum oils and solvents; West #88 for heavy coal tar distillates such as creosotes; West #77 for poisonous plants; etc.

Employer's Duty to Warn and Protect

Where substances are generally known to be dangerous, or the knowledge is generally available (as with chromates and petroleum derivatives today), an employer using them has a duty to warn and protect his employees using them.⁴⁴ The employer is presumed to be familiar with the dangers, latent as well as patent, ordinarily accompanying his business.⁴⁵ The employer's actual ignorance is no excuse.⁴⁶ And the fact that the plaintiff is the first employee to suffer injury (dermatitis) is no defense.⁴⁷ The duty arises when the employer has reason to know that some employees might be injuriously affected, even though the average man might not be seriously affected.⁴⁸ Nor does the fact that only a few people are predisposed to sensitization (allergenic reaction) relieve the employer of the duty to warn and protect the group of employees.⁴⁹

The fact that the substance itself (i.e., its container or package) carried a warning is competent evidence on the issues of

⁴⁴ Baumgartner v. Penna. R. R. Co., 292 Pa. 106, 140 A. 622 (1928) (gas); Mooney v. Monark Gas & Oil Co., 317 Mo. 1255, 298 S. W. 69 (1927) (gasoline fumes in clothing); Middlebrooks v. Atlanta Metal Casket Co., 63 Ga. App. 620, 11 S. E. 2d 682 (1940) (lead fumes); Musgrave v. Great Falls Mfg. Co., 86 N. H. 375, 169 A. 583 (1933) (bleach); Adams v. Grand Rapids Refrig. Co., 160 Mich. 590, 125 N. W. 724 (1910) (enamel mfr.); Tissue case, below, n. 45; Urie case, below, n. 47; Young case, below, n. 47; Boal case, below, n. 45; Maty case, below, n. 45; 56 C. J. S., Sec. 248, pp. 1002, 1003; 39 C. J. 491, Sec. 604; Foerster, n. 23.

⁴⁵ Wagner v. H. W. Jayne Chemical Co., 147 Pa. 475, 479, 23 A. 772, 773, 30 Am. St. Rep. 745 (1892) (acid fumes); Tissue v. B. & O. R. Co., 112 Pa. 91, 3 A. 667 (1886) (dynamite explosion); Middlebrooks case, n. 44, Amer. Sand & Gravel Co. v. Reeves, 168 Miss. 608, 151 S. 477 (1933) (asphalt paint explosion); Boal v. Elec. Storage Battery Co., 98 F. 2d 815 (C. C. A. 3, Penna., 1938) (battery acid, lung cancer); Maty v. Grasselli Chem. Co., 98 F. 2d 877 (C. C. A. 3, N. J., 1938) (soda ash inhalation in glass plant).

⁴⁶ Middlebrooks case, n. 44, cf., 39 C. J. 491; Beard v. Georgian Mfg. Co., 8 Ga. App. 618, 70 S. E. 57 (1911) (heavy weight, lifting); Harvey v. Welch, 86 N. H. 72, 163 A. 417 (1932) (radiator cleaning acid).

⁴⁷ Urie v. Thompson, 337 U. S. 163, 69 S. Ct. 1018, 1028, 1029, 93 L. Ed. 1282 (1949), revg. 352 Mo. 219, 176 S. W. 2d 471 (locomotive sander silicosis); Young v. Penna. R. R. Co., 197 F. 2d 727 (C. A. 2, N. Y., 1952) (dining car cleansers); Baumgartner v. Penna. R. R. Co., 292 Pa. 106, 140 A. 622, 624 (1928) (gas); Fritz v. Elk Tanning Co., 258 Pa. 180, 101 A. 958 (1917) (tannery fumes); Grammar v. Mid-Continent Petroleum Corp., 71 F. 2d 38 (C. C. A. 10, Okla., 1934) (oil refinery still cleaner, lung trouble).

⁴⁸ Musgrave v. Great Falls Mfg. Co., 86 N. H. 375, 169 A. 583 (1933) (bleach); Bianchi v. Denholm & McKay Co., 19 N. E. 2d 697 (Mass. 1939) (allergy & cosmetic); Boal case, above, n. 45; Pieczonka v. Pullman Co., 89 F. 2d 353 (C. C. A. 2, N. Y., 1937) (silicosis); The Jefferson Myers, 45 F. 2d 162 (C. C. A. 2, N. Y., 1930); Restatement, Torts, Sec. 461.

⁴⁹ Musgrave case, above, n. 48; Boal case, above, n. 45; Pieczonka case, above, n. 48; Bianchi case, above, n. 48; Fritz case, above, n. 47.

the dangerous nature of the substance.⁵⁰ Of course it is strongly cumulative evidence of knowledge of danger.

Generally, except in clear cases of knowledge or a duty to know, the courts have held that the question of "knowledge, actual or constructive of the alleged inadequacies" is one of fact, for the jury.⁵¹

Application of F. E. L. A.

Federal Employers' Liability Act coverage includes injuries in the nature of occupational diseases, and is not limited to injuries resulting from accidents.⁵²

It now is well settled that contact dermatitis is one of the types of occupational diseases which creates liability under the F. E. L. A.⁵³

Assumption of risk has been utterly abolished as a defense under the F. E. L. A., by amendment in 1939.⁵⁴ This means that an employee who knowingly works with such substances as chromates, or knowingly neglects to use protective supplies, is not barred from recovery even after warning or knowledge have come to his attention.⁵⁵ But the F. E. L. A. provides that if an employee has been guilty of *contributory negligence* his damage recovery will be diminished proportionately.⁵⁶ In effect this is the comparative negligence rule but only as to the amount of damages.⁵⁷

⁵⁰ See, *Elizabeth Arden, Inc. v. Brown*, 107 F. 2d 938 (C. C. A. 3, Penna., 1939) (mislabeled package); *Genesee County Fire Relief Assn. v. L. Sonneborn Sons*, 263 N. Y. 463; 189 N. E. 551, aff. 240 A. D. 752, 265 N. Y. S. 927 (1934) (chemical container, improper label).

⁵¹ *Urie case*, n. 47, at 337 U. S. 178.

⁵² *Urie case*, n. 47 (silicosis case), pp. 180, 181, 186, 187; cf., *Sandowski v. L. I. R. R. Co.*, 292 N. Y. 448, 455 (silicosis case).

⁵³ *Young v. Penna. R. R. Co.*, 197 F. 2d 727 (C. A. 2, N. Y., 1952) (use of cleansers); *Crowley v. Elgin, J. & E. R. Co.*, 1 Ill. App. 2d 481, 117 N. E. 2d 843 (1954), cert. den. 348 U. S. 927 (diesel fuel oils and coolants); *Evinger v. Thompson*, 364 Mo. 658, 265 S. W. 2d 726 (1954) (diesel fuel oils and coolants).

⁵⁴ 45 U. S. C. A., Sec. 54; and see, *Tiller v. Atlantic Coast Line R. Co.*, 318 U. S. 54, 67, 63 S. Ct. 444, 87 L. Ed. 610 (Va. 1943), 143 A. L. R. 967; *Hughes case*, n. 57; *Graham case*, n. 57; *Thomas v. Union Ry. Co.*, 216 F. 2d 18 (C. A. 6, Tenn. 1954).

⁵⁵ *Ibid.*; *Crowley case*, n. 53; *Young case*, n. 53.

⁵⁶ 45 U. S. C. A., Sec. 53; *Young v. Penna. R. R. Co.*, n. 53 above.

⁵⁷ *Cases in n. 54*; *Albertson v. Chi., N., St. P. R. R. Co.*, 242 Minn. 50, 64 N. W. 2d 175 (1954), 42 A. L. R. 2d 1044; *Springer v. Southern Pac. Co.*, 145

(Continued on next page)

Forms of Pleading

A complaint (petition) under the F. E. L. A. of course should allege the applicability of that statute.⁵⁸ It seldom is practicable to deny this allegation, in the answer, in most cases where it is found.⁵⁹

The answer, of course, may allege due care, and contributory negligence of the plaintiff (if so), as well as such special defenses as release and satisfaction.

Interrogatories should be detailed. One major admission should be called for almost every time—the fact that the defendant's representatives attended the Conferences addressed by Dr. Schwartz, described above, and thus had knowledge or notice of the danger (See *Employer's Knowledge of Danger*).⁶⁰

Statutes of Limitations and Recurrences

The effect of the F. E. L. A.'s three-year period of limitations is clearly stated in the *Urie* case.⁶¹ The rule is, for occupational disease cases, that injury (and a cause of action) accrues when the accumulated effects of the harmful substance become mani-

(Continued from preceding page)

Calif. App. 2d 640, 302 P. 2d 872 (1956); *Gulf, C. & S. F. Ry. Co. v. Blanton*, 284 P. 2d 736 (Okla. 1955); *Graham v. Atlantic Coast Line R. Co.*, 240 No. Car. 338, 82 S. E. 2d 346 (1954); *Hughes v. Terminal R. Assn. of St. L.*, 296 S. W. 2d 59 (Mo. 1956).

⁵⁸ See forms in *Oleck, Negligence Forms of Pleading*, 498, Sec. 274, et passim (1957 revision).

An example is the following (from the files of a plaintiff's law office in Cleveland):

"3. For a long period of time prior to and including Feb. 17, 19____, and thereafter, the defendant used in its . . . diesel shops, in and about its diesel locomotives, certain oils, greases, solvents and chemical solutions containing harmful substances irritating and infectious to the skin, reasonably likely to cause systemic and organic damage, skin eruptions, rash, ulcers and dermatitis to persons coming in contact therewith, when the defendant knew, or, by the exercise of ordinary care should have known, of the dangerous characteristics of said materials.

"4. The defendant so negligently used and continued to use said oils, greases, solvents and chemical solutions, and so negligently maintained and operated its . . . diesel shops and equipment therein, and so negligently failed to provide plaintiff with a safe place in which to carry on his work, that plaintiff was exposed to and came in contact with said materials and was caused to contract dermatitis."

(Then it may be well to add a denial of contributory negligence.)

⁵⁹ *Ibid.*, *Oleck*, p. 87, et passim.

⁶⁰ At n. 29—37.

⁶¹ *Urie* case, n. 47.

fest.⁶² The argument that every contact before injury became manifest is a fresh cause of action was rejected, as it would limit damages to the aggravation of a progressive injury traceable to the immediately preceding period of time, and would bar suit for an employee who left (or was transferred from) the exposed work more than three years before discovering the injury.⁶³ It is the new manifestation of injury that starts the statute running.

Thus, knowledge of the injury (or of reappearance of symptoms in the case of an employee re-exposed after a past dermatitis) starts the statute running. A first attack of dermatitis, or a renewal (in re-exposure cases) starts a new cause of action and a new period of limitations. Re-exposure, after settlement and release of a claim for an attack, starts a new cause when a new manifestation of injury occurs.

Leading Cases

Crowley v. Elgin, J. & E. Ry. Co. (1954)⁶⁴ is perhaps the ruling case on the subject. Three plaintiffs there, all suffering from contact dermatitis caused by diesel fuel oil and chromate solution coolants, received verdicts, one for \$42,800 (reduced by remittitur of \$22,800), one for \$19,500 (reduced by remittitur of \$9,500), and one for \$28,900 (reduced by remittitur of \$18,900). The preceding discussion draws heavily from the excellent opinion in this case, which examines the medicolegal problem in detail.

Evinger v. Thompson (1954)⁶⁵ is another F. E. L. A. case involving dermatitis caused by contact with sodium dichromate used as a rust inhibitor in diesel engine cooling systems. It was held that the defendant's knowledge of the danger was a jury question, even if the substance was not injurious to everyone. It is enough (to go to the jury) if the substance "could cause injury to a considerable number" of those who come in contact with it.⁶⁶ If sensitization occurs, this is enough to require damages for loss of earning capacity. But the plaintiff, of course, is under

⁶² *Urie v. Thompson*, 337 U. S. at 170; 69 S. Ct. at 1024.

⁶³ *Ibid.*

⁶⁴ Discussed above at n. 14, 17, 18, 24, 29, 53, 55.

⁶⁵ Discussed above at n. 17, 18, 24, 53; Pound, Note, 14 NACCA L. J. 168 (Nov. 1954).

⁶⁶ Cf., *Arnold v. May Dept. Stores Co.*, 337 Mo. 727, 85 S. W. 2d 748 (1935) (hairdye); *Anno. on Unusual Susceptibility to Injury*, 26 A. L. R. 2d 963, 973-979; *Gerkin v. Brown & Sehler Co.*, 177 Mich. 45, 143 N. W. 48, 53, 48 L. R. A. (N. S.) 224 (1913) (dyed fur coat).

a duty "to minimize avoidable consequences."⁶⁷ Excellent discussion of the medicolegal problem. \$35,000 verdict, affirmed for \$25,000 on remittitur of \$10,000.

Roderick v. St. Louis S. W. Ry. Co. (1957),⁶⁸ is a late case on railroad diesel shop contact dermatitis. There, a 49 year old electrician's helper suffered skin injury from sodium dichromate in diesel cooling systems. He no longer could work in contact with solvents, greases, oils, turpentine and other agents. His hands were sensitized and his nails had come off several times. He was held not to be guilty of contributory negligence as a matter of law, for continuing to work after a doctor had told him the cause of his skin ailment and advised him to avoid contact. A \$45,000 verdict was reduced to \$15,000 by remittitur, and so affirmed. This was a Missouri case, and Missouri courts are well known to be very frequent users of remittitur powers.

Elmore v. Missouri Pacific RR. Co. (1957),⁶⁹ another late case, reversed a \$25,000 verdict for the plaintiff, and remanded the case for new trial, because of prejudicial error in the trial court's instructions to the jury. The instructions had said, in effect, that the employer must be held liable if he had permitted the dangerous substance (again the sodium dichromate coolant in diesel engines) to become deposited in and about the place of work. In effect this directed a verdict against the defendant for merely using the dangerous substance while knowing of its danger. The real test (said the court) is whether the employer furnished a safe place to work by exercising reasonable care to make it safe. While the F. E. L. A. provisions bar the defenses of contributory negligence and of assumption of risk where the risk is known or knowable, in order to recover on the theory of negligence the claimant must show that his employer *was* negligent. The practical question that comes to mind then (after all the experience and cases now available in 1958), is this—*Is it not now very nearly dangerous per se (negligent per se on the employer's part), for employees to have to use known-to-be-dangerous-and-hard-to-control chromates, at all?*

⁶⁷ Cf., *Phegley v. Graham*, 358 Mo. 551, 215 S. W. 2d 499, 505, 6 A. L. R. 2d 382 (1948).

⁶⁸ *Roderick v. St. Louis S. W. Ry. Co.*, 299 S. W. 2d 422 (Mo., 1957).

⁶⁹ *Elmore v. Missouri Pacific RR. Co.*, 301 S. W. 2d 776 (Mo., 1957); cf., 56 C. J. S. Master and Servant, Sec. 214 (a), p. 922; 35 Am. Jur. 550, Master and Servant, Sec. 121; *Mather v. Rillston*, 156 U. S. 391, 398, 15 S. Ct. 464, 467, 39 L. Ed. 464 (1895) (storage of explosives); *Spahn v. Peoples Ry. Co.*, 3 Boyce (Del.) 302, 83 A. 27 (1912); 3 Stevenson, Law of Negligence (in Atlantic States) Sec. 837, 840 (1954, & 1957 cum. Supp.).

These seem to be the main case decisions on contact dermatosis in railroad shop injuries, to date. Other appealed cases, involving other industries and the same type of injury, are not numerous either.⁷⁰

Most of the claims now are being settled, because the railroads are hesitant to risk substantial jury verdicts and then to attempt to obtain remittiturs. As is plain, from the above cases, all the reported decisions have been plaintiffs' verdicts. The decisions are characterized by remittiturs, rather than by doubts of liability where any negligence of an employer in protecting employees is shown.

Conclusion

Employers today must be presumed to know of the dangerous nature of many chemicals which produce contact dermatitis, as well as respiratory and other injuries. Among the known-to-be-dangerous substances are such things as chrome compounds, lead compounds, petroleum compounds, and many others. The danger of sensitization by these substances also must be presumed to be known.

It follows that an employer is legally bound to take all reasonable possible precautions to protect his workers from such injuries. Whether or not he has taken adequate precautions is a question of fact, for the jury. If he has taken no special precautions, he may be guilty of negligence as a matter of law.

⁷⁰ See: *T. M. Crutcher Dental Depot, Inc. v. Miller*, 251 Ky. 201, 64 S. W. 2d 466 (1933) (chromates); *Cell v. Yale & Towne Mfg. Co.*, 281 Mich. 564, 275 N. W. 250 (1937) (chromates); *Ramsey v. Bendix Aviation Corp.*, 314 Mich. 169, 22 N. W. 2d 256 (1946) (chrome plating fumes, bronchiectasis connection not clear); *Sutkowski v. Mutual Chem. Co. of Amer.*, 115 N. J. L. 53, 178 A. 71 (1935) (chromates); *Natural Products Ref. Co. v. Court of Com. Pl. Hudson County*, 123 N. J. L. 522, 10 A. 2d 148, affd. 125 N. J. L. 309, 15 A. 2d 754 (1940) (chromates); *Repka v. Fedders Mfg. Co.*, 264 N. Y. 538, 191 N. E. 553 (1934) (chromates); *Shoemaker v. Electric Auto Lite Co.*, 69 Ohio App. 169, 41 N. E. 2d 433 (1942) (chromic acid fumes).