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(1947)

SUMMARY FOR 1946 OF WORK OF INDUSTRIAL HEALTH SECTION

Surveys conducted by Industrial Hygiene Laboratory	40
Analyses made in Laboratory	2,494
Home Office Inspections	62
Travel Credit	$2,405.26
Special inquiries handled by mail or conference (An increase of approximately 125% over 1945)	675
Literature sent (Industrial Health Series)	3,684
Publications completely revised	2
Publications slightly revised	1
Leaflets revised	2
Other publications written and published	3
Conferences in Home Office	80
Field visits to Groups	14
Other field visits	36
Meetings attended by staff	61

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Dr. Lanza has been made a member of the Board of Trustees of the Trudeau Sanatorium and Foundation.

A ventilation engineer is now available in the Laboratory of Industrial Hygiene for consultation in planning new ventilation and exhaust systems and necessary revisions of those in use.

We have secured the services of another chemist in the Laboratory.

The following are a few of the more outstanding research jobs conducted by the Laboratory.

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The Rochester Gas and Electric Company was visited by Mr. Feiuel to outline and supervise a program for the study of atmospheric dusts and gas pollution. The company is planning to erect a new steam electric generating plant which will take about two years to build. The Metropolitan is to make studies each season of the year of the normal dust counts and supervise the study of the dust fall and sulfur dioxide concentrations in the City of Rochester before the erection of the plant. After completion of the plant and when it is in production, we are to supervise check studies to see if the plant causes any pollution of the air which will be detrimental to the health of people living in the vicinity of the plant. The Metropolitan was asked to do this work by the Rochester Gas Company on the advice of the Republic Steel Corporation for whom similar work has been done.

A study was made of the possible exposure of employees to hydrogen fluoride generated by the addition of sodium fluoride to molten steel when pouring rim heat. The study was made over a prolonged period to determine the extent of the exposure of employees before this method of making steel was put into operation. Recently a strike was called at the Ford Motor Company due to complaints of employees who had been exposed to the irritating fumes of hydrogen fluoride generated at a similar process. It is interesting to note that before any new process is developed or any new materials are used in the plants of the Republic Steel Corporation, the company requests the Metropolitan to make a study to determine the existence of any possible health hazards.

Tests were conducted on certain days of the week for three consecutive weeks in the carding room of the Manville, New Jersey plant of the Johns-

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Manville Corporation to determine the dust pollution that could be expected when carding and spinning four different mixtures of asbestos and cotton. This is another example of tests being made by the Industrial Hygiene Laboratory of contemplated processes in the plants of our Group policyholders before being put in production to eliminate any potential health hazards.

Triethylene Glycol Study

In certain areas in the new building (Unit 1) the air supplied to the sections is treated with triethylene glycol as a method of air sterilization. We have taken air samples in the sections with the impingers and absorption tubes and made quantitative triethylene glycol determinations. Considerable work was done in checking and adapting the analytical method used. By adapting a special filter, we were able to use our Electrophotometer in the analytical work in these determinations.

The results of our study to date indicate that the concentration of triethylene glycol vapors in the atmosphere is not at the optimum quantity and, therefore, no positive results are indicated nor can they be expected until the triethylene glycol concentration is increased until it reaches the bactericidal or killing range.

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Another paper by Dr. McConnell entitled "Summary of Twenty-Two Trinitrotoluene Fatalities in World War II" appeared in the May 1946 number of the "Journal of Industrial Hygiene and Toxicology".

Conferences

During the year, Dr. Lanza held sixty-two conferences and Dr. McConnell held eighteen, in the office with representatives of our Group policyholders and others from health organizations.

Field Trips

Dr. Lanza visited the plants of twelve of our Group policyholders and conferred with management regarding nursing service, poor claim experience or other matters of interest. Among policyholders visited were the Corning Glass Company, the General Electric Company, the General Motors Corporation, Johns-Manville Company and the American LaFrance Foamite Company. Dr. Lanza also made thirty-six other field trips during the year for the purpose of conferring with the executive staffs of health organizations, Government bureaus, universities, other insurance companies, etc. regarding methods of improving the health of industrial employees. Some of the more important of these trips were for the following purposes:

He had a conference with Dr. Dudley Irwin in Pittsburgh concerning the future activities with respect to the aluminum treatment of silicosis.

He visited a number of Group policyholders on the Pacific Coast during the first part of July when he attended the annual meeting of the American Medical Association at San Francisco.

ANNUAL REPORT

INDUSTRIAL HEALTH SECTION

1946

Plant Surveys

The Laboratory of Industrial Hygiene conducted forty surveys of health conditions in the plants of our Group policyholders. Although this is a reduction in the number of plants surveyed last year, the individual plants surveyed were larger and employed a greater number of employees. Also, the initiation of a very large project - the surveying of approximately one hundred and twenty plants of the General Electric Company - as well as surveys of several other companies could not be included in this year's schedule due to the transportation strikes which held up for weeks trunks containing equipment and samples collected in the previous surveys.

A typical plant survey report includes a description of the processes, plant construction and layout, plant housekeeping and personal facilities; discussion of methods of sampling and analyses; chemical analyses and other findings of the samples collected; and recommendations for control of any health and safety hazards found. Attention is also called to safety hazards. A section of the report discusses the health hazards found - symptoms, toxic concentrations, treatment, etc.

The samples collected in the plants and sent to the Home Office Laboratory necessitated making 2,494 separate analyses. Exclusive of such environmental factors as defective illumination, inadequate local and general ventilation, and sanitary defects, a total of 42 different substances known

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to affect adversely the health of exposed workers was detected. These consisted of dusts, such as silica (which is by far the most prominent), asbestos, lead, manganese; solvents, such as carbon disulphide, tetrachlorethane, trichlorethane, trichlorethylene, benzol, toluol, ethyl, methyl and butyl acetate, amyl and ethyl acetate, naphtha, as well as hydrofluoric, hydrochloric, and sulfuric acids.

A number of new instruments were purchased for the Laboratory during the year in order to facilitate and expedite the survey work and to attain the best possible accuracy in determining hazardous exposures. These are a mercury vapor detector, a sound meter used to determine noise levels, and a Geiger-Muller meter for measuring radiant energy.

A ventilation engineer is now available for consultation in planning new ventilation and exhaust systems or necessary revisions of those in use.

Home Office Inspections

The Industrial Health Section and the Laboratory of Industrial Hygiene has continued to make periodic sanitary and industrial hygiene inspections of the Commissary Division. These inspections include methods of preservation of food, refrigeration, food handling and disposal, dish washing, vermin control and cleanliness generally.

The office has also continued to be of assistance in such work operations as paint spraying, lead soldering, welding and other operations where solvents and toxic materials are employed throughout the building.