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Absenteeism in Commercial Shipyards

by

ELEANOR V. KENNEDY



Bulletin No. 734

[Reprinted from the *Monthly Labor Review*;
February 1943, with additional data]

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1943

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington, D. C. - Price 5 cents

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LETTER OF TRANSMITTAL

UNITED STATES DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, D. C., February 20, 1943.

The SECRETARY OF LABOR:

I have the honor to transmit herewith a report on absenteeism in commercial shipyards. This report was prepared in the Division of Construction and Public Employment, Herman B. Byer, Chief.

A. F. HINRICHS, *Acting Commissioner.*

HON. FRANCES PERKINS,
Secretary of Labor.

Bulletin No. 734 of the

United States Bureau of Labor Statistics

[Reprinted from the MONTHLY LABOR REVIEW, February 1943, with additional data]

ABSENTEEISM IN COMMERCIAL SHIPYARDS, 1942

By ELEANOR V. KENNEDY, *Bureau of Labor Statistics*

Summary

ABSENTEEISM in commercial shipyards fluctuated around 7 or 8 percent from April through October 1942. In 81 yards which reported throughout this period, absenteeism rose irregularly from 6.7 percent in April to 7.8 percent in October. In these yards in the midweek of October the time thus lost was equivalent to 4 hours during the week for each wage earner on the pay roll.

Absenteeism is the failure of workers to report on the job when they are scheduled to work. It is a broad term which is applied to time lost because sickness or accident prevent a worker from being on the job, as well as to unauthorized time away from the job for other reasons. Workers who quit without notice are also counted as absentees until they are officially removed from the pay roll. Although absenteeism is a continuing problem of industry, it is only in periods when manpower is at a premium and maximum production is a national necessity that absenteeism becomes a matter of grave concern.

In yards along the Atlantic, Pacific, and Gulf Coasts absenteeism rates were higher than in yards in the Great Lakes and Inland areas. The rates varied widely from one yard to another, ranging from less than 2 percent to over 20 percent of working time. Wide month-to-month variations in the same yard were also reported. A few days of bad weather were frequently responsible for unusually high absenteeism in a yard.

In general, large yards had higher rates of absenteeism than small yards. This fact may explain some of the differences between areas, as the largest yards are all on the Atlantic, Pacific, and Gulf Coasts.

Company officials regarded poor housing and transportation facilities and the necessity of recruiting inexperienced workers, many of whom quit without giving notice, as the major causes of absenteeism. They were practically unanimous in stating that absenteeism was highest on week ends.

Scope and Method of Study

The Bureau of Labor Statistics, acting as agent for the War Production Board, collects monthly reports of operations from shipbuilding and ship-repair companies in the United States. Since April

1942, companies engaged in the construction of new vessels have been requested to report the amount of time lost by wage earners because of absenteeism. The yards from which these monthly reports are received employ almost 90 percent of all wage earners engaged on new construction in commercial yards. Because of the irregular working schedules in ship-repair yards, absenteeism data are not collected from companies engaged primarily in repair work.

Absenteeism is measured by the full man-days on which persons scheduled to work fail to appear. Tardiness, or fraction-of-day absences, vacations, authorized days off, and lay-offs are not included. The number of absentees is compiled from daily attendance records and is multiplied by the scheduled working hours to get total man-hours lost from absenteeism.

Rates of absenteeism may be computed in a variety of ways. Unless otherwise noted, the rates given in this article represent the ratio of man-hours lost to man-hours worked plus man-hours lost by wage earners during the midweek of the month.¹

In addition to collecting the monthly reports on absenteeism, in July 1942 the Bureau of Labor Statistics made a special inquiry of the causes of absenteeism in 20 selected shipyards which had reported absenteeism rates of 6 percent or more. The 4 largest shipbuilding zones were represented in the sample, and the particular yards were selected because their operations were considered representative. Each yard was asked to submit daily records of absenteeism over a 2-week period, and company officials were requested to state what they considered the major causes of absenteeism.

Difficulties in Measuring Absenteeism

Some absenteeism is accepted as a normal factor in industrial operations. However, only sporadic studies of the extent of absenteeism have been made and there are no regularly compiled statistical series (such as have long been available on employment, earnings, industrial accidents, and labor turn-over) to trace the changes in the amount of absenteeism over a period of years and to evaluate differences among industries. Also, because no standardized procedure has been established either for collecting the basic statistical data or for computing absenteeism rates, it is difficult to compare the results of such studies as have been made.

Few companies keep detailed records of absenteeism or require workers to explain their absences. An additional complication is the fact that practice varies in individual companies on such points as the length of time during which a worker who fails to appear is carried as an absentee before he is regarded as a "quit." Some companies count such workers as absentees for as long as a month, whereas others remove their names from the pay roll after 2 or 3 days. Moreover, policies regarding the granting of vacations and authorizing time off, which undoubtedly have some bearing on the amount of unauthorized leave which employees take, vary from company to company as well as from time to time within the same company.

¹ Other methods of computing absenteeism commonly used are: (a) Ratio of man-hours lost to man-hours actually worked; (b) average time lost per employee; and (c) ratio of number of absentees to the total number on the pay roll. (In the last method of computation, the average daily attendance for the week is expressed as a percentage of the total number on the pay roll; the difference between this ratio of average daily attendance and 100 percent is the percent of absenteeism for the week.)

It is difficult, therefore, to determine the irreducible minimum of absenteeism occasioned by sickness and accidents and similar causes beyond the control of either management or labor, and that which is due to irresponsibility among the workers, or to managerial or governmental policies which lower worker morale.

Absenteeism in 1918

What was probably one of the most thorough early studies of absenteeism also dealt with the shipbuilding industry. During the first World War the Emergency Fleet Corporation made a survey of absenteeism in 90 shipyards, for which continuous weekly records were available from January to September 1918, inclusive. These yards employed 320,000 workers in September 1918.

The results of that survey, which are summarized in table 1, show that, during the 9-month period, on the average almost 18 percent of the workers in steel-ship yards were absent daily. The monthly rates varied from 26 percent in January to 13 percent in June. Absenteeism was lower in yards building wooden ships than in those building steel ships; the 9-month average for wooden-ship yards was about 13 percent. For both wooden-ship and steel-ship yards there was wide variation in the extent of absenteeism in different shipbuilding districts. Absenteeism was highest in yards in the Northern Atlantic States and lowest in those on the Pacific Coast. This fact, together with the observation that absenteeism was greater in the winter than in the spring and summer months, led to the conclusion at that time that climatic reasons were a large factor in absenteeism in shipbuilding.²

TABLE 1.—Absenteeism Among All Employees of 90 Shipbuilding Companies, January–September 1918¹

District	Steel-ship yards					Wooden-ship yards				
	Number of yards reporting	Daily absentees as a percent of all employees				Number of yards reporting	Daily absentees as a percent of all employees			
		9 months	First quarter	Second quarter	Third quarter		9 months	First quarter	Second quarter	Third quarter
All districts.....	48	17.8	22.3	16.0	16.5	42	13.2	14.7	12.1	13.4
Atlantic.....	7	23.7	31.0	23.0	19.6	12	15.1	20.0	13.7	14.5
Delaware River.....	6	16.9	20.9	14.6	16.4	2	21.3	25.7	21.4	20.0
Middle Atlantic.....	2	23.5	28.7	20.7	22.7	4	19.1	19.4	17.4	20.3
Southern.....	4	14.5	12.7	16.6	13.8	4	11.4	17.5	10.8	.8
Gulf.....	5	19.4	20.5	16.9	21.2	5	19.4	20.5	16.9	21.2
Great Lakes.....	14	15.8	20.1	14.4	14.6	1	11.4	17.5	10.8	.8
North Pacific.....	8	12.4	9.9	11.3	15.3	6	8.4	10.1	7.7	8.2
No. II ²	7	8.4	8.9	8.1	8.5	7	8.4	8.9	8.1	8.5
South Pacific.....	4	10.7	11.3	9.3	11.6	5	8.0	11.1	7.4	6.6
Fabricated ³	3	21.6	30.2	18.5	18.0					

¹ From Journal of Political Economy, May 1919, p. 387.

² Includes all wooden-ship yards in Oregon and on Columbia River, except those of Coos Bay.

³ Includes yards where parts fabricated in other plants are assembled.

The 1918 survey was made when the shipbuilding industry was experiencing a wartime expansion similar to that at the present time, and absenteeism was considered extremely high. Unfortunately, it

² For a more complete discussion, see Journal of Political Economy, May 1919 (pp. 362-396): Labor Administration in the Shipbuilding Industry During War Time, by P. H. Douglas and F. E. Wolfe.

is impossible to make direct comparisons of absenteeism rates in 1918 and 1942, because of basic differences in the coverage of the data and the methods of computing the rates. The 1918 study was based on continuous weekly records for all employees, while current reports are for the midweek of the month and cover wage earners only. The 1918 rates were computed on the basis of the percent that the average daily absentees were of the total employees on the pay roll, whereas the 1942 rates were computed on the basis of man-hours lost in relation to man-hours worked plus man-hours lost.

Absenteeism in 1942

Absenteeism in shipyards fluctuated around 7 or 8 percent during the 7 months from April through October 1942. Shipyard employment expanded rapidly during this period, and with this expansion there was some tendency for absenteeism to increase. Time lost from absenteeism in 81 identical shipyards which reported each month rose irregularly from 6.7 percent in April to 7.8 percent in October

VARIATIONS AMONG SHIPBUILDING ZONES

Absenteeism was more prevalent among workers in yards on the Atlantic and Gulf Coasts than in the other shipbuilding zones shown in table 2. Throughout the 7-month period the Atlantic Coast rates were above the rates for all zones combined. Absenteeism fluctuated more from month to month in Gulf Coast yards than in any other area, and in some months rates for the Gulf area exceeded those for Atlantic Coast yards. Yards in the Great Lakes zone consistently reported the lowest rates, ranging between 3.1 percent in August and 4.2 percent in April. Absenteeism rates in the Inland yards were somewhat higher than in the Great Lakes area, but well below those in the other 3 zones. Throughout the summer, absenteeism rose in yards on the Pacific Coast, and in October this area had almost as high a rate as the Atlantic Coast yards.

TABLE 2.—*Absenteeism in 81 Identical Commercial Shipyards,¹ by Shipbuilding Zone,² April–October 1942*

Month	Man-hours lost as a percent of man-hours worked plus man-hours lost						Man-hours lost per week per wage earner on pay roll					
	All zones	Atlantic Coast	Gulf Coast	Pacific Coast	Great Lakes	Inland	All zones	Atlantic Coast	Gulf Coast	Pacific Coast	Great Lakes	Inland
April.....	6.7	7.8	6.6	5.7	4.2	4.4	3.4	4.2	3.7	2.7	2.1	2.6
May.....	6.5	7.7	7.3	4.9	3.7	3.7	3.3	4.1	4.1	2.4	1.8	2.2
June.....	7.2	7.6	8.3	6.8	3.3	4.2	3.8	4.1	4.5	3.4	1.7	2.5
July.....	7.3	8.2	6.7	6.8	3.4	4.7	3.8	4.4	3.7	3.3	1.7	2.8
August.....	7.4	8.7	5.4	7.3	3.1	4.0	3.8	4.6	2.9	3.5	1.6	2.4
September.....	7.4	8.2	6.7	7.3	3.4	4.6	3.8	4.4	3.5	3.5	1.7	2.6
October.....	7.8	8.0	8.9	7.7	3.5	5.6	4.0	4.2	4.9	3.7	1.8	3.2

¹ These 81 shipyards employed 60 percent of the total number of wage earners in commercial shipyards engaged in new construction in April. Although employment increased in the 81 yards from April to October, they had only 53 percent of all wage earners in October.

² The Atlantic, Pacific, and Gulf Coast and Great Lakes zones are those recognized by the Shipbuilding Stabilization Committee; the Inland zone is the Ohio-Mississippi Valley area.

The average time lost from absenteeism amounted to 4 hours per week for each wage earner on the pay roll in the midweek of October. In the Great Lakes yards the time lost averaged less than 2 hours per week, but in Gulf Coast yards it was almost 5 hours.

The shipbuilding zones with the highest absenteeism rates included by far the largest share of shipyard workers. In October almost 42 percent of all wage earners in commercial yards engaged in new construction were working in yards situated on the Atlantic Coast, 37 percent were in Pacific Coast yards, and 15 percent were in Gulf Coast yards. Thus, nearly 94 percent of the wage earners were in areas where absenteeism averaged at least 7.7 percent in October. Yards in the Great Lakes area had less than 5 percent of the workers and Inland yards less than 2 percent.

VARIATIONS AMONG YARDS

Opinion varies as to where to draw the line between absenteeism which must be expected as a "normal" part of industrial operations and that caused by situations which, theoretically at least, could be remedied. However, the wide variation in the absenteeism rates of individual shipyards, shown in table 3, leads to the conclusion that in some yards absenteeism far exceeds that which can be explained by sickness and accidents and a moderate amount of time off for other reasons. In April, 57 of the 81 yards for which absenteeism records were available each month reported that man-hours lost from absenteeism were less than 6 percent. These 57 yards employed 47 percent of the wage earners in the 81 reporting yards. More than half of the wage earners in the 81 yards worked in yards where absenteeism was equal to 4 to 8 percent in April. If 8 percent is arbitrarily set as the maximum amount of absenteeism which can be regarded as "normal" in shipyards, it would appear that excessive absenteeism occurred in yards with almost 25 percent of the wage earners in April.

TABLE 3.—Distribution of 81 Identical Commercial Shipyards According to Absenteeism Rates ¹ in April and October 1942

Absenteeism rate	April 1942		October 1942	
	Number of yards	Percent of total wage earners in 81 yards	Number of yards	Percent of total wage earners in 81 yards
Total.....	81	100.0	81	100.0
0.1 and under 2 percent.....	17	9.2	13	7.7
2 and under 4 percent.....	25	13.0	19	6.0
4 and under 6 percent.....	15	25.0	16	19.8
6 and under 8 percent.....	13	28.2	13	23.1
8 and under 10 percent.....	4	8.6	8	11.2
10 and under 12 percent.....	4	7.9	5	19.2
12 and under 14 percent.....	2	1.6	3	7.0
14 and under 16 percent.....	0	0	2	5.0
16 and under 18 percent.....	1	6.5	1	.9
18 percent and over.....	0	0	1	1

¹ Ratio of man-hours lost to man-hours worked plus man-hours lost.

² Absenteeism rate between 20 and 30 percent.

By October, employment in these same 81 yards had increased 50 percent, and the number of yards reporting absenteeism rates of 8 percent or more had grown. Less than 34 percent of the wage earners in October worked in yards where absenteeism was under 6 percent, while more than 43 percent were in yards where the rate was 8 percent or more.

Absenteeism appeared to be more of a problem in large shipyards than in small ones. Although the figures in table 4 show that some

yards with fewer than 500 wage earners in October reported absenteeism of 8 percent or more, in three-fourths of these yards absenteeism was below 6 percent. In a few yards with 5,000 or more wage earners absenteeism was kept below 6 percent, but almost half of these large yards reported rates of 8 percent or more.

Table 4 throws some light on the differences in the extent of absenteeism in various shipbuilding zones which were observed earlier. Practically all of the yards in the Great Lakes and Inland zones, where absenteeism was lowest, had fewer than 5,000 wage earners each. As a matter of fact, employment in over half of the yards in these 2 zones was below 500 each in October. In practically 9 out of 10 yards in these areas absenteeism was kept below 8 percent.

TABLE 4.—*Distribution of All Commercial Shipyards Reporting in October 1942, According to Absenteeism Rates¹ and Size and Location of Yards*

Zone and absenteeism rate	Number of yards distributed according to number of wage earners						
	All yards	Less than 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000	10,000 and under 20,000	20,000 and over
All zones.....	206	102	32	35	13	12	12
0.1 and under 2 percent.....	41	28	6	5	1	0	1
2 and under 4 percent.....	51	27	11	10	2	4	2
4 and under 6 percent.....	47	22	2	9	2	4	2
6 and under 8 percent.....	29	16	2	5	3	3	1
8 and under 10 percent.....	18	5	3	3	3	1	3
10 and under 12 percent.....	6	2	0	1	0	2	3
12 and under 14 percent.....	4	0	0	0	2	1	1
14 percent and over.....	8	2	2	2	1	1	0
Atlantic, Gulf, and Pacific zones.....	157	75	20	26	12	12	12
0.1 and under 2 percent.....	33	21	6	4	1	0	1
2 and under 4 percent.....	34	20	6	6	1	0	1
4 and under 6 percent.....	33	15	5	5	2	4	2
6 and under 8 percent.....	23	12	0	5	2	3	1
8 and under 10 percent.....	16	4	2	3	3	1	3
10 and under 12 percent.....	7	1	0	1	0	2	3
12 and under 14 percent.....	4	0	0	0	2	1	1
14 percent and over.....	7	2	1	2	1	1	0
Great Lakes and Inland zones.....	49	27	12	9	1	0	0
0.1 and under 2 percent.....	8	7	0	1	0	0	0
2 and under 4 percent.....	17	7	5	4	1	0	0
4 and under 6 percent.....	14	7	3	4	0	0	0
6 and under 8 percent.....	6	4	2	0	0	0	0
8 and under 10 percent.....	2	1	1	0	0	0	0
10 and under 12 percent.....	1	1	0	0	0	0	0
12 and under 14 percent.....	0	0	0	0	0	0	0
14 percent and over.....	1	0	1	0	0	0	0

¹ Ratio of man-hours lost to man-hours worked plus man-hours lost.

All the very large shipyards, i. e., those with more than 10,000 wage earners each in October, were on the Atlantic, Pacific, or Gulf Coasts. Half of these large yards reported that absenteeism was at least 8 percent in October. Similarly high absenteeism occurred in half of the yards with 5,000 to 10,000 wage earners in these 3 zones. However, the small yards in these areas reported absenteeism rates which compared very favorably with those reported by similar yards in the Great Lakes and Inland zones. Almost 9 of every 10 yards with fewer than 500 wage earners in the Atlantic, Pacific, and Gulf yards reported absenteeism rates of less than 8 percent in October, as was the case in the other 2 zones.

These differences between large and small yards in the same areas lend some weight to two of the explanations frequently given for the

current high absenteeism—inadequate housing and transportation. Although these two factors constitute problems in all localities where shipbuilding employment has expanded rapidly, it is probably true that the problems of overcrowding and poor transportation increase disproportionately with the expansion of large yards as compared with expansion of smaller ones. It is also probable that in the smaller yards closer contacts can be maintained between management and workers, as well as between individual workers, than is possible in yards with 20,000 or 30,000 workers.

Causes of Absenteeism

Fourteen of the 20 yards from which the Bureau obtained information through its special survey of the causes of absenteeism furnished daily records of the amount of absenteeism for 2 weeks during July (see table 5), but the remaining information obtained through this survey consisted of opinions of company officials.

In most cases a general tendency was observed for absenteeism to rise over the week end. Absences on Saturday and Monday accounted for about 40 percent of the man-hours lost throughout the week. Several explanations of this attendance pattern were offered. Friday is pay day in many yards. Many workers whose homes were quite distant visited their families over the week end and frequently did not return until Tuesday. Others took Monday off to rest up from week-end activities. In yards scheduling Sunday work regularly, absenteeism was usually greatest on Sunday.³

TABLE 5.—Daily Record of Absenteeism in 14 Selected Shipyards, July 6–July 18, 1942

Period	July 6–July 11		July 13–July 18	
	Man-days lost as percent of man-days worked plus man-days lost	Percent of total man-days lost each day	Man-days lost as percent of man-days worked plus man-days lost	Percent of total man-days lost each day
Monday through Saturday.....	8.3	100.0	8.2	100.0
Monday.....	10.2	20.2	9.8	19.6
Tuesday.....	8.3	16.6	8.1	16.4
Wednesday.....	7.7	15.5	7.7	15.7
Thursday.....	7.0	14.1	7.1	14.5
Friday.....	7.2	14.7	7.3	14.8
Saturday.....	9.4	18.9	9.4	18.9

The other reasons offered by company officials for the high absenteeism in their yards are summarized in table 6. Most of them felt that absenteeism resulted from a combination of factors. In specific areas inadequate housing and transportation facilities were decidedly the most important causes of absenteeism. High on the list of other reasons was the large number of workers quitting without notice, which was associated with the increasing number of inexperienced workers being hired.

³ In one yard with 14.5 percent absenteeism, almost a third of the absenteeism occurs on Sunday, which is the seventh day of work in this yard. All workers in some departments are offered an opportunity to report for work on Sunday, although it is understood that many of them will not report. Those who do not report in these departments are counted as absent.

TABLE 6.—*Causes of Absenteeism in Selected Commercial Shipyards*

Zone and yard	Week-end absences	Quits without notice	Housing	Transportation	High earnings	Long hours	Sickness and accidents	Other work (farms, etc.)	Climate or weather	Inexperienced labor	Unexplained or miscellaneous
Atlantic Coast:											
I-A	X				X		X				X
I-B	X								X		
I-C	X	X	X								
I-D	X	X			X						
I-E	X	X			X						
I-F	X	X			X					X	
I-G	X	X	X								
I-H	X		X	X				X	X		
I-J											X
Gulf Coast:											
II-A	X	X	X	X		X			X		
II-B	X	X	X	X		X					
II-C	X	X			X				X	X	
II-D	X		X	X							
Pacific Coast:											
III-A	X		X								X
III-B	X		X				X				
III-C	X		X								X
III-D	X		X				X				
III-E	X	X	X								
III-F	X		X				X				
Great Lakes: IV-A											X

HOUSING AND TRANSPORTATION

Lack of housing accommodations was undoubtedly the principal cause of absenteeism in many yards, particularly in the Gulf and Pacific areas. The tendency of workers to take time off for week-end visits to their families has already been mentioned. In some areas workers bringing their families with them were forced to live in trailer or tent camps without adequate facilities for water supply and sewage disposal, and being accustomed to and able to pay for decent housing, took time off to look for better accommodations or, in extreme cases, quit their jobs because housing conditions were intolerable.

Shortage of housing facilities has caused many workers to commute as much as 50 to 150 miles (round trip) daily. Rationing of tires and gasoline have resulted in workers' forming car pools, and a blow-out or engine trouble may keep 5 or 6 workers away from work. As previously stated, absenteeism in this report does not include fraction-of-day absences. If time lost because of tardiness were included, transportation would be a still more important factor, because automobile trouble and congested traffic make many workers tardy. Some workers traveling long distances prefer to work fewer days and make less money than to make the long trip to and from work every day.

Although both publicly and privately financed war housing has been built in shipbuilding centers, in many areas the supply of housing has failed to keep pace with the increase in employment. Since the natural requirements for launching large vessels limit the number of possible locations for certain types of yards, many of the proposals for placing war industries where labor and housing are already available are not applicable to the shipbuilding industry. Moreover, shortages of critical materials preclude any large-scale building of new ways.

QUITS WITHOUT NOTICE AND INEXPERIENCED WORKERS

A large percentage of absenteeism resulted from carrying on the pay roll persons who had quit work without giving notice to the company. Such workers are counted as absentees for varying periods (in some yards for as long as a month) until their names are removed from the pay roll. Detailed records of one shipyard, employing more than 2,500 workers and reporting an absenteeism rate of 9 percent, illustrate the effect of unreported quits in absenteeism rates. Approximately one-fifth of this company's absenteeism was caused by keeping on the pay roll persons who were probable terminations.

Bureau of Labor Statistics' reports on labor turn-over in the shipbuilding industry show that quits rose from 4.29 per 100 workers in April 1942 to 5.39 per 100 workers in October. This was in addition to discharges, military separations, and lay-offs. Shipbuilding officials attribute a large share of the quits to the necessity of hiring inexperienced workers who are recruited from a wide variety of occupations. Many workers after a few days find they cannot do the work or cannot stand the grind, take time off to look for another job, and do not return. One large shipbuilding company on the Atlantic Coast submitted reports showing that of over 500 workers who had quit in the first half of November, almost half had been employed no longer than a month. Nearly seven-eighths of those quitting had been employed by this company 6 months or less.

Many workers after being trained believe they can obtain better wages elsewhere, take time off to seek other employment, and then leave permanently. In some localities shipyards were hiring each other's workers. A survey of workers hired by representative shipyards on the west coast during June 1942 showed that 14 percent of the new persons hired had come from other shipyards. However, about a third of the workers reported as recruited from other shipyards were, in reality, employees shifted between two yards operated by the same company, and were doubtless transferred by an arrangement of the management.⁴

HIGH EARNINGS AND LONG HOURS

Officials of 4 companies attributed absenteeism to high earnings in combination with other causes, and an official of a fifth company mentioned high earnings alone. Frequently workers who were separated from their families preferred a visit home to more money. However, many of these workers probably would not have taken jobs away from home in the first place had it not been for the inducement of high wages and the prospects which they afforded of visits to the families. Company officials also felt that some workers were interested merely in making a living and would work only until they made enough to satisfy their wants. During the first World War "wage income higher than the standard of living" was also advanced as a cause of absenteeism in certain sections of the shipbuilding industry.⁵

Comparison of average weekly earnings and absenteeism rates for the 20 companies does not show any consistent relation between changes in earnings and changes in absenteeism. In fact, the absenteeism records of individual companies show chiefly that absenteeism

⁴ Monthly Labor Review, November 1942 (p. 926): Sources of Labor Supply in West Coast Shipyards and Aircraft Parts Plants.

⁵ Political Science Quarterly, December 1919 (p. 603): Absenteeism in Labor, by Paul H. Douglas.

rates change so erratically from month to month that in all yards the explanation must lie in a variety of factors. In one Atlantic Coast yard absenteeism rose from 2 percent in April to over 9 percent in August and declined slightly in the following 2 months. In another Atlantic Coast yard absenteeism dropped from 11.3 percent in April to 8.0 in June, but rose to 14.4 in October. In a Pacific yard where employment was more than doubled from April to October, but where average weekly hours and average weekly earnings were about the same in both months, absenteeism rose from 0.8 percent in April to 10.0 percent in October. In other yards absenteeism remained between 3 and 7 percent throughout the 7-month period. On the other hand, in a large yard on the Atlantic Coast absenteeism was consistently high, but whereas employment increased 50 percent, absenteeism was reduced from 16.0 percent in April to 11.9 percent in October. This yard also reduced average weekly hours from 54.5 to 49.9 per week over the 7 months.

The two Gulf yards which mentioned long hours, along with other causes, as the explanation for high absenteeism reported average weekly hours of 52.8 and 53.6 in July, when the average for all shipyard workers was 48.3. Scheduled workweeks in these yards were 54 and 58 hours, respectively.

TABLE 7.—*Employment, Hours, Earnings, Absenteeism, and Quit Rates in Selected Commercial Shipyards, April-October 1942*

Zone, shipyard, number of wage earners, ¹ and month	Employment index (April=100)	Average weekly hours	Average weekly earnings	Percent of absenteeism	Quit rate (per 100 wage earners)
<i>Atlantic Coast</i>					
Shipyard I-A (20,000-25,000 wage earners):					
April.....	100.0	47.1	\$49.19	5.3	3.03
May.....	101.4	47.2	49.24	5.4	2.39
June.....	102.6	47.6	50.08	4.3	2.45
July.....	103.0	47.9	55.03	6.1	2.26
August.....	100.5	47.7	55.85	6.9	3.72
September.....	103.6	47.7	58.77	6.8	5.93
October.....	108.6	48.2	55.28	4.5	3.95
Shipyard I-B (under 5,000 wage earners):					
April.....	100.0	54.3	53.39	5.7	5.54
May.....	117.4	56.4	58.92	8.8	6.99
June.....	139.4	55.8	51.36	10.4	6.02
July.....	146.5	52.3	51.45	10.5	6.77
August.....	164.8	56.3	59.63	10.4	6.47
September.....	197.6	55.2	60.05	9.3	5.73
October.....	234.8	55.9	58.39	10.6	5.20
Shipyard I-C (25,000-30,000 wage earners):					
April.....	100.0	46.5	43.90	10.2	3.37
May.....	104.3	48.0	45.29	(?)	4.17
June.....	108.4	49.6	47.91	8.2	4.68
July.....	112.3	51.2	50.18	9.7	3.23
August.....	116.1	50.2	53.36	10.6	6.67
September.....	116.8	51.1	58.10	9.6	6.25
October.....	114.2	48.2	53.74	10.7	4.59
Shipyard I-D (30,000-35,000 wage earners):					
April.....	100.0	54.5	57.88	16.0	5.69
May.....	113.3	52.7	55.84	15.0	8.82
June.....	125.2	53.4	57.23	14.6	11.93
July.....	139.7	48.0	58.04	13.0	5.68
August.....	153.7	47.2	(?)	13.2	8.19
September.....	156.7	49.7	63.85	13.9	9.07
October.....	146.8	49.9	61.39	11.9	6.55
Shipyard I-E (under 5,000 wage earners):					
April.....	100.0	46.0	49.40	7.6	2.22
May.....	117.2	42.7	44.97	8.1	2.35
June.....	125.6	44.7	46.65	8.5	2.32
July.....	124.1	45.7	52.82	9.3	2.10
August.....	133.4	43.7	50.97	6.5	(?)
September.....	133.0	46.3	56.72	7.7	5.85
October.....	148.6	48.8	59.66	7.4	6.79

See footnotes at end of table.

TABLE 7.—*Employment, Hours, Earnings, Absenteeism, and Quit Rates in Selected Commercial Shipyards, April-October 1942—Continued*

Zone, shipyard, number of wage earners, ¹ and month	Employment index (April=100)	Average weekly hours	Average weekly earnings	Percent of absenteeism	Quit rate (per 100 wage earners)
<i>Atlantic Coast—Continued</i>					
Shipyard I-F (10,000-15,000 wage earners):					
April.....	100.0	48.8	\$52.81	6.9	1.89
May.....	116.2	50.6	53.18	9.3	2.39
June.....	137.9	49.2	54.69	6.5	2.39
July.....	152.8	52.5	64.95	7.4	1.73
August.....	175.9	50.4	61.36	8.1	2.34
September.....	183.3	48.3	59.95	9.2	2.50
October.....	192.8	53.8	64.75	6.7	2.23
Shipyard I-G (25,000-30,000 wage earners):					
April.....	100.0	49.9	\$58.92	2.0	1.86
May.....	108.2	48.9	57.97	4.1	(²)
June.....	122.3	49.3	57.38	4.5	2.50
July.....	132.5	49.6	62.97	7.1	1.55
August.....	138.8	47.3	57.55	9.4	2.67
September.....	143.3	48.7	64.50	7.7	3.56
October.....	154.1	45.2	55.87	8.5	2.92
Shipyard I-H (15,000-20,000 wage earners):					
April.....	100.0	48.0	39.86	11.3	2.92
May.....	107.1	50.8	43.73	9.8	2.81
June.....	120.4	51.7	45.01	8.0	3.23
July.....	137.5	49.8	(³)	8.8	(²)
August.....	150.2	46.6	46.49	10.1	3.71
September.....	156.4	49.0	52.80	8.8	4.95
October.....	174.6	45.4	45.45	14.4	3.89
Shipyard I-J (25,000-30,000 wage earners):					
April.....	100.0	47.7	56.62	5.4	1.40
May.....	110.2	49.8	60.35	4.2	1.04
June.....	116.6	48.6	60.60	5.2	1.10
July.....	125.1	50.0	66.41	8.0	1.10
August.....	141.7	48.8	64.47	7.8	1.45
September.....	152.7	49.5	66.87	5.6	(²)
October.....	155.5	46.5	60.58	5.7	(²)
<i>Gulf Coast</i>					
Shipyard II-A (5,000-10,000 wage earners):					
April.....	100.0	49.2	43.70	8.8	6.14
May.....	114.2	50.6	44.14	6.4	.72
June.....	135.2	51.8	44.89	6.1	3.72
July.....	144.7	52.8	47.01	8.3	6.15
August.....	170.1	52.7	52.41	7.8	8.74
September.....	178.9	49.9	49.81	10.4	9.58
October.....	186.9	48.2	47.89	13.0	(²)
Shipyard II-B (10,000-15,000 wage earners):					
April.....	100.0	53.5	51.21	6.8	8.54
May.....	107.5	51.4	47.17	10.4	14.22
June.....	112.7	51.8	51.59	9.8	10.65
July.....	109.8	53.6	53.53	6.8	11.93
August.....	117.8	57.5	58.79	4.7	20.98
September.....	117.7	44.7	49.34	5.8	25.05
October.....	127.1	45.1	44.36	8.2	24.04
Shipyard II-C (10,000-15,000 wage earners):					
April.....	100.0	47.9	48.07	3.9	7.58
May.....	123.0	45.2	47.30	4.9	3.59
June.....	161.2	44.6	46.27	5.8	7.25
July.....	166.2	45.4	47.89	6.6	5.04
August.....	201.9	41.6	50.57	3.9	5.22
September.....	179.2	50.0	58.97	4.5	4.74
October.....	187.1	49.9	63.76	4.9	3.86
Shipyard II-D (10,000-15,000 wage earners):					
April.....	100.0	56.1	\$58.35	7.7	1.62
May.....	123.9	58.4	61.00	7.1	1.83
June.....	141.4	53.3	56.08	10.0	1.30
July.....	160.4	56.1	58.77	7.0	1.80
August.....	177.5	56.9	66.12	6.4	1.45
September.....	187.1	57.0	70.42	5.5	1.81
October.....	197.0	57.3	67.53	7.3	1.65
<i>Pacific Coast</i>					
Shipyard III-A (20,000-25,000 wage earners):					
April.....	100.0	43.0	51.56	10.0	(²)
May.....	118.0	42.8	52.03	6.8	11.97
June.....	132.8	42.4	51.90	10.0	12.42
July.....	147.2	41.6	50.44	8.6	12.67
August.....	161.6	40.0	46.00	8.7	12.14
September.....	165.0	41.8	(³)	8.3	13.08
October.....	162.7	41.8	56.67	12.0	9.19

See footnotes at end of table.

TABLE 7.—*Employment, Hours, Earnings, Absenteeism, and Quit Rates in Selected Commercial Shipyards, April–October 1942—Continued*

Zone, shipyard, number of wage earners, ¹ and month	Employment index (April=100)	Average weekly hours	Average weekly earnings	Percent of absenteeism	Quit rate (per 100 wage earners)
<i>Pacific Coast—Continued</i>					
Shipyard III-B (25,000–30,000 wage earners):					
April.....	100.0	42.6	\$50.16	6.2	(?)
May.....	126.0	43.0	50.79	7.7	8.93
June.....	134.3	42.7	51.66	10.7	10.65
July.....	164.6	42.4	51.46	11.7	9.31
August.....	193.9	43.5	57.00	11.7	10.19
September.....	204.4	43.6	60.77	8.9	(?)
October.....	212.6	43.6	56.82	11.2	6.26
Shipyard III-C (10,000–15,000 wage earners):					
April.....	100.0	41.8	51.18	8.2	13.39
May.....	114.2	43.1	51.63	6.9	11.42
June.....	127.5	47.4	55.45	6.1	7.94
July.....	136.6	44.9	55.10	7.3	6.94
August.....	148.6	45.0	60.06	5.6	6.20
September.....	157.0	44.6	63.73	5.3	6.97
October.....	154.0	44.9	60.52	(?)	4.92
Shipyard III-D (15,000–20,000 wage earners):					
April.....	100.0	46.2	60.16	(?)	(?)
May.....	91.2	39.7	48.53	5.3	(?)
June.....	201.7	40.7	51.27	10.4	(?)
July.....	258.8	42.2	49.92	6.2	(?)
August.....	450.0	42.6	57.75	5.9	(?)
September.....	578.7	(?)	59.85	(?)	(?)
October.....	733.8	42.2	58.20	(?)	(?)
Shipyard III-E (10,000–15,000 wage earners):					
April.....	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
May.....	100.0	25.0	39.74	6.8	(?)
June.....	378.5	33.4	40.77	9.6	(?)
July.....	1,206.7	36.1	43.97	7.8	(?)
August.....	2,274.5	37.9	49.04	10.1	(?)
September.....	2,867.2	38.6	57.85	9.1	(?)
October.....	3,221.2	40.1	52.83	12.2	(?)
Shipyard III-F (25,000–30,000 wage earners):					
April.....	100.0	41.7	\$55.50	.8	(?)
May.....	112.1	47.8	53.65	.7	(?)
June.....	138.9	45.7	55.25	5.0	(?)
July.....	159.6	43.2	54.16	7.0	(?)
August.....	184.3	40.1	55.00	8.3	(?)
September.....	195.7	43.1	51.37	9.3	(?)
October.....	204.5	41.9	54.51	10.0	(?)
<i>Great Lakes</i>					
Shipyard IV-A (under 500 wage earners):					
April.....	106.0	42.7	42.85	12.7	(?)
May.....	138.2	53.2	55.09	6.2	(?)
June.....	132.7	55.1	(³)	4.3	(?)
July.....	134.8	52.8	57.40	7.3	(?)
August.....	178.8	54.5	59.84	4.0	(?)
September.....	193.3	57.5	72.79	6.9	(?)
October.....	215.7	53.9	62.40	7.3	(?)

¹ Wage earners in October 1942.

² Not reported.

³ Data questionable.

⁴ Yard not in operation.

SICKNESS AND ACCIDENTS

None of the shipbuilding companies questioned reported sickness and accidents as a major cause of absenteeism. One company reporting an absenteeism rate of 11.8 submitted a detailed analysis of this time lost, which showed that industrial injuries accounted for 1.8 percent and reported sickness 0.3 percent of the total.

WEATHER AND CLIMATE

Weather is probably a more important factor of absenteeism in shipbuilding than in any other industry with the possible exception of the construction industry. Much shipbuilding work is in the open and is affected by heavy rains and severe heat or cold. It is very common for shipyards to report on their monthly schedules that high absenteeism was caused by heavy rain, and this may account for some of the apparently erratic fluctuations in absenteeism rates for individual companies. Since the available 1942 data cover only the months from April through October, it is too early to tell whether the increase in absenteeism which occurred during the winter of 1918 will be duplicated in 1942 and 1943.

OTHER CAUSES

All of the reasons offered by shipyard officials for the current high absenteeism rates had been observed by Prof. Paul H. Douglas in a general article on absenteeism, written shortly after the close of World War I.⁶ In addition, his list of causes included: Employment of women; nature of employment, e. g., heat, dust, excessive noise, monotony; payment of overtime bonus; lack of materials; liquor; and separation of interests between workman and employer.

Although woman workers in shipyards increased appreciably in number during the summer of 1942, they represented no more than 2 percent of the workers in commercial shipyards in October.⁷ The increasing employment of women may result in higher absenteeism, but women were not numerous enough in the fall of 1942 to have much effect on the rates.

Absenteeism attributable to the nature of the work was doubtless implied when shipyard officials called attention to the large number of quits, particularly among new workers. The effect of liquor was probably also associated by company officials with week-end absences. Separation of interests of workman and employer may have some bearing on the fact that absenteeism seemed to be more of a problem in large than in small yards in 1942.

The payment of overtime bonuses was regarded as such an important factor in absenteeism in the spring and summer of 1942 that an agreement abolishing calendar premium days, which will be discussed later, was made effective in all zones by August 1, 1942.

The extent to which worker morale is lowered and absenteeism is thereby increased because of faulty planning of work and lack of materials and equipment cannot be measured. Rapid expansion of yards and difficulties in getting materials have unquestionably complicated the orderly planning of work and the most effective use of workmen in many yards.

Methods of Reducing Absenteeism

Although the majority of shipyard officials questioned stated that they had taken steps to eliminate as much absenteeism as possible, many reported that they had been unable to reduce it to any appre-

⁶ Political Science Quarterly, December, 1919 (pp. 600-604): Absenteeism in Labor, by Paul H. Douglas.

⁷ For data on employment of women in shipyards, see Monthly Labor Review, February 1943, p. 277.

ciable extent. The Navy Department, U. S. Maritime Commission, War Production Board, and other Federal agencies have also attempted to assist labor and management in minimizing this loss of working time.

Abolition of calendar premium days.—One step to reduce absenteeism was the abolition of calendar premium days as the result of the Shipbuilding Stabilization Committee agreement which was effective in all zones by August 1, 1942. Shipbuilding companies were of the opinion that employees were working on Saturday and Sunday in order to receive premium pay and were then taking time off during the week. The agreement provided that Saturdays and Sundays would be considered as regular workdays and that work performed on these days would be paid for at straight-time rates except when Saturday and Sunday were the sixth or seventh regular shift of the established workweek. Time and a half would be paid for the sixth regular shift and double time for the seventh regular shift worked in an employee's regularly established workweek.

Personal appeals to workers.—Most yards considered that appeals made to the workers through foremen, through posters supplied by the War Production Board, Navy, and Maritime Commission, and through labor management committees were the most effective methods of reducing absenteeism.

One Pacific Coast shipyard planned to maintain large bulletin boards showing the relative percentage of absentees by crafts, shifts, and divisions, with the hope that these boards would stimulate competition and thus reduce absenteeism.

A popular method of appealing to the workers was to have speakers in the yards, who pointed out to the workers the value of every day's work and the importance of their jobs in the war.

One of the most direct appeals was reported by a Pacific Coast yard which printed an "Open Letter to Joe Lay-off" in the plant magazine. This letter set forth the number of workers who were absent on 1 day, the losses in terms of production, the essential part that shipping plays in the war, and the importance of every worker to his job and his country.

Assistance in housing and transportation problems.—Two companies reported taking steps to alleviate transportation and housing difficulties. One of these companies arranged for shuttle train service between the city in which the yard was situated and a neighboring city where a large proportion of workers were forced to reside because of housing shortages. The second company established a division responsible for trying to eliminate the causes of absenteeism, which assisted employees in obtaining houses.

Decrease in hours of work.—Although two yards reported that long hours undoubtedly were a principal cause of absenteeism, only one of them reduced hours—from a scheduled workweek of 58 to 48 hours. Another yard reported that by allowing employees to work only 6 shifts a week, absenteeism had been reduced 50 percent.