A survey on work absenteeism in a Swiss factory

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I. Background of the survey

Increasing consideration is being paid to-day to work absenteeism in consequence of the recognition of its significance in connexion with industrial productivity, the health of the individual, the life of the "group" and the social climate of the factory.

Present research tends to concentrate on two aspects of the problem: the recording of absenteeism and the use of absenteeism rates for comparative purposes.

Progress, however, appears hindered by obstacles such as the difficulty of assessing the role of the numerous and intermingled factors involved in the picture, the establishment of standard definitions, the utilization by the people concerned of common patterns for the classification of absenteeism-causing illness.

Despite considerable scepticism expressed about the scope and possibilities of research, experimentation on absenteeism recording still appears to be the first step necessary toward, for example, the solution of the more complicated problem of comparison, which solution must rest upon a practical system of determination of where, when and under what conditions absenteeism is occurring.

The aim of the survey reported here was to try to make a contribution to the problem along the lines mentioned above. In addition, the author found further inducement in the existence of so far practically untouched opportunities to study absenteeism in the somehow unique social environment of a Swiss factory.

The investigation took place in Geneva during the year 1955 at the "Ateliers de Sécheron", an industrial concern established in 1891, which produces electrical engines and equipment for railway machinery, for other forms of transportation and for electric power stations, and manufactures welding apparatus.

The following broad outline considers those features of Sécheron which may be said to be common to most Swiss concerns of the same category, as well as those peculiar to the factory concerned.

In 1955, the working population totalled 978 persons, comprising 350 skilled workers, 250 unskilled workers, 68 apprentices and 310 clerical and other staff (including 30 women).

The work is carried out in about 12 shops housing departments for carpentry, welding, manufacture of heavy parts, sheet metal work, coil winding, assembly and testing of heavy static equipment, locomotive assembly, manufacture of electrodes, sheet-steel cutting, high voltage laboratory, chemistry and metallography laboratories and welding school.

Work hazards include risks of burns, and electrical and other accidents. Among

the chemical hazards are those arising out of the use of acids in the manufacture of electrical engines, and those connected with the welding process.

Two hundred and fifty four days of $8^{8}/_{10}$ hours and 49 Saturdays of 4 hours were worked in 1955, totalling 303 workings days, which is equal to 2,431 hours and 12 minutes.

With the exception of Saturdays when the workers left at 11 a. m., the timetable observed during the week was from 7 a. m. to 12 noon and from 1.42 p. m. to 5.30 p. m. – a total of 48 working hours. Work at the factory is based on a single shift and only a very small group of workers have night duties.

Wages are paid once every two weeks. Bonus and other incentive systems are part of the factory's policy. Wages may be considered satisfactory and the standard of life relatively high. Skilled workers earn on an average about Sw. Fr. 600–700 a month (approximately £51–£60).

As far as the administration of the factory is concerned, the company has an executive body at the top level and, below this, a director-general who is responsible for the functioning of the factory, including the accounting, operating, production, inspection, technical and public relations units.

The supervisory organization is of the type to be encountered in other Swiss or, one might say, European factories of the same type and size and the administrative set-up ranges from the top executive down to the worker through managers, superintendents, chiefs of divisions, departments and sections, and foremen.

Social and welfare schemes play an important role in the life of the factory. In Switzerland, largely owing to the existence of good economic conditions and the consequently high standard of living of the population, national insurance is comparatively less developed than in other European countries. In this connexion Sécheron, like other Swiss factories, runs some social and welfare services, aiming at complementing the partial coverage of the worker against financial loss caused by interruption of earning capacity, provided by the national insurance schemes.

Sécheron factory provides children's allowances, birth, death and marriage grants, encourages thrift by a non-profit banking service, has an assistance fund, a fund for helping towards the further education of its personnel's specially gifted children, and also runs a pension scheme.

Furthermore, the company has set up near to the factory a welfare centre which has a canteen, showers, a library and other recreational facilities, and has also built a group of houses to be rented by the workers at economically feasible prices.

It should further be pointed out that all these services provided by Sécheron are administered by boards on which the workers are actively represented.

With regard to the factory medical service, like most Swiss workplaces Sécheron has no industrial medical officer, but it has an infirmary staffed by two nurses who might be called "multi-purpose" workers because, having received a basic training in both the medical and social fields, they deal with first aid as well as with the employees' social problems.

One special feature of the social environment of Sécheron factory which offers great potentialities for observation and comparison is that of the different origins of the workers: the French-Swiss, the German-Swiss and the Italian-Swiss.

The objectives of the survey can now be stated more precisely than was possible at the beginning of this report. They were:

1. to record throughout the whole of 1955 work absenteeism due to sickness, occupational diseases, non-industrial and industrial accidents, leave with permission, unjustifiable absences, annual leave and leave for military service, of a statistically significant sample of the working population;

2. to measure and compare sickness absenteeism among young persons,

skilled workers and unskilled workers, using an ad hoc prepared system of classification of diseases;

3. to try to evaluate the relationship between, on the one hand, absenteeism and, on the other hand, the age, civil status and origin of the worker;

4. to assess the annual and weekly incidence of sickness absenteeism.

A form recently used by the Swedish Employers' Confederation in connexion with a national survey on absenteeism, which was kindly provided by Professor *S. Forssman*, Medical Adviser to the Swedish Employers' Confederation, was used as a model for the collection of data.

The following features of the Swedish system for absenteeism recording are worth noting: only a 10 per cent sample of the working population was included in the survey; this was obtained by drawing up the above-mentioned form for every worker born on the 5th, 15th or 25th of any month.

All staff who did not work the normal working hours of the undertaking, provided their working time did not exceed 40 hours per week, were considered as part-time workers. The normal working time was noted day by day and expressed in hours or parts of an hour, for example, 8.5 hours from Monday to Friday and 5.5 hours on Saturday. The absence of the worker was recorded for each day by putting abbreviations expressing the reason for absence in the same squares where the normal working time was recorded. Absences fell under the following 8 headings:

1. sickness and non-industrial accidents
2. industrial accidents and occupational diseases
3. pregnancy or confinement
4. military service
5. annual leave
6. time off for personal reasons granted by the employer at the request of the worker
7. interruption of work due to events outside the control of the worker, such as: breakdown of machinery, lack of raw materials, lack of orders, etc.
8. unjustifiable absence, including any absence from the workplace for reasons other than those mentioned in the first 7 groups

The instructions for the compilation of manpower statistics specified that the above-mentioned notations were to be made daily and only absences exceeding half the normal working day were to be reported.

Finally, the form on which information about census registration, civil status and other personal particulars, together with details of the type of occupation, shift work, the remuneration system, etc. was to be entered was divided into two parts. The first sheet related to the first and third quarters of the year and the second sheet to the second and fourth quarters, thus facilitating the preparation of quarterly reports without disturbing the normal daily filling in of the blanks on the form.

The technique followed in the survey reported here differed slightly from the Swedish procedure. In consideration of the relatively small number of workers at the Sécheron factory, larger samples of its personnel were taken by considering all the skilled and unskilled workers born on alternate days throughout the month, that is, a theoretical 50 per cent of these two groups. Of the 68 apprentices 50 were included in the survey.

As the survey dealt only with male workers, the heading "absenteeism due to pregnancy or confinement" was, of course, omitted, but this heading was replaced by splitting into two the group "sickness and non-industrial accidents". When recording absenteeism, every absence from the workplace was taken into account regardless of the length of the absence, and in assessing absenteeism the working time lost was expressed in terms of minutes in order to make the calculations as precise as possible and to facilitate the process of evaluation.

Table No. 1 **Age and Professional Distribution of the Population Surveyed**

Age Groups	Total	Appren-tices	Skilled workers	Unskilled workers
All ages	296	50	113	133
Under 20 years	50	50	0	0
20–29 years	56	0	40	16
30–49 years	134	0	44	90
50 years and over ..	56	0	29	27

II. The results of the survey

Work absenteeism is considered in turn for each of the reasons already listed. The procedure followed in the presentation of the results has been to report separately data for the whole group of employees surveyed and then for each of its three categories, that is, apprentices, skilled workers and unskilled workers.

During the year 1955, 50 apprentices, 113 skilled workers and 133 unskilled workers were surveyed. This total of 296 persons represented approximately 44 per cent of the 668 Sécheron workers (excluding the 310 clerical and other staff).

1. Sickness absenteeism (non-occupational accidents included). *Sickness absenteeism of the whole group*

The *disability rate* was worked out using the formula:

$$\frac{\text{amount of working time lost during 1955}}{\text{number of person-years of exposure}}$$

where the working time was calculated in minutes, subsequently translated into hours and finally into 8-hour days.

The result was 74 hours of working time or about 9.2 (8-hour) days lost per year on an average by each of the workers included in the survey.

The *frequency rate:*

$$\frac{\text{number of disabling illnesses recorded during 1955}}{\text{number of person-years of exposure}} \times 1000$$

came to 1033 absences due to sickness per year and per 1000 workers (1.033 absences per worker).

The severity rate:

$$\frac{\text{number of working days lost during 1955}}{\text{number of absences recorded during 1955}}$$

amounted to 71.58 hours, i. e. 8.9 days lost per absence.

Sickness absenteeism expressed as a percentage of the year's working time came to 3.04 per cent.

The number of absences was 306.

Table No. 2

	Appren-tices	Skilled workers	Unskilled workers
Disability rate	8 days	11 days	8 days
Frequency rate	1700	823	962.40
Severity rate	4 days	13 days	8 days
Sickness absenteeism as % of the year's working time	2.64	3.54	2.76
Number of absences	85	93	128

Table No. 3 **Sickness absenteeism and its causes among the three categories of workers** (actual figures)

Causes	Number of absences				Corresponding number of 8-hour days absences			
	Whole group	Appr.	Skilled	Un-skilled	Whole group	Appr.	Skilled	Un-skilled
All causes ..... (industrial accidents and occupational diseases incl.)	346	93	115	138	3264.2	487.2	1505.6	1271.3
All diseases	275	75	88	112	2078.5	291.3	868.9	918.2
a) Occupational diseases ..	–	–	–	–	–	–	–	–
b) Non-occupational diseases	275	75	88	112	2078.5	291.3	868.9	918.2
All accidents	71	18	27	26	1185.6	195.8	636.7	360.6
a) Occupational accidents .	40	8	22	10	526.0	85.6	288.1	152.2
b) Non-occupational accidents	31	10	5	16	659.6	110.2	348.6	200.8

Table No. 4 **Sickness absenteeism and its causes among the three categories of workers**

Average length of absences or severity rate (expressed in hours)

Causes	Whole group	Appren-tices	Skilled workers	Unskilled workers
All causes	75.5	41.94	104.73	73.69
All diseases	60.52	31.12	78.99	65.58
a) Occupational diseases ...	–	–	–	–
b) Non-occupational diseases	60.52	31.12	78.99	65.58
All accidents	133.58	87.03	188.65	108.63
a) Occupational accidents ..	105.21	85.67	104.77	121.80
b) Non-occupational accidents	170.20	88.12	557.72	100.41

Table No. 5 **Sickness frequency and disability rate for each category**

Causes	Frequency rate Number of absences per 1000 workers in each category				Disability rate Number of hours lost per worker in each category			
	Whole group	Appr.	Skilled	Un-skilled	Whole group	Appr.	Skilled	Un-skilled
All causes	1168.9	1860.0	1017.6	1037.6	88.2	77.9	106.6	76.4
All diseases	929.0	1500.0	778.7	842.1	56.1	46.6	61.5	55.2
a) Occupational diseases	–	–	–	–	–	–	–	–
b) Non-occupational diseases	929.0	1500.0	778.7	842.1	56.1	46.6	61.5	55.2
All accidents	239.8	360.0	238.9	195.4	32.0	31.3	45.0	21.2
a) Occupational accidents	135.1	160.0	194.7	75.1	14.2	13.7	20.4	9.1
b) Non-occupational accidents	104.7	200.0	44.2	120.3	17.8	17.6	24.6	12.1

Table No. 6 **Sickness absenteeism expressed as a percentage of the year's working time**

Causes	Percentage of working hours lost by each category			
	Whole group	Appren-tices	Skilled workers	Unskilled workers
All causes	3.62%	3.20%	4.38%	3.14%
All diseases	2.31%	1.92%	2.53%	2.27%
a) Occupational diseases ...	–	–	–	–
b) Non-occupational diseases	2.31%	1.92%	2.53%	2.27%
All accidents	1.31%	1.28%	1.85%	0.87%
a) Occupational accidents ..	0.58%	0.56%	0.84%	0.37%
b) Non-occupational accidents	0.73%	0.72%	1.01%	0.50%

As sickness represents the largest group of causes of absenteeism in industry, and as it is recognized that days lost through non-occupational diseases are, as a rule, about five to ten times the number of days lost through accidents and occupational diseases, the value is seen of studying the whole group of non-occupational diseases as well as the respective importance of the diseases coming under this heading.

The first requirement in this connexion appears to be a system of classification of disease which can be utilized with relative ease for purposes of evaluation and comparison. Various methods of coding sickness, accidents and invalidism, for example the one worked out by *Gafafer*, are to be found in medical literature but, unfortunately, they generally resemble the 1938 International Statistical Classification of Diseases, Injuries and Causes of

Death which is not a suitable model for morbidity coding and which has therefore been replaced by another system.

With the assistance of *Mr. E. G. Ruff*, of the WHO Division of Epidemiological and Health Statistical Services, a new morbidity list was prepared for use in the recording of sickness absenteeism in connexion with the present investigation. This code, which is reproduced later, has been based on the Sixth Revision of the International Lists of Diseases and Causes of Death, as the latter is the classification now used internationally, and has been prepared to provide a single list applicable to both morbidity and mortality statistics.

A few comments are needed to introduce this morbidity code. The 1948 Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death [35] includes four lists: a detailed 3-digit list with 612 categories of diseases and morbid conditions, plus 153 categories for the classification of the external cause of injury and 189 categories for characterization of injuries according to the nature of the lesion; an intermediate list of 150 causes for tabulation of morbidity and mortality (List A); an abbreviated list of 50 causes for tabulation of mortality (List B); and a special list of 50 causes for tabulation of morbidity for social security purposes (List C). Of these, only lists A and C appeared suitable for establishing a morbidity list to be used in connexion with industrial sickness absenteeism. These lists could not, however, be used, as they were owing to the fact that the determinant factor in sickness absenteeism is not necessarily the medical or social importance, nor even the gravity or the special character of the disease, but its disabling power in terms of number, length, frequency and economic implication of the absences. There are, for example, morbidity causes of no special medical interest such as the common cold, menstruation troubles, headache, asthenia, which, while not justifying a special mention in either morbidity list A or C, may still have a greater importance in connexion with absenteeism than diseases such as tuberculosis or pneumonia.

The list worked out for this survey is based on the following principles:

1. To keep the classification in line with the 1948 Nomenclature of Diseases and Causes of Death;
2. To take into consideration as much as possible, in the application of Lists A or C, those diseases and groups of diseases which were thought to be of special importance in codes previously prepared by experts, such as *Gafafer* (14), for the evaluation of sickness absenteeism in industry;
3. To work out a list of items avoiding the gaps to be found in codes based on the 1938 International Statistical Classification of Causes of Death.

In accordance with principle 1, the following additions have been introduced in *Gafafer*'s list:

Tuberculosis, other forms.
Tumours, malignant and benign.
Other allergic diseases, diabetes mellitus.
Alcoholism.
Hypertension, diseases of the arteries, diseases of the veins.
Diseases of the stomach and of the duodenum, cirrhosis of the liver.
Diseases of the gallbladder and biliary ducts.
Nephritis and nephrosis.

Complications of childbirth and pregnancy, etc.
Occupational skin diseases.

The additions made in accordance with principle 2 are included under comprehensive residual headings such as "other diseases of..." or "other accidental causes". Items of importance for special categories of industrial concerns might be taken into consideration in possible additional lists under the above-mentioned headings. For example, this might be the case for industrial or even non-industrial accidents (sports or traffic accidents).

Special list of causes to be used for the tabulation of statistics on sickness absenteeism in industry

All causes (001-759, 780-E990[1])

All diseases (001-759, 780-795[1])

I. **Infective and parasitic diseases** (001–138)
Tuberculosis of respiratory system (001–008) . . . . . C 1
Tuberculosis, other forms (010–019) . . . . . C 2
Other infective and parasitic diseases (020–138) . . . . . including .....

II. **Neoplasms** (140–239)
Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (140–205) . . . . . C 12
Benign neoplasms and neoplasms of unspecified nature (230–239) . . . . . C 13

III. **Allergic, endocrine system, metabolic and nutritional diseases** (240–289)
Hay fever and asthma (240–241)
Other allergic disorders (242–245)
Diabetes mellitus (260) . . . . . C 16
Diseases of thyroid gland, of other endocrine glands, avitaminoses and other metabolic diseases (250–254, 270–289) including .....

IV. **Diseases of the blood and blood-forming organs** (290–299)
Anaemias (290–293) . . . . . C 18
Other diseases of the blood-forming organs (294–299) including .....

V. **Mental, psychoneurotic, and personality disorders** (300–326)
Psychoses and psychoneurotic disorders (300–306, 308–318) including nervous asthenia (318.3)
Alcoholism, including alcoholic psychoses (307–322)
Other disorders of character, behaviour and intelligence (320, 321; 323–326) including .....

VI. **Diseases of the nervous system and sense organs** (330–398)
Vascular lesions affecting central nervous system (330–334) . . . . . C 20
Diseases of nerves and peripheral ganglia (360–369) including: facial paralysis, trigeminal neuralgia, brachial neuritis sciatica, polyneuritis and polyradiculitis (360–364)
Diseases of eye (370–389) . . . . . C 21
Diseases of ear and mastoid process (390–398) . . . . . C 22
Other diseases of nervous system and sense organs (340–350, 352–357), including migraine (354)

[1] Excluding: cerebral spastic infantile paralysis (351); certain diseases of early infancy (760-777), and senility whithout mention of psychosis (794).

including: affection of sacro-iliac joint, ankylosis of joint, other diseases of joint, synovitis, bursitis and tenosynovitis (736–738, 741, 742)

XIV. **Congenital malformations** (750–759) A127–A129

XV. **Symptoms and ill-defined conditions** (780–793, 795) . . . . . A 137
Nervousness and debility (790)
including: debility and abnormal fatigue (790.1)
depression (790.2)
Other symptoms and ill-defined conditions (780–789), 791–795)
including .....

XVI. **Accidents, poisonings, and violence** (E800–E925, E927–E999)[1] . . . . . C 50
Occupational accidents and poisonings (E800–E965) . . . . . C 50a
Accidents and poisonings, non-occupational (E800–E965)[1] . . . . . C 50b
Other violence (E970–E999) . . . . . C 50c
including .....

As is mentioned further in Part III of this survey (i. e. in the chapter devoted to conclusions), the above system of classification of disease, which is derived from the latest revision of the International List of Diseases, Injuries and Causes of Death, seems to be well-suited to the purpose of evaluation of sickness absenteeism as well as for the purpose of comparing data obtained from different countries.

Table No. 7 **Sickness absenteeism experience of the workers surveyed**
(Actual and proportional figures)

Disease or accident	Number of absences	Average sickness absence expressed in hours	Working time lost in hours	Time lost as % of sickness absence
Total	346	87.8	26,113.4	100.0
I. Infective and parasitic dis.	1	0.2	82.2	0.3
II. Neoplasms	8	4.0	1,209.6	4.6
III. Allergic, endocrine system	–	–	–	–
IV. Diseases of blood	–	–	–	–
V. Mental, psychoneurotic ..	4	0.6	183.2	0.7
VI. Nervous system	5	3.9	1,172.8	4.5
VII. Circulatory system	14	10.2	3,020.9	11.5
VIII. Respiratory system	104	22.9	6,805.9	26.0
(Influenza)	(31)	(8.0)	(2,382.0)	(9.1)
IX. Digestive system	38	9.8	2,905.8	11.1
X. Genito-urinary system....	–	–	–	–
XI. Delivery, pregnancy	–	–	–	–
XII. Skin diseases	8	0.8	255.6	0.9
XIII. Diseases of bones	8	1.5	454.2	1.7
XIV. Congenital malformations.	–	–	–	–
XVI. Ill-defined conditions	85	1.8	538.0	2.0
XVII. Accidents	71	32.0	9,485.2	36.3
a) Occupational accidents.	(40)	(14.2)	(4,208.4)	(16.1)
b) Non-occupational acc. .	(31)	(17.8)	(5,276.8)	(20.2)

[1] Excluding E926: lack of care in infants under 1 year of age.

Its application does not offer any difficulty and at the same time it allows a presentation of the sickness absenteeism situation either in a very condensed form or giving a breakdown of figures, according to the type and the amount of material at the disposal of the statistician and his qualifications.

The tables 7 and 8, and in particular table 7, provide the reader with an example of how the system can be used in an industrial concern.

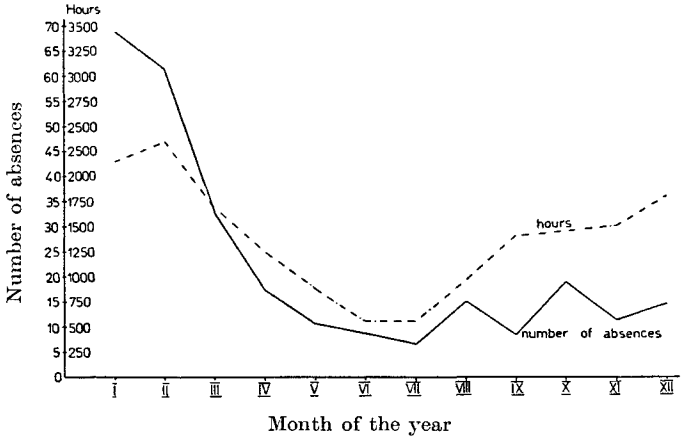
Table No. 8 **Number of absences and hours of absence due to sickness divided according to the main groups of causes and the monthly distribution**

(Figurs adjusted on the basis of a uniform number of working days in the month.)

Causes		Year	Month of the Year											
			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
All causes	No.	346	73	67.7	37.9	20.4	15.6	13.4	16.3	22.2	16.3	23.0	19.2	17.7
	Hrs.	26113.4	2619.7	3346.6	2521.4	1815.2	1398.1	1218.2	1496.5	1951.6	2822.2	2313.0	2140.4	2208.4
All diseases ...	No.	275	69	61.4	32.4	17.0	10.4	8.6	6.7	14.8	8.6	19.2	11.5	14.5
	Hrs.	16628.2	2166.1	2344.1	1707.9	1242.7	870.6	539.2	557.3	972.4	1388.3	1440.9	1510.4	1805.9
All accidents ..	No.	71	4	6.2	5.5	3.4	5.2	4.8	9.6	7.4	7.6	3.8	8.6	3.1
	Hrs.	9485.2	453.6	1002.5	813.5	572.5	527.5	679.0	939.2	979.2	1433.8	872.1	630.0	402.5
a) Occupational accidents ...	No.	40	2	3.1	2.7	1.1	3.1	2.8	6.7	4.6	2.8	3.8	2.8	3.1
	Hrs.	4208.4	60.8	234.3	287.4	215.2	259.1	405.9	478.4	371.4	701.1	625.1	273.0	197.5
b) Non-occupational	No.	31	2	3.1	2.7	2.2	2.08	1.9	2.8	2.7	4.8	–	5.7	–
	Hrs.	5276.8	392.8	768.1	526.1	357.2	268.3	273.0	460.7	607.7	732.6	246.9	356.9	205.0

Monthly figures were multiplied by 25 and divided by the number of days worked in the corresponding month of the year, in order to make up for the deforming influence of the unequal length of the months.

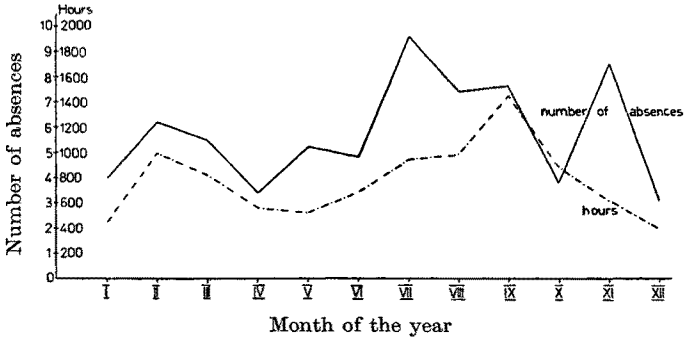
Graph No. 1 *Monthly Distribution* of *sickness absenteeism accidents excluded* (solid line: the number of absences; broken line: the hours of absence).



Besides the quarterly and the monthly distribution of sickness absenteeism, it is also worth while examining its weekly distribution. According to *Baldamus* and *Behrend*[1], there is a steady decline in the average number of absentees

[1] Ref. No. 2

Graph No. 2 Monthly distribution of sickness absenteeism due to accidents (occup. and non-occup.) (solid line: the number of absences; broken line: the hours of absence).



from Monday to Friday throughout the year attributable to morale. These authors have observed that the downward curve is less clearly marked for women workers, because women work equally hard during the weekend as in the factory. The following are the results of this investigation which, needless to repeat, concerned only male workers:

Table No. 9 **Average number of sickness absences from Monday to Saturday throughout the year**

Day of the week	Absences as absolute figures	Absences as percentages of the total No. of absences
Monday	114	37.3
Tuesday	44	14.4
Wednesday	50	16.3
Thursday	42	13.7
Friday	26	8.5
Saturday	30	9.8
	306	100.0

Of great interest is the calculation of the duration of absences and particularly the assessment of absences of short duration. As *Gafafer* pointed out "disabilities of short duration are of importance particularly because of their relative high frequency and because this group of disabilities is more likely to respond earlier than the diseases of long duration to any efforts toward prevention and control that may be initiated by the plant medical department". Experience in this survey showed that this predominance of diseases of short duration, especially of those of 1–2 days is also true when the very short absences of less than one day are taken into account. It has also been observed that the absences falling under the heading of sickness absenteeism were frequently due to social rather than to medical reasons.

Table No. 10 **Distribution of sickness among workers** (non-industrial accidents included)

No. of absences	Per 100 workers	Per 100 workers reported absent for sickness	All workers involved in the survey (296)	Apprentices (50)		Skilled workers (113)		Unskilled workers (133)	
				Absolute figures	%	Absolute figures	%	Absolute figures	%
1	30.4	55.6	90	20	48.8	33	60.0	37	56.0
2	10.8	19.8	32	7	17.1	12	21.8	13	19.8
3	8.4	15.4	25	9	21.9	8	14.6	8	12.1
4	1.4	2.5	4	2	4.9	0	–	2	3.0
5	2.6	4.3	7	2	4.9	1	1.8	4	6.1
6	0.7	1.2	2	1	2.4	0	–	1	1.5
7	0.7	1.2	2	0	–	1	1.8	1	1.5
Total	55.0	100.0	162	41	100.0	55	100.0	66	100.0

Table No. 11

Number of absences	*Duration of absences in hours*							
	For the 162 workers reported sick in the year		Apprentices (50)		Skilled workers (113)		Unskilled workers (133)	
	Absolute figures	Average duration absence	Absolute figures	Average in hours	Absolute figures	Average in hours	Absolute figures	Average in hours
1	7876.3	87.5	673.1	33.6	4883.8	201.2	2319.4	62.7
2	4649.7	72.6	631.6	45.1	2384.5	99.3	1633.6	62.8
3	4214.0	56.2	868.2	32.1	1419.4	59.1	1926.4	80.3
4	270.2	16.9	78.4	9.9	–	–	191.8	24.0
5	4058.8	115.9	785.6	78.6	954.2	190.8	2319.0	116.0
6	332.4	27.7	175.6	29.3	–	–	156.8	26.1
7	503.6	36.0	–	–	98.2	16.4	405.4	57.9

Table No. 12 **Duration of sickness absences** (non-occupational accidents included)

Absence	Actual number of days				Percentages			
	Whole group	Appr.	Skilled	Unskilled	Whole group	Appr.	Skilled	Unskilled
All absences	306	85	93	128	100	100	100	100
–1 day	76	24	18	34	24.8%	28.2%	19.4%	26.6%
1–2 days	93	33	28	32	30.4%	38.8%	30.1%	25.0%
3–6 days	43	11	14	18	14.1%	12.9%	15.0%	14.1%
7–15 days	58	11	20	27	19.1%	12.9%	21.5%	21.1%
16–90 days	34	6	11	17	11.1%	7.1%	11.8%	13.3%
3–6 months	1	–	1	–	0.3%	–	1.1%	–
7–12 months	1	–	1	–	0.3%	–	1.1%	–

Relationship between sickness absenteeism and age

The persons surveyed were divided into four age-groups. The apprentices, most of whom were born between 1936 and 1938, belong with one exception to the first age-group which comprised persons of less than 20 years of age. The other three groups included both skilled and unskilled workers. As one can see from Table No. 1 on "Age and Professional Distribution of the Population Surveyed", a greater number of skilled workers were represented in the age-group 20–29 years, while more unskilled workers belonged to the age-group 30–49 years.

Calculation of the average time lost during the year due to sickness absenteeism, by the workers in the 4 age-groups listed, gave the following results which, having been drawn from relatively small groups of population may not be statistically significant.

Average time lost by worker during the year due to sickness absenteeism expressed in hours

Age-group	*Hours*
1. *16–20 years* (This group included the apprentices. All of them except one were under 20 years of age. It was thought preferable to include them all in the same group, despite the slight overlapping with age-group no. 2) *Total* = 50	64.2
2. *20–29 years* (Included 40 skilled workers and 16 unskilled workers) *Total* = 56	45.1
3. *30–49 years* (Included 44 skilled workers and 90 unskilled workers) *Total* = 134	51.1
4. *50 years and over* (Included 29 skilled workers and 27 unskilled workers) *Total* = 56	44.1

The civil status of the worker is also to be considered among the factors influencing absenteeism. In fact, absenteeism has been reported *higher* for *unmarried* men than for married ones. *Forssman*[1] found 6.87 % working time was lost by the former as opposed to a figure of 5.72 % for the latter.

As the apprentices were all bachelors, a comparison of sickness absenteeism experience according to civil status was carried out only in connexion with the groups of skilled and unskilled workers.

There were 165 married workers, including 72 skilled workers and 93 unskilled workers. The so-called "unmarried" group, which comprised bachelors as well as widowers, divorced and separated persons, included 41 skilled workers and 40 unskilled workers – a total of 81.

[1] Ref. No. 31

Table No. 13 **Sickness absenteeism according to civil status of workers**

	Married workers			Unmarried workers		
		Average working time lost by worker in			Average working time lost by worker in	
	No.	hours	days	No.	hours	days
Skilled and Unskilled workers ..	165	81.60	10.2	81	46.76	5.8
Skilled workers	72	114.28	14.2	41	40.93	5.1
Unskilled workers ..	93	56.28	7.0	40	52.75	6.6

Sickness absence according to the origin of the worker

The 296 workers considered in the survey fell into four groups according to their origin: there were three groups from the French, German and Italian cantons respectively and a fourth group made up of foreign workers, but this latter was so small numerically as to be considered unimportant and was left out.

The following tables show the breakdown of the workers into the four groups and the sickness absenteeism experience of the first three (non-industrial accidents are included):

Table No. 14 **All the workers subdivided according to their origin**

Category	Actual numbers				
	Total	French-Swiss	German-Swiss	Italian-Swiss	Foreign
All workers	296	153	112	22	9
Apprentices	50	22	14	13	1
Skilled workers	113	46	59	4	4
Unskilled workers .	133	85	39	5	4
In percentage					
All workers	100	51.7%	37.8%	7.4%	3.1%
Apprentices	100	44.0%	28.0%	26.0%	2.0%
Skilled workers	100	40.7%	52.2%	3.5%	3.5%
Unskilled workers .	100	63.9%	29.3%	3.8%	3.0%

Table No. 15 **Sickness absenteeism experience per worker during the year according to origin** (Average time lost expressed in hours)

Category of worker	French-Swiss	German-Swiss	Italian-Swiss
Apprentices, skilled and unskilled workers together, foreigners excluded	107.8	63.5	46.8
Apprentices	51.2	106.3	42.1
Skilled workers	210.5	48.3	13.2
Unskilled workers	66.9	71.1	86.0

Table No. 15 should not be interpreted without the following information as to the relatively high sickness absenteeism of the French-Swiss group. The analysis of the causes and duration of the absences revealed that the two longest absences recorded in the year were respectively due to heart disease and to a non-occupational accident, and happened to concern the skilled workers of the above-mentioned group. This table is an example of how a series of statistical data can be misleading if not properly analysed.

2. Absenteeism due to industrial accidents

The procedure followed for the evaluation of this cause of absenteeism was the same as that used for the assessment of sickness absenteeism. Data

Table No. 16 **Absenteeism due to industrial accidents**

	Apprentices (50)	Skilled workers (113)	Unskilled workers (133)	Apprentices, skilled and unskilled workers (296)
Number of industrial accidents	8	22	10	40
Disability rate (average time lost by a worker)	13.7 hours	20.4 hours	9.1 hours	15.25 hours
Frequency rate (absences per 1000 workers) ..	160	194	75.18	135.13
Severity rate (average length of absences) ..	85.6 hours	104.7 hours	121.8 hours	105.2 hours
Absenteeism as % of working time	0.56	0.83	0.37	0.59

3. Absenteeism due to causes other than sickness or accidents

Table No. 17 **Absenteeism due to leave with permission**

	Whole group (296)	Apprentices (50)	Skilled workers (113)	Unskilled workers (133)
Number of absences	508	169	172	167
Average number of absences per 1000 workers per year (frequency rate)....	1710	3380	1520	1270
Average time lost by worker	18.7 hrs.	48.0 hrs.	15.7 hrs.	10.1 hrs.
Average duration of absences	10.9 hrs.	14.3 hrs.	10.3 hrs.	8.0 hrs.
Time lost as a percentage of working time	1.01	1.99	0.64	0.41

were first collected separately for the three categories of workers, but as the observations were often too few to allow statistically significant conclusions, the whole population was eventually treated as one group. The reader's attention is therefore drawn to the data which, in the following tables, fall under the heading "apprentices, skilled and unskilled workers".

Table No. 18 **Absenteeism due to leave with permission in the population surveyed which has been subdivided according to origin**

	French-Swiss	German-Swiss	Italian-Swiss
Number of workers involved .	153	112	22
Number of absences	209	197	84
Frequency rate	1366	1758	3818
Average time lost by worker (hours)	14.3	19.4	46.5
Average duration of absence (hours)	10.4	11.0	12.1
Absence as % of working time	0.58%	0.80%	1.91%

(18 absences due to leave with permission by workers of foreign nationality were not considered in this table)

Table No. 19 **Incidence of absenteeism due to leave with permission according to civil status of worker**

	Married workers	Unmarried workers	
	Skilled and unskilled workers	Skilled and unskilled workers	Apprentices
Number of workers involved	(165)	(81)	(50)
Number of absences	170	169	169
Average time lost by worker	8.7 hours	20.8 hours	48.0 hours
Frequency rate (absences per 1000 workers)	1030	2080	3380
Average length of absence	8.4 hours	9.9 hours	14.3 hours

Table No. 20 **Incidence of absenteeism due to leave with permission according to age of worker**

Age groups	50 years and over	30–49 years	20–29 years	16–21 years
Number of workers involved	(56)	(134)	(56)	(50)
Number of absences	50	165	124	169
Average time lost by worker	6.7 hrs.	11.0 hrs.	22.7 hrs.	48.5 hrs.
Frequency rate (absences per 1000 workers)	892	1231	2214	3380
Average length of absence	7.5 hrs.	8.9 hrs.	10.2 hrs.	14.3 hrs.

Table No. 21 **Unjustifiable absences**

	Whole group (296)	Apprentices (50)	Skilled workers (113)	Unskilled workers (133)
Number of absences	121	82	17	22
Average time lost by worker	3.2 hrs.	11.3 hrs.	1.5 hrs.	1.5 hrs.
Average number of absences per 1000 workers (frequency rate)	408	1640	150	165
Average duration of absences	7.8 hrs.	6.9 hrs.	10.2 hrs.	9.6 hrs.
Absences as percentage of working time	0.132%	0.46%	0.063%	0.065%

Table No. 22 **Unjustifiable absences according to the origin of the population surveyed**

	French-Swiss	German-Swiss	Italian-Swiss
Number of workers involved	153	112	22
Number of absences	35	28	57
Frequency rate	228.7	250.0	2590.9
Average time lost by worker (minutes)	110.1	155.3	1024.3
Average duration of absence (minutes)	481.7	621.4	395.3
Absences as percentage of working time	0.07%	0.11%	0.70%

Table No. 23 **Incidence of unjustifiable absences according to civil status of the worker**

	Married workers	Unmarried workers	
	Skilled and unskilled workers	Skilled and unskilled workers	Apprentices
Number of workers involved	(165)	(81)	(50)
Number of absences	10	29	82
Average time lost by worker	0.9 hours	2.8 hours	11.3 hours
Frequency rate (absences per 1000 workers)	60.6	358.0	1640.0
Average length of absence	15.6 hours	7.9 hours	6.9 hours
Absences as a percentage of working time	0.04%	0.11%	0.46%

Table No. 24 **Incidence of unjustifiable absences according to age of the worker**

Age groups	50 years and over	30–49 years	20–29 years	16–21 years
Number of workers involved	(56)	(134)	(56)	(50)
Number of absences	7	16	16	82
Average time lost by worker	1.7 hrs.	1.0 hrs.	2.7 hrs.	11.3 hrs.
Frequency rate (absences per 1000 workers)	125.0	119.4	285.7	1640.0
Average length of absence	14.0 hrs.	8.4 hrs.	9.5 hrs.	6.9 hrs.
Absences as a percentage of working time	0.07%	0.04%	0.11%	0.46%

Table No. 25 **Absenteeism due to annual leave**

	Whole group	Apprentices	Skilled workers	Unskilled workers
Number of workers involved	(296)	(50)	(113)	(133)
Average time taken by worker as annual leave	114.6 hours	124.7 hours	115.2 hours	110.4 hours
Absenteeism as percentage of working time	4.71%	5.12%	4.74%	4.54%

Table No. 26 **Absenteeism due to military service**

	Whole group	Apprentices	Skilled workers	Unskilled workers
Number of workers involved	(296)	(50)	(113)	(133)
Number of absences	111	6	51	54
Average absenteeism due to military service	70.8 hours	102.3 hours	67.2 hours	21.1 hours
Absenteeism as percentage of working time	2.91%	4.21%	2.76%	0.87%

III. Conclusions

Before commenting on the results of the survey, the following points should be mentioned:

1. As Sécheron does not apply any special policy of selection in its recruitment of workers, the physical fitness of the latter may be considered as roughly representative of that of the local population;

2. The local public health authorities considered 1955 a "normal" year, i. e. the extent to which the population suffered from the various diseases was within the usual limits;

3. It has not been possible to relate the factory's productivity to the workers' attendance, largely due to the methods of work production.

The results of the survey led to the following observations.

Sickness absenteeism

The disability rate for the three groups of workers included in the investigation was 9.2 days, the severity rate 8.9 days, the frequency rate was 1,033 and the percentage of working time lost in the year 3.04.

If one takes into consideration the fact that all absences, however short, were recorded, and that not all the notified sickness was medically certified and therefore a certain proportion of absences considered under the heading of sickness absenteeism may have been due to reasons other than true illness, then the sickness absenteeism experience at Sécheron is certainly no worse, and possibly a little better than sickness absenteeism reported in connexion with other similar industrial concerns.

Of the three categories of workers surveyed—apprentices, skilled and unskilled workers—the group of skilled workers showed the highest sickness absenteeism disability and severity rates and, logically, the highest percentage of working time lost, while they recorded the lowest frequency rate. As may be seen from the following statistical table, quite the reverse trend was observed for the apprentices (i. e. a greater number of shorter absences).

Table No. 27 **Sickness absenteeism**

	Apprentices	Skilled workers	Unskilled workers	Whole group
Disability rate	8 days	11 days	8 days	9.2 days
Frequency rate	1700	823	962	1033
Severity rate	4.7 days	13 days	8 days	8.9 days
Percentage of year's working time lost as an average by each worker	2.64%	3.54%	2.76%	3.04%

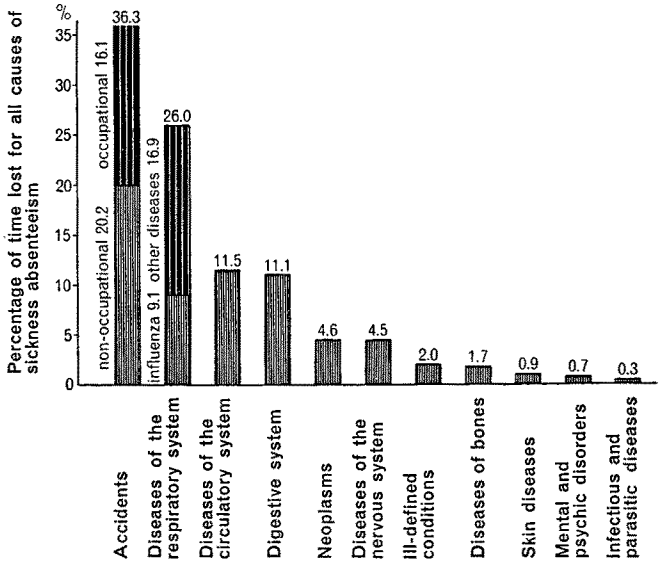
Analysis of the causes of sickness absenteeism—including the group "occupational and non-occupational accidents"—showed this cause as the leading one. As may be easily seen from the tables 5 and 6, over one-fifth of all the absences, about 36 per cent of the total sickness absenteeism reported in 1955 for the three groups of workers surveyed, was due to accidents. In other words, if the time lost by the apprentices, skilled and unskilled workers had been evenly distributed among the population surveyed, each worker would have lost 32 hours of working time during the year. Diagram No. 1 shows how non-occupational accidents were more important than the occupational accidents in causing this absenteeism.

With regard to the type of non-occupational accidents included in this heading, these may be subdivided into three main groups: sports accidents, traffic accidents and accidents in the home. Sports accidents (accidents resulting from skiing, football matches, skating, etc.) seemed to occur more frequently among the apprentices than among the skilled and unskilled workers, who were affected more by the other two groups of accidents, particularly by traffic accidents.

Non-industrial accidents, which outnumbered occupational accidents and which because of the increasing number of traffic accidents occurring in industrial countries are likely to become an even greater problem in the near future, thus deserve special consideration by industry.

The high non-occupational accident rate, besides indicating the need for preventive measures and rehabilitation facilities, also suggests the value of the registration of these accidents under a separate sub-heading of Section XVI of the special list "Accidents, Poisonings and Violence" when tabulating sickness absenteeism statistics.

Diseases of the respiratory system which, according to most investigators *(Gafafer, Britten* and others, *Belloni, Rotta*[1]*)* come either first or after the infectious diseases in the order of importance of the various causes of sickness absenteeism, ranked second and were responsible for over 20 per cent of the time lost. Unskilled workers appeared to be affected much less by these diseases, which include the highly frequent common cold, than the apprentices or skilled workers. Influenza alone caused over one-third of the absenteeism recorded in this group of diseases.



Graph No. 3 Sickness absenteeism as due to the different groups of causes (occup. and non-occup. accidents included), expressed as percentages of time lost for all causes of absenteeism.

[1] Ref. No. 14 and 27

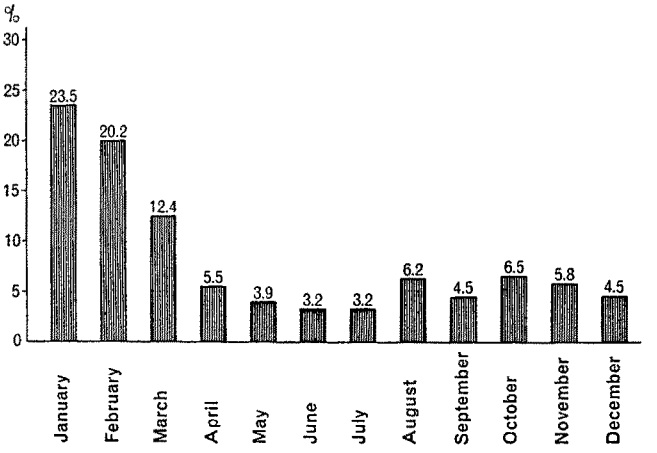
Diseases of the circulatory system, which followed the above-mentioned group in the downward scale of importance, did not on the whole cause many absences, but the duration of these diseases was usually considerable.

Diseases of the digestive system, which included appendicites, dental abscesses, intestinal colics, ulcers of the stomach and of the duodenum, hernias and liver troubles, were responsible for four times more absenteeism among unskilled workers than among apprentices or skilled workers. While they caused about 13 per cent of total sickness absenteeism for the three categories of workers surveyed, they were responsible for 23 per cent of the working time lost for sickness among the unskilled workers as against about 6 per cent among the other two groups of workers.

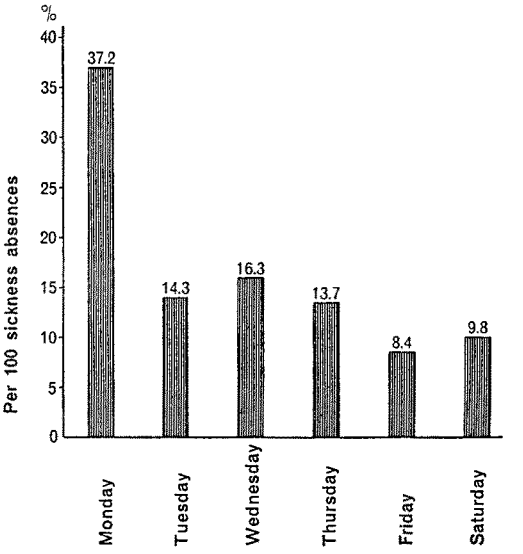
Neoplasms recorded for skilled and unskilled workers caused as much absenteeism as did diseases of the nervous system which, it must be remembered, include diseases of the sense organs.

The absence falling into Group XV of causes of sickness "Symptoms and Ill-defined Conditions" had the following features: they were frequent but of short duration, and were usually non-diagnosed or reported with a vague diagnosis by the worker himself. Investigations into the real cause of these absences revealed that they very often occurred just before or just after a holiday, or that when these absences did not correspond to the alleged diagnosis they are sometimes the expression of fatigue caused by working conditions or by the individual's private life, of malingering, maladjustment, or the effect of social reasons (such as work to be done at home, illness of a member of the family, family troubles, personal reasons). Although not very important in terms of total absenteeism (2.45 per cent), by their very frequency these absences represent a factor of production disorganization and may be taken as a pointer towards the level of morale in the factory. The apprentices appeared to be most affected by this "ill-defined morbidity". The workers, whose first three days of absence are not paid for by the factory nor covered by insurance schemes, tended to conceal the exact reasons for these absences. Unfortunately, this hindered the study of this cause of absenteeism and, to a certain extent, confused the evaluation of real sickness among the working population.

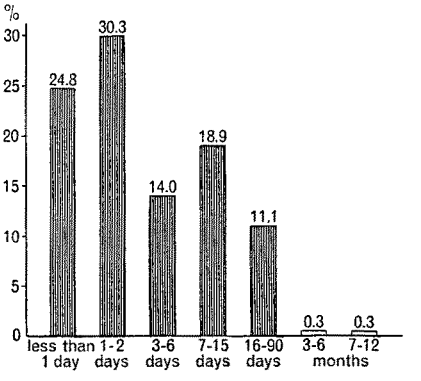
Absenteeism due to diseases of the bone and organs of movement, as well as absenteeism due to skin diseases, proved to be relatively low though still a little higher than that resulting from mental, psychoneurotic and personality disorders. One should, however, point out that the apparently very small part played by the psychological disorders is very likely due to the fact that Sécheron had no industrial medical officer who could look after the mental health of the individual or the group in the factory. It was interesting to note that the group "Infectious and Parasitic Diseases" as a cause of sickness absenteeism came last on the list.



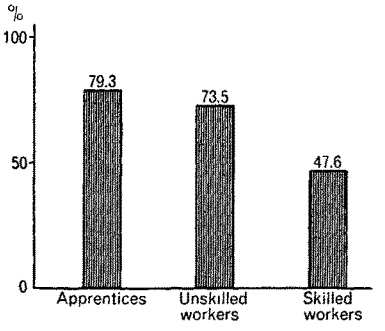
Graph No. 4 Distribution of sickness absenteeism through the year expressed in percentages of the total number of absences.



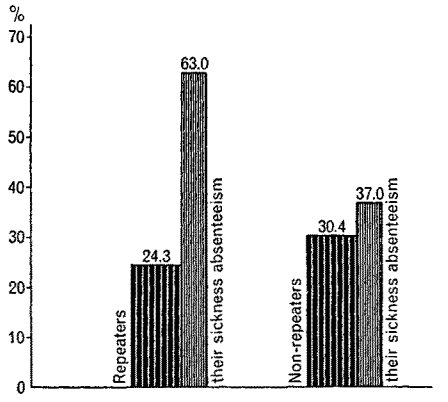
Graph. No. 5 Average weekly distribution of sickness absences expressed in percentages of the total yearly number of absences.



Graph No. 6 Sickness absences including non-industrial accidents, subdivided by length and expressed in percentages of the total number of absences in the year.



Graph No. 7 Sickness absenteeism caused by the "repeaters" of the 3 groups of population surveyed expressed as percentages of the respective groups' absenteeism.



Graph No. 8 "Repeaters" and "non-repeaters": their importance expressed as percentages of the population surveyed and their respective sickness absenteeism expressed as percentages of the total sickness absenteeism.

The distribution of sickness absenteeism through the year (see Graph No. 4) showed a greater absenteeism rate at the beginning of the year, with a downward curve from January to July and a relatively small, irregular increase during the second part of the year. A similar trend appeared in respect to the weekly distribution of absences. Graph No. 5 shows the decrease of absenteeism from Monday to Friday with a slight increase on Wednesdays and Saturdays. The same trend was recorded for each of the three categories of workers.

Subdivided into groups of different length, the great majority of absences were of 1–2 days' duration, followed by those lasting less than 1 day; the former totalled almost one-third of all the absences, the latter about one-quarter of the total figure. Together, these two groups of absences amounted to over 55 per cent of all sickness absenteeism. Absences of 3–6 days and of 7–15 days were reported considerably less frequently as may be seen from Graph No. 6.

A study of the distribution of absences among the population surveyed showed that 162 (54.7 per cent) out of the 296 workers considered were reported sick once or more times during the year. Of these 162 "sick absentees", 90, i. e. 55.5 per cent (30.4 per cent of the whole group) had only one sickness absence; 72, i. e. 44.4 per cent (24.3 per cent of the whole group) were absent

more than once. The latter group, or so-called "repeaters", proved to have been responsible for about 63 per cent of the whole group's sickness absenteeism. (See Graphs No. 7 and 8.)

It would thus appear that, although the difference between the number of "repeaters" and "non-repeaters" was not great enough to be statistically significant, the former still played a much more important part than the latter in causing sickness absenteeism. In fact, their absenteeism experience was 1.7 times greater than that of the "non-repeaters" (63 per cent as against 37 per cent).

With regard to the respective importance of the "repeaters" in the three groups of workers surveyed, the part they played appeared greatest among the apprentices, smaller among the unskilled workers and lowest among the skilled workers.

Finally, calculation of the distribution of absenteeism among the three groups of workers surveyed confirmed the observation made by *Buzzard*[2] that the greater part of the average absence of the group was caused by the small proportion of people who had the longest absences. In this connexion, those persons totalling the greatest sickness absenteeism in the year were usually "repeaters". This proved true even for the skilled workers—the group having the lowest proportion of "repeaters"—whose 10 "repeaters" (i. e. 18 per cent of the "sick absentees") were responsible for 40.8 per cent of the group's sickness absenteeism.

Calculation of the relationship between sickness absenteeism and age showed the highest rate of absenteeism for the age group 16–20 years (the apprentices) with an average of 64.2 working hours lost per year; the lowest rate for the group 50 years and over (with 44.1 working hours lost per year), and the intermediate rates for the age groups 20–29 and 30–49 years.

Contrary to reported observations (*Forssman*[1]), sickness absenteeism proved higher among married than among unmarried workers (81.6 hours and 46.7 hours average time lost per year respectively). This disparity was strikingly greater for the skilled workers, the married workers having lost 114.2 working hours in the year as against 40.9 hours lost by the unmarried skilled workers.

Finally, the sickness absenteeism rate was less favourable for the French-Swiss workers than that reported for the German-Swiss or Italian-Swiss workers.

Absenteeism due to industrial accidents

On an average each of the individuals surveyed lost 15.25 hours (approximately two 8-hour working days) through industrial accidents during the year. The absenteeism frequency rate was 135.1 per 1000 workers, the severity rate 105.2 hours and absenteeism expressed as a percentage of the working time

[1] Ref. No. 31
[2] Ref. No. 7

amounted to 0.59. In comparison with the other two categories of workers, the skilled workers appeared to have the most unfavourable rates in every respect.

The disability rate and the working time lost showed a definite correlation with age, the absenteeism rate increasing from the younger to the older workers. In this case, as had been noticed for sickness absenteeism, the unmarried workers seemed to do better than the married ones, although the frequency rate of industrial accidents was lower for the married workers.

Finally, the rate for absenteeism due to industrial accidents was more favourable for the Italian-Swiss workers than for the French-Swiss workers and was least favourable for the German-Swiss workers.

It should be pointed out here that no case of occupational disease was reported during the year.

Absenteeism due to leave with permission

An average of 18.7 working hours was granted to the worker as leave with permission during the year. The average duration of such absences was approximately 11 hours, the frequency rate 1710 and the time lost as a percentage of working time 1.01. The rates of absenteeism for the apprentices were, however, considerably higher than these mean figures, the average time lost per apprentice being 48 hours (i. e. six 8-hour days) and the percentage of yearly working time reaching almost 2 per cent.

As may be clearly seen from table No. 20, there is a definite association between the age of the worker and this type of absenteeism, in that the number of permission granted for absence was greatest for the apprentices and then decreased progressively for the three older groups of workers.

Unmarried skilled and unskilled workers benefited twice as much as their married colleagues from these permissions.

The average number of absences, as well as their duration, increased from those reported for the group of French-Swiss workers, to those of the German-Swiss, and finally to those of the Italian-Swiss workers. For this last group, leave with permission represented 1.9 per cent of the year's working time, that is, almost double the percentage calculated for the French-Swiss workers.

The management of Sécheron stated that the company's policy with regard to granting leave with permission had been far too lenient and that it would have to be revised in 1956 with the application of the 5-day working week.

It is worth while remembering here that there is a very delicate balance between, on the one hand, granting of leave with permission, and, on the other hand, unjustified and sickness absenteeism, the two latter being likely to decrease with the increase of the former.

Unjustifiable absences

The highest absenteeism was reported among the apprentices and the lowest for the more "responsible" group of skilled workers. The average time lost during the year by the former was 11.3 hours and by the latter 1.5 hour. Absences as a percentage of working time came to 0.46 and 0.06 respectively. On the other hand, as shown in table No. 21, the apprentices' absences were of shorter duration than those of the skilled workers, and particularly those of the unskilled workers.

Annual leave and military service

The average time taken by the workers for annual leave and military service totalled, for the three groups of workers surveyed, 14.3 days, equal to 4.71 per cent of the year's working time, and 8.8 days, equal to 2.91 per cent of the year's working time, respectively.

The following is the average *disability rate* for the apprentices, skilled workers and unskilled workers due to sickness, industrial accidents, leave with permission and unjustified absences, expressed in 8-hour days and in time lost as a percentage of the year's working time.

Sickness absenteeism	9.2 days	3.04%
Industrial accidents	1.8 days	0.59%
Leave with permission . . .	2.3 days	1.01%
Unjustified absences	0.4 days	0.13%
	13.7	4.77%

Some practical considerations

As was pointed out at the beginning of this report, there is growing recognition of the significance of work absenteeism in connexion with industrial productivity, the health of the individual, the life of the "group" and the social climate of the factory. This trend emphasizes the importance of absenteeism recording for measuring the effect of the work on the health of the worker, in its turn a prerequisite for ensuring a safe environment. In the circumstances, it can hardly be disputed that absenteeism recording should be carried out on the largest scale possible. However, this statement raises the following question: can such recording be carried on in those industrial concerns—the majority—which have no medical service, or where for lack of personnel the medical service can only deal with the major health problems? The obvious complexity of the reported survey might well lead the reader to a negative conclusion. The work involved in recording absences in working days, hours and minutes, in dividing the population into sub-groups, in evaluating the relationship between absenteeism rates and factors such as age, civil status, origin of the

worker, and in assessing the distribution of absences during the year, season and weeek proved very time-consuming besides raising delicate statistical problems. In addition, despite his efforts, the investigator found it impossible to take into account all the elements which build up but at the same time confuse the picture.

One answer to the question is that the above-mentioned difficulties, which are so often given priority in the author's comments, should not discourage the practice of absenteeism recording as it is still possible to achieve fairly accurate results using much simpler methods than those which were applied during the present investigation.

Emphasis should be put on the fact that also small factories despite the statistical insignificance of the figures they may work out, should record and process absenteeism data. Both the stimulating effect of this practice on occupational health services and the not to be overlooked possibility of the summing up of data from more small factories into figures of statistical importance underline the value of absenteeism recording everywhere there is a working group.

It is felt that the full or part-time industrial medical officer whose duties only permit him a limited time for dealing with absenteeism recording should keep in mind the following points.

1. It is advisable to use a statistically significant sample of the population or, better still, samples from the different categories of workers, rather than the whole population when this exeeds 200–300 workers.

2. The system of recording absences by working days seems to give more accurate results and to raise fewer difficulties than the method which records absenteeism by calendar days.

3. It is not thought necessary that absences should be measured in term of hours and minutes, as the calculation of absences in days and half-days can give results similar to those obtained through the former method.

4. The following are suggested as basic data for recording absenteeism:

a) *in connexion with the worker*
   age, sex, social status, origin, date of entry into the factory, previous occupation (especially valuable for the diagnosis of occupational diseases), skill, result of medical examination;

b) *in connexion with the work*
   nature of the work, hazards;

c) *in connexion with the absence*
   cause of absence according to:
   i. medical grounds (occupational or non-occupational disease)
   ii. accident (occupational or non-occupational)
   iii. other types of absence (leave requested by the worker, unjustified absence, etc.)

starting and finishing date of the absence, time of the year, in case of a disease: result of the disease;

5. For the classification of disease, the morbidity code used in this survey, derived from Lists A and C of the 1948 Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death, is strongly recommended as this system, if widely adopted, would lend itself to national and international comparison.

6. It is felt that absenteeism is best measured through the use of the already well-known disability rate, severity rate, frequency rate and time lost expressed as a percentage of working time.

7. A personal card should be prepared for each worker. Punch cards are of great value when sorting out the data and processing the available information. Absenteeism of the workers should be followed for at least one year if possible in order to take into consideration the effect of seasonal trends on sickness absenteeism. It is of great importance that the investigator should state clearly the methods he has followed so that his conclusions are understandable for persons wishing to use the data for comparative purposes.

8. Finally, the investigator should not be too ambitious in his aims and should always regard the results of his calculations critically.

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Summary

All-cause work absenteeism among selected groups of apprentices, skilled and unskilled workers in a Swiss factory producing electrical equipment was recorded during 1955, and later measured and compared.

An evaluation of the relationship between absenteeism and the age, civil status and origin of the worker, has been attempted, and the annual and weekly incidence of sickness absenteeism assessed.

The report is divided into three parts, devoted respectively to the background, results and conclusions of the survey. The second part introduces a new morbidity code based on the Sixth Revision of the International Lists of Diseases, Injuries, and Causes of Death, which was used for recording the sickness absenteeism, and this code represents an important feature of the survey.

The investigation has shown: comparatively higher sickness absenteeism disability

and severity rates, together with a lower frequency rate, for the group of skilled workers; occupational and non-occupational accidents as the leading cause of absenteeism, followed by diseases of the respiratory, circulatory and digestive systems, respectively; the numerical importance and special features of absences recorded under "symptoms and ill-defined conditions"; a greater absenteeism incidence rate during the first part of the year and the week; the predominance of short absences; and the responsibility of "repeaters" for more than half of the whole group's sickness absenteeism.

This report ends with a number of practical considerations on the value and the technique of absenteeism recording in factories.

Résumé

On a calculé le taux d'absentéisme pour toutes causes parmi trois groupes selectionnés d'apprentis, d'ouvriers spécialisés et de manœuvres d'une usine suisse de matériel électrique, pour l'année 1955.

On a comparé les chiffres obtenus, recherché les rapports possibles existant entre le taux d'absentéisme d'une part, et l'âge, l'état civil et l'origine de l'ouvrier, d'autre part, et évalué le taux annuel de l'absentéisme et ses variations au cours de la semaine.

Le rapport d'enquête comprend trois parties qui traitent respectivement des conditions, des résultats et des conclusions de l'étude. Un nouveau code de morbidité, basé sur la «Sixième Revision de la Nomenclature internationale des Maladies, des Traumatismes et des Causes de Décès», a été établi par l'auteur, qui s'en est servi pour la classification des absences dues à la maladie; ce code est un élément capital de l'enquête.

Cette dernière a mis entre autre en évidence ce qui suit: les ouvriers spécialisés ont eu les coefficients d'incapacité et de gravité les plus élevés et le nombre d'absences le plus bas; les accidents du travail et les accidents nonprofessionnels à eux seuls ont été la cause la plus importante d'absentéisme, suivie par les maladies des appareils respiratoire, circulatoire et digestif; les absences comprises dans le groupe «symptômes et états mal-définis» tiennent par leur nombre et leur caractère spécial une place importante dans l'ensemble; le taux d'absentéisme est plus élevé dans la première partie de l'année ainsi qu'au début de la semaine; la plus grande partie des absences sont de courte durée; et les «récidivistes» sont responsables de plus de la moitié de l'absentéisme pour cause de maladie.

Le rapport termine par un certain nombre de considérations d'ordre pratique sur l'importance et les techniques du relèvement de l'absentéisme dans les usines.

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