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INDUSTRIAL HYGIENE DIGEST

Literature Abstracts

- MEDICAL
- ENGINEERING
- LEGAL - - - decisions and trends

Industrial Health News

ANNUAL MEETING ISSUE



Issued Monthly By

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FOUNDATION FACTS

Foundation Facts is a monthly news-letter issued to industrial concerns holding membership in Industrial Hygiene Foundation. The Foundation is a non-profit association of industries for the advancement of healthful working conditions.

Vol. 6 November, 1944 No. 1

MMBB-001264

UNIVERSITY OF PITTSBURGH ARCHIVES

Annual Meeting Highlights
500 Attend Sessions

A continuation of the panel discussion, "Putting the Disabled Veteran Back to Work," and a panel on "Health Insurance," highlighted the Ninth Annual Meeting of Members of Industrial Hygiene Foundation held at Mellon Institute, Pittsburgh, on November 15 and 16.

More than 500 officers of member companies, other executives, plant managers, and industrial health and safety specialists attended the sessions. One hundred and sixty-three companies were represented together with guests from the Armed Forces and various Governmental agencies.

H. G. Batcheller, Operations Vice Chairman, War Production Board, and President of Allegheny Ludlum Steel Corporation, delivered the keynote address. He pointed to certain critical shortages in war production and asserted that it would be better for G.I. Joe to be jobless for three months after his discharge, than killed for lack of supplies because of premature reconversion.

Andrew Fletcher, Vice President, St. Joseph Lead Company, and Chairman of the Foundation's Board of Trustees, pointed out that the maintenance of the human machine is more important than the maintenance of machines in the plant, adding that "We should never consider only what the man or woman does to the machine and overlook what the machine does to the worker." He said that many organizations, of which his company was one, "Can show that every dollar invested in improved working and living conditions, pays enormous dividends in dollars as well as in human happiness."

Industrial Relations

V. P. Ahearn, an Industry Member, War Labor Board, and Executive Secretary, National Industrial Sand Association, spoke on the rising importance of industrial health in industrial relations, "There is hardly a major case coming before the War Labor Board," Mr. Ahearn observed, "which does not involve, at one stage or another, a demand that something shall be done to improve industrial health." In discussing working conditions, he called attention to the importance of ventilation and said:

"I am confident that at the working level, the lack of adequate ventilation has done as much to contribute to poor labor relations as anything."

Abstracts Available

Abstracts of most of the reports presented in the Medical and Engineering Sections and in the Legal Section, together with texts and abstracts of other papers, are being sent to members and subscribers. These comprise the November issue of the INDUSTRIAL HYGIENE DIGEST. The abstracts help bridge the gap between the meeting and publication of the formal Proceedings. The panel on employment of the disabled veterans, with which the Foundation pioneered at its 1943 meeting, will be issued shortly as the first part of the Proceedings.

NOVEMBER 1992
LIFE AMONG THE ARMS

HWBB-0011765

Abstract of address by Andrew Fletcher, Vice President, St. Joseph Lead Co., New York, and Chairman, Foundation's Board of Trustees, opening the Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, on November 15, 1944.

Before we can discuss the Foundation's position in the postwar years, it might be well to consider the probable future position of the industries of our Country, as our activities are, of course, directly proportionate to industrial activity. In this connection, I will assume that we as individuals, and collectively as a Nation, will destroy the myth that many of our people and the Government have a secret bank account, that can be drawn upon to give us those things which we want - and that the cost of them will always be negligible. The sooner we realize that we obtain nothing in this world without paying for it, the better. I believe that we are, fortunately, at long last beginning to appreciate the fact that as a Nation we can only consume what we produce, and that we can only have more as we produce more. One group may possibly, for the moment, benefit at the expense of another, but the people as a whole certainly cannot gain by any such selfish group policy.

Although victory is assured, I feel that we stand today in a rather dangerous position, because individual and business freedom has necessarily been drastically restricted by wartime conditions. There are, of course, two widely different schools of thought as to economic policies for our Country. One of these is the belief that the private enterprise system has proved a failure, and that depression, unemployment and the emergencies that we are bound to face in the postwar era can only be handled by large Government expenditures and control. The other point of view is, of course, that we can only have expanding economy and resultant prosperity, if we remove the wartime restrictions, and give private enterprise the opportunity to continue the progress which has been so apparent in the development of our Nation.

In my estimation there should be no doubt as to which course we should follow, and I am confident that, with an expanding program for private enterprise, industry will accept the responsibility of fair wages and the disposal of its production at reasonable prices. We have within this Nation the natural resources, the manpower, the capital and the ingenuity to create the most productive and efficient economy in the world. With the united determination of capital, labor, Government and the people in general, there need be no limit to the progress and prosperity that we can realize in this Country after the war.

However, there is little satisfaction in living in a beautiful home completely surrounded by graveyards, and therefore we must share our prosperity with the rest of the world..... Europe aided us in our early days, and now we are given the opportunity to reciprocate.

Provided we accept the responsibility in seeing that practical terms for peace are developed, and sane methods are insisted upon for maintaining the peace, then there should be no more difficulty in securing repayment for the help which we should give to Europe, than Europe had in securing repayment for the help given to us in our early days - in fact, because of many willing hands, the time for repayment should be relatively short, say possibly 30 or 40 years. I would, however, caution those who may think that if we give gold, then repayment must be in gold - we must accept repayment in whatever way the borrower can make it, whether it be in gold, labor or goods. Personally, I do not fear the future, and I look forward with much enthusiasm to the postwar earning possibilities of our Nation, and to the position which we will hold in the world.

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As I have already said, the possibilities for our Foundation are directly proportionate to industrial activity - with postwar industrial activity greater than prewar, then it is purely a question of our being able to take advantage of the opportunities. We must, of course, "sell" the Foundation to capital, labor and to those officials of the State and Federal agencies whose responsibility is the protection and betterment of public health. But we should have no great difficulty as the maintenance of the human machine is equally, if not more, important than the machines in a plant - and no one will dispute the advisability of plant maintenance. In the past, we at times neglected the human machine, because it is such a well-designed unit that it will stand an unbelievable amount of abuse. We should never consider only what the man or woman does with the machine, and overlook what the machine does to the worker. Many organizations, of which the Company that I work for is definitely one, can today show that every dollar invested in improved working and living conditions pays enormous dividends in dollars, as well as in human happiness.

The Foundation through its research programs and technical knowledge can aid in solving the toxic factors, the unknown dangers, that have resulted through the astonishing wartime discoveries, and which because of the war emergencies there has not been sufficient time to solve. If a company, or an individual, knows of a hazard, then in practically every instance, steps will be taken to guard against it. I know of no organization that is better fitted or more willing to help than the Industrial Hygiene Foundation of America, if it is given the opportunity. Therefore when difficulties arise, or, better still, before they arise, just call on us.

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IN REPLY ADDRESS November 1992

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Text of Keynote address, "Victory Before Reconversion," by H.G. Batcheller, Operations Vice Chairman, War Production Board and President, Allegheny Ludlum Steel Corporation, opening Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 15, 1944.

I consider it a privilege to talk to you men assembled here this morning. I have followed for years with great interest and great admiration the work of your Foundation. It is part of my job today to talk to people who have the same basic objective as we have in the War Production Board.

Reconversion seems to be the topic of the day. War Production is no longer news. It has ceased to excite our people. It is relegated to the inside pages. However as Mr. Whoosiz gets a permit to resume the production of mouse traps or cocktail shakers, that makes the front page, and that is going too far. In a recent national publication having considerable circulation, the War Production Board was accused of throwing curved balls, of deliberately delaying by its confusion the American economy. That was a short time ago. Only a few days ago, another story appeared in a national publication, I want to quote if I may: "While much ballyhoo has been released by the War Production Board about the spot authorization plan, government officials who have maintained close contact with industry do not report much enthusiasm from business men. Manufacturers have complained that there is too much red tape, too many forms to fill out, too many questions to answer that are irritating when the subject of the application should be very little concern to the government."

And again, "Although War Department officials are still talking about a 200,000 employee manpower shortage, informed trade sources say that the actual shortage is 12,000 unskilled laborers in 'must" programs such as heavy tires, trucks, artillery and ammunition."

I think it is silly and absurd to talk to intelligent people and not give the true facts on both sides, and it is my intention, as briefly as I can, to present to you the truth as I see it. I think I see it clearly, because for two months now, I have been engaged with high officials, very high officials of the Army and of the Navy, in examining, investigating and exploring the production for war. Where it falls short, by how much, what it means, what steps have been taken to correct it, where they are inadequate, what can be done to bring critical shortages up to schedule.

We must realize, however, that there is such a thing as Reconversion. It is silly to attempt to pass over the necessity for minimizing to the greatest extent possible, the reconversion of our industry from war production to peace production at the proper time. The error comes in trying to beat the gun and not anticipating the time at which specifically reconversion of industry and resumption of civilian production can be undertaken. We know GI Joe wants a job; we know some billions of dollars are needed to support our national economy; we know additional jobs must be provided, more than we ever had in any other war years if we are to preserve our American way of life as we wish to have it preserved. The error comes in trying to anticipate and attempting to do that job, resume the production of civilian products, the lack of which causes no real suffering in this country, at the expense of the war. If we do that, it means only one thing, it means lives will be lost.

So I say, let's stop talking about it prematurely; go as far as we can in planning and taking steps that can reasonably be taken without interference with war, but if anyone wants to interfere with the war by doing it prematurely, I say he is on the wrong track.

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Yesterday, as a result of the study and investigation that I referred to, I made my report to the War Production Board on the present status of war production. It was a long exhaustive report and I am not going to report to you what it contained for obvious reasons. However, I do want to give you a few of the overall facts as to the present status of what we are doing in American industry to keep our troops at the front and keep our Navy supplied with what they need to end this war as quickly as possible. (Shows Chart I -- The Story of War Production)

This is the overall story. You will note that at the beginning, back in 1939, when Stalin and Hitler made their pact, when Germany invaded Poland, we had nothing in the way of war production. We were starting from scratch. As a matter of defense, the situation was serious. This study shows over half billion dollars in '39; moving up into '40, moving up to the mountain top, it represents an ascending pinnacle of some five and a half billion dollars of ammunitions and necessities of war. Up here at the peak, is an amazing record in American history. Nothing like it has ever been known in the history of the world. It has astounded our enemies and allies alike. You will notice that we have reached a peak and to be apparently slipping down the other side. The thing we must do more than anything else, beyond everything else, is to maintain this production. With this high level, to be sure, there are undoubtedly some surpluses in the individual procurements. Well, what of it. I don't know anyone who can calculate the requirements of a 10 million man army and balance it out to the third decimal point. The surplus, in my opinion, and this is only a guess, will be considerably less than some people are worrying about, but regardless of whatever that may be, you never lost a war by having too much. I am not talking about the possibility of losing the war, I am talking about the possibility of delaying the war. I am talking about the possibility of delaying an early and victorious conclusion of this war by having too little.

The investigation to which I refer proves definite and critical categories where we know we have too little. I should like to call your attention to one important difference. Two years ago, we were concerned with so-called critical shortages calculated by the people who were planning the production of munitions trying to determine what would be needed. Today, when we talk about a critical shortage, we talk about a definite deficit of something, based, not on any plan, but on information received from Supreme Headquarters at the front and every theatre of operation scattered all over the country, all over the globe. (Shows Chart II -- Cotton Duck)

This is one of them -- Cotton Duck. Cotton duck recalls to your mind nothing more important than the white pants you used to wear playing tennis. Maybe your son is yelling because he has not been able to get a little play tent. This, however, means shelter to our troops at the front. It means shelter for the base hospitals and hospitals being set up in jungles under all sorts of conditions. We had a production of more than 50 million yards per month in our great textile industry back in '42. It slipped in '43 and slipped again down to 30 million yards in January of '44. This up here (indicating), nearly 50 million yards a month, represents the requirement of the Armed Forces and on down in each case, shows what is needed. The green bar shows what has been produced and it is not anywhere near enough. The textile industry is an uninteresting industry, many working conditions are unpleasant, a low paid industry and people have shifted and drifted from that to more glamorous, better paying occupations. Aircraft work is something we like to do and so forth. There, however, is the result laid out. We hope and our expectation is that by the petition to the directive power of the War Production Board which represents the greatest concentration of power in any agency, to be able to build this back up to 60 odd millions of yards in the early part of the year. There is, however, no human way by which we can make up what has been lost during this period. We are informed on the best possible authority that 100 million yards or more of that which we might have had, but never produced, means only one thing, and that is that a specific number --- I can't give you the number --- of United States soldiers will be without shelter in Europe this winter. This is no rumor, it is a fact.

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On the subject of heavy artillery ammunition, by heavy I mean 105 mm., I show no requirement. The requirement is unlimited. Our Armed Forces today could profitably extend the saving of life by having all the heavy ammunition that we could possibly produce in this country and transport to them for their use at the front. I think the reasons for that are obvious. We, of course, cannot go into too much detail. If you will go back and read the newspaper accounts at the time for the storming and occupation of Aachen, if you will study the situation around the great fortress of Metz, it will be obvious to you as it will to all of us if you properly interpret the news, as to what I am talking about. We are trying every means within the power of the American industry to bring production up.

This (indicating) is the achievement today. This (indicating) is the objective. That objective is the minimum requirement, and if we do not achieve it, it means just one thing. I don't want to constantly repeat this, but I am going to do it. It will be the duration of the war will be extended --- nothing but that. (Shows Chart III -- Heavy Tires)

Here we have a different story. Heavy Truck and Bus Tires. Here you have an industry which, in addition to all the other problems, has had to face the loss of raw materials and it has been necessary for the scientists to work out methods to produce a synthetic product to take the place of rubber formerly available to us. Here in this case, there was adequate time to plan for the present heavy requirement of tires. The principal reason that we are not meeting the objective now is the tremendous upsurge of requirements. The scientist has no definite calculation of the life expectancy of this new scientific material and, in this case, it is the replacement of tires in our fighting equipment that has caused this gap between what we are producing and what the need is. Thus, the necessity for again increasing production from here (indicating) up to here (indicating). (Shows Chart IV -- Dry Cell Batteries)

Again, a program which sounds like hardware store stuff. It, however, means walkie-talkies and the discharge of communications of our fighting forces. In this case, the reason we don't have enough is the difficulty in manning the facilities that have been provided for the production of these astronomical quantities of dry cell storage batteries. That is the shortage. That is what we have to overcome if we are going to keep the war moving on schedule. (Shows Chart V -- Heavy-Heavy Trucks)

Heavy-heavy trucks. You have heard about the Red Ball Express. That has been glamorized, not as much as it should have been. This is the continuous line of the so-called "heavy-heavies" that were never made in this country pre-war, carrying tremendous loads, requiring more axles, more wheels, more tires, heavier tires. These are what are principally relied upon for the transportation of the munitions of war from the beaches to the front lines. I think it is no secret that these which are in use are moving, as far as they are able, not the customary 60 yards apart but nose to tail, everyday of the week, 24 hours a day, on roads that are not like our Harrisburg highway. Can we hope that we can build our production from some 6 thousand a month up to a requirement which is in excess of 8 thousand a month? The reasons for this difficulty are all across the board -- lack of manpower in the assembly plants, lack of material in the foundries, both steel, malleable iron, and gray, and of course, lack of tires. That is one of the most difficult problems with which the War Production Board has to deal. Enough of that. I hope I made my point with the few examples I brought here. If I may, let me summarize.

Overall production -- a magnificent achievement! Anyone who makes a speech and berates the people because we don't have enough is misinformed. Within this great program, however, there are certain critical matters delaying definitely the day of victory and these I have tried to illustrate to you. The reason I am doing that is that

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it can only be answered by one means, by persuading American industry, both management and labor that the need does exist -- is there, and is not some fanciful dream -- and by persuading you in management and industry to go all out for war.

I took out of the paper here yesterday an example of what I mean. It is so easy to talk in generalities. Let me read one brief paragraph. In this paper, there were at least 10 stories of Reconversion. They made the front pages.

"Kunming, Nov. 8 (Delayed): Abandoning their fourth Southeastern China base to the Japanese offensive, United States 14th Air Force demolition teams before dawn set off the last bomb buried in runways and taxi strips on Liuchow Field and escaped westward in jeeps. They left behind them the debris of the base which, after the abandonment of Kweilin, stood as the main center of American airpower in Southeastern China. In the blackened embers was the last hope that eleventh-hour deliveries of American arms and ammunition, slim though they might be, would save the foothold."

And that is why I say to you, we must continue to produce for war until final and complete victory is won. We cannot let up for one moment and we cannot let the thoughts of reconversion hamper us in our desire to win the war. If it means that we have to wait awhile before we can reconvert, I believe that you and I and everyone would rather have that than a delayed victory. When GI Joe comes home he wants a job. I want him to have one, so do you. He has earned his job by his brave actions in the past, he has risked his life to make our country secure. But, at the same time, I would rather have a live GI Joe waiting three months than to have him lying in a slit trench, dead. Dead for lack of supplies, lack of shelter, lack of medicine, guns or ammunition.

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THE ARMY AIR FORCES

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Comments by Col. John N. Andrews, Officer in Charge of Postwar Activities, National Selective Service System, Washington, D.C., in panel on "Putting the Disabled Veteran Back to Work," at Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 15, 1944.

One of the greatest challenges the medical profession and allied groups have ever faced will confront them in the rehabilitation program to be carried out following the war. This challenge will confront the physicians, surgeons, nurses, hygienists, psychologists, psychiatrists, social workers, and personnel directors who are concerned with the satisfactory readjustment of the working population.

The task of readjusting the veteran at the end of this war will be at least three times as great as it was in 1918-1919. In the first place, the numbers involved will be three times or more greater than at the end of World War I; in the second place, the men and women in the armed forces will have been away from school, their jobs, families, and friends much longer; and, in the third place, the 18,000,000 to 20,000,000 war workers to be readjusted will be far greater than those in similar work in World War I.

The most critical group requiring readjustment will be the two to three million men and women in the younger age groups who never had permanent positions.

Approximately 1,500,000 men and women have been separated from service since September 1940. Industry also has had opportunity to reabsorb large numbers of the ex-servicemen in their old jobs or in new ones.

One of the most significant developments during the year has been the enactment of Public Law No. 346 (The G. I. Bill of Rights), providing wide educational opportunities for the veterans. This Law is especially designed to provide further education or training for ex-servicemen who are not pensionable cases, and is a valuable addition to Public Law 16 which was passed in 1943, providing for the vocational readjustment of veterans with service-connected disabilities.

Public Law 346 provides, in addition to education, hospital facilities; loans for homes, farms, or businesses; and other benefits. Educational benefits are only a part, but a very important part of the law.

The other Act, Public Law 16, extends the rehabilitation activities of the Veterans Administration to provide for a program to last for six years after the termination of the present war, during which period a veteran, man or woman, with a pensionable disability may receive training up to four years specifically aimed at the restoration of employability.

The schools and colleges will have a tremendous responsibility and opportunity in developing educational programs to meet the varying needs of the veterans, in integrating these returning servicemen with the rest of the student body and in the provision of alert and understanding teachers, professors and administrative officers who will provide the type and character of instruction that will be needed. Industry and commercial establishments will face a similar challenge as they seek to provide the type of industrial and business training that will be desired by the veterans who seek this kind of opportunity rather than to return to school or college. Adequate guidance offers a real challenge, and we certainly should have enough imagination to meet that challenge resourcefully. If a country can recruit a man from the school, factory, mine, farm or college, give him physical and vocational examinations, train

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him at great expense for many months, supply him with the most expensive equipment, and then send him forth to fight, that same country ought to be able to develop a comprehensive program to reconvert that individual into a productive, peacetime civilian.

Most of the higher educational institutions have now had some experiance with discharged men and women who have returned to school. One institution, New York University, reports that it has already enrolled some 700 veterans; Ohio State University reports that about 200 ex-servicemen are in attendance at that institution; the University of Minnesota, with a considerable number of veterans in attendance, has studied the readjustment of ex-servicemen intensively and has emphasized testing and counseling. Seventy veterans were enrolled in the vocational and trade courses in Philadelphia and Superintendent Alexander J. Stoddard expects eventually to have 1,000 or more of them attending the city schools.

Millions of the returning servicemen will desire employment as soon as they are released from service. In studying the general problem of employment for veterans, serious thought should be given to the fact that approximately one-fourth of the men now in the armed forces have never had permanent employment.

The 6443 local boards of the Selective Service System are assisting and will continue to assist the returning veteran in every way possible. Attached to each of the local boards are one or more reemployment committeemen who serve as the friends and advisers of the veterans. There are now approximately 16,000 reemployment committeemen. These committeemen, working in cooperation with the local boards, render any kind of employment and other assistance possible.

It is encouraging to observe that of the thousands of veterans already released from active service, practically all of those entitled to reemployment in their old jobs and desiring such reinstatement, have been reinstated without delay. Organized labor has also been cooperative in helping veterans make their adjustments to old or new jobs.

Most of the industrial firms of the country have announced policies regarding the reinstatement of veterans in their old jobs or similar ones. In many of the industrial plans, liberal provision has been made for upgrading veterans so they will have better positions than they held when they entered service. In the cases of veterans returning with handicaps, such as to make it impossible or unwise to reinstate them in their former positions, employers have been generous in shifting the men to positions which they are able to perform.

The physicians making the examinations of handicapped veterans should outline in detail the conditions which they discover which make the employee unsuited for certain types of work, and full information should be furnished as to what type of work should be avoided in assigning the handicapped person to employment. For instance, there will be persons who should not work near fast-moving machinery; there will be others who should not do any heavy lifting; there will be still others who should work on the ground level only and not be allowed on ladders, scaffolds, or elevated platforms; and there will be some who must avoid dust, fumes, or skin irritants. Some will find it impossible to walk or stand for considerable periods of time in connection with their work.

One group about which much has been said and of which there is great public misunderstanding is the veterans who have been discharged for neuropsychiatric disabilities. Colonel William C. Menninger, Director of the Neuropsychiatric Division of the Office of the Surgeon General of the War Department stresses the need for public education regarding the "medical" discharges, saying:

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"We must anticipate that the returning veteran whether he be medically discharged or otherwise, in many cases, will return a very different man than when he entered the service. Particularly is this true if he has spent many months overseas. We will face a new problem when the illiterate son of the hills returns to this country with an intimate knowledge of Burma or Arabia. After a man has had all his physical needs attended to, his personal financial cares obliterated by the system of living over so long a period, we can anticipate many difficulties in his readjustment as a civilian. We need to anticipate these problems, as well as the attitude of the man who has been separated from his home for an indefinite period on a small stipend and perhaps risked his life: -- he will expect much.

"Especially is public education desirable for the benefit of the neuropsychiatric veterans who are discharged. Many misconceptions exist in this field and will result in a difficult reception at home, a cold shoulder from former acquaintances, a misunderstanding among employers. Even men in high government positions are reputed as having stated that they did not want to employ a 'psychoneurotic.' Such individuals need to be educated to the fact that the great majority of these men so discharged are not incapacitated. None are psychotic and very few are any less capable of holding jobs than before they went into the Army."

You of the Industrial Hygiene Foundation will have an extremely important role to play in the readjustment of the returning servicemen. Many of you have already had considerable experience with these men. Your medical programs will need to be very closely integrated with the work of the personnel department and you will want to maintain close contact with supervisors, foremen, and others who are in intimate touch with the returned veterans. It will not be sufficient merely to find a job and put a man to work. He will need frequent counseling and he should be encouraged to discuss his personal and other problems freely with personnel directors and the plant physicians. After all, most of these ex-servicemen will have experienced a great deal of excitement during their period of service. Civilian life and employment generally will, at best, be much more routine and monotonous to the workers than many of their experiences have been while in service.

It is hoped and confidently expected that, through the combined efforts of business and industrial executives, labor managers, educational leaders, and medical groups plans can be made by which gainful employment and other opportunities will be available for all veterans. If these men and women can be quickly and satisfactorily assimilated, they will become a great constructive force in every community. To see that adequate opportunities are available, and to make whatever additional contributions are necessary to facilitate the readjustment of the ex-servicemen and women, is the challenge which faces America today. You of the Industrial Hygiene Foundation will make a great contribution to this important program. Your interests and efforts on behalf of the veterans are deeply appreciated and we ask your continued active cooperation.

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UNITED ARMS

HWBB-001127

Comments by Dr. Harley L. Krieger, Medical Director, Ford Motor Company, Dearborn, Michigan, in panel discussion on "Putting the Disabled Veteran Back to Work," at the Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 15, 1944.

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Up to October 1, 1943, at the Rouge Plant, we had placed 348 veterans on suitable work. As of October 1, 1944, we had placed a total of 1580 veterans back to work, of these, 556 are new men. That is, they are veterans who have never worked for us. 870 veterans have been re-instated. These are the men whose military leaves for induction were issued by the Ford Motor Company. 154 veterans were re-hired. That is, at some preveios time they worked for us, but were not inducted into the service from Ford Motor Company. All of the men were placed at work by the Medical Transfer Department. Four employees have been added to this staff during the past year, bringing its total to 15. "Exit interviews" also have been added to this department's work. These interviews are not confined to veterans. Following through from exit interviews, Management has placed one man on veteran hiring. This will enable the veteran to have a personal interview. He will be able to express his desires more confidentially and perhaps we in turn can place him more intelligently on a job.

Information gained from exit interviews on 57 veterans who quit during the last year or so, shows very little of a standard nature. 38 were old employees and 19 new employees. Reasons for terminating services were many and varied-running from a new wife in California to an outright imposter apprehended by the F. B. I. The degree of disability, mental or physical, had little to do with their desire to move on. Some asked for outside jobs and, when such jobs were given them, still were not satisfied. In the main, I believe, these men returned to industry a little too soon and perhaps in the near future they will "find" themselves and make the grade. As it was, the transition from Army to industry had been too fast for them. They needed a "conditioning" station in-between.

Of the 1580 veterans working, much can be said in their favor. It is true that we had to transfer some of them two or three times, sooner or later, though, a suitable job was found, a job which appealed to them. Then their troubles were over.

The second part of this discussion has to deal with Veteran Occupational Rehabilitation as adopted by the Henry Ford Trade School. 503 acres of excellent farming soil together with suitable buildings, consisting of a lodge, power house, chapel (which through the week is converted into a classroom) a hobby shop, machine shop and a laboratory were turned over to Veterans Occupational Rehabilitation. This is known as Camp Legion. Established in 1938, it was then a summer farm project for the Sons of World War I Veterans, hence its name.

Camp Legion is open to all veterans with a medical discharge. Also we prefer men with definite physical disabilities, such as: the loss of an arm, leg, eye, etc. It is not our intention to fill this camp with veterans having a medical discharge which reads "psycho-neurosis." On the other hand any veteran who has been overseas and on battle missions is more than welcome even with a diagnosis of psycho-neurosis.

The program at Camp Legion is planned for men who wish to return to industry or farming, and having definite disabilities, must now have some occupational rehabilitation.

The educational program of the Camp is under the able direction of the Henry Ford Trade School instructors. It is flexible and the desires of each veteran as to the type of training in which he is interested are given consideration by executives of the school.

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During the time that this training takes place the veteran will have the advantage of athletic programs and the comfort of a healthful, wholesome, and interesting environment. Each man may remain in the Camp until he is mentally, physically and skillfully ready to take a job. While at Camp Legion he will have medical check-ups and necessary treatment. In addition, each man is allotted $3.00 a day besides room and board. When he leaves the Camp he is under no obligation to work for the Ford Motor Company, but may take his knowledge wherever he pleases.

Should the veteran decide to work for us there are three main courses of vocational training he may pursue, industry, agriculture and auto mechanics.

If the veteran chooses industry, he is further rehabilitated by being transferred to the Cherry Hill Plant where he goes on Ford Motor payroll at standard hourly rates with subsequent designated raises. He pays for his own room and board, also any medical attention necessary, other than that associated with compensation. His work at Cherry Hill is considered very light, in that the Company has set up the necessary machinery for the production manufacture of automobile door and ignition locks. The veteran is now on a regular job with definite time habits, and doing his job, whether it be running a small cutter, a grinder or a drill press. It might not be the way you or I would operate the machine. And it may require special fixtures to enable this veteran, with his disability, to work the machine. Nevertheless, he is doing the job in the manner taught him by his instructor at Camp Legion.

If the veteran is interested in agriculture and his disability is such that his instructors believe he will make a good farmer, all of his training will be along agricultural lines. This will include maintenance of equipment. When his course is finished, he will be transferred to the Ford Farms. One such veteran is now a foreman on our Dairy Farm.

In arranging the third course, that of auto mechanics, we set up in one section of the machine shop a work bench with the necessary tools, wrenches, chain falls, and used automobile motors. Under an instructor's guidance, veterans learn to rebuild or re-condition these motors. In the course of time these boys become very adept at this work. A phone call to the Ford dealer brings about a speedy placement of these veterans in their own locality. And a much needed mechanic, and another man, is returned to society.

We do not guarantee every Camp Legion Veteran a job. On the other hand, we have never failed to place a man.

It might be interesting to note that our first veteran came to the Camp March 20, 1944, and that we now have 40 veterans in Camp, 11 at Cherry Hill, one on the farm and two have been placed in dealer organizations. 75% of the boys in camp are overseas men.

We believe that in the placement of handicapped veterans, personal handling of the veteran from the time he applies for a job until he is placed, is most satisfactory. This we have accomplished by having one man assigned from the Employment Division to interview and hire all veterans. The veteran is then referred to the Medical Transfer Department for satisfactory placement.

We also believe that in many instances further vocational training of the veteran is needed. This training must be individually adapted to the disability of the veteran. Rug weaving, broom making, leather tooling, etc., are essential for the specific training and coordinating of nerve-muscle function. We sincerely suggest to all agencies, Federal, State and Local that a definite program of practical vocational rehabilitation be instituted. This will enable the veteran to adapt himself more quickly in industry and allow us more time to spend on other cases.

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NOVEMBER 1992
ARCHIVES
IN THE

HWBB-0011276

IN THE ABRAMS NOVEMBER 1992

Continuing case history reports by Mr. A. A. Hendrix, Director of Personnel, Eastern Aircraft-Linden Division, General Motors Corporation, in panel discussion on "Putting the Disabled Veteran Back to Work," at Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 15, 1944.

Since our meeting here a year ago we at Eastern Aircraft have had the benefit of a good deal of valuable experience in the reemployment of ex-servicemen. We have employed approximately 1100 ex-servicemen since 1942. Of these about 300 were former employees. 474 have been released. The following is a breakdown of this released group: quits to take other jobs, go back into business, to regain health, etc., 396; of whom 68 were former employees. Returning to military service, 36; of whom 23 were former employees. Discharged for cause, 42; of whom 3 were former employees.

So far, fortunately, we have been able to find a job suitable to his condition for every veteran. Also, we have had to transfer some cases one or more times before they became properly adjusted. For instances, take the case of "C" presented here last year. Given a medical discharge from the Coast Guard June 19, 1943 he was first employed by us July 6, 1943 as a router operator. However this work proved too strenuous and he was transferred to metal forming. On October 16th he complained that the continuous hammering in the department was upsetting his nerves and his stomach. He said he had been examined at the U. S. Marine Hospital and was advised to have a change in his job. It was arranged to place him in a crib job in which he did fairly satisfactorily. On December 8, 1943 in order to further remove "C" from excessive noise he was transferred to the Spare Parts Department as a Crater and Packer. He is still employed on this job and his case can be considered a success.

Now to reconsider the Classification of Reasons for Discharge from service offered here a year ago: In April we analyzed a total of 737 of our cases and made the following summary:

			Per cent
Group 1 -	Overage, dependency, etc.	63	9%
Group 2 -	Minor physical defects - flat feet, perforated ear drums, visual defects, etc.	254	34%
Group 3 -	Major physical defects:		
	Orthopedic (foot, back, arm, etc.)	55	8%
	Heart and lungs	48	6.7%
	Gastro-intestinal	67	9%
	Tropical diseases	10	1.3%
	Other (including wounds, etc.)	98	12%
Group 4 -	Disorders of nervous system:		
	A. Organic	15	2%
	B. Functional	127	18%
		737	100%

These figures are somewhat misleading. In many cases were the stated reason for discharge was some minor physical defect - or perhaps even a major one, such as wounds, etc. - the real reason was a functional nervous disorder or the man was just a misfit in service. We think accurate information would reveal that well over 30% of these men were released for this cause.

Among cases of Functional Disorder of the Nervous System, "B" was hired May 10, 1943 as a production worker. He enlisted in the Marines in 1939 and served as a flight mechanic and also radio gunner during the present war. He was in action in the Solomons in October, 1942 when he developed a nervous breakdown. Hospitalized for

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six months, he received Metrazol shock therapy and made a recovery. When discharged in April, 1943, he says, "I felt like a recruit coming back to civilian life." When first employed he was trained on a riveting job at 79¢ per hour, but this became too much for his nerves and he was transferred to the Pre-flight Department as an installer. He did well in his job, was promoted to Mop-up Mechanic and later became a Crew Chief, working himself up to $1.55 per hour. On April 16, 1944 he was promoted to foreman. After that he became gradually more tense and nervous, in all probability due to the strain of responsibility. He was seen by the plant psychiatrist in the hope of helping him adjust successfully. However, the pressure of the job seemed to be too much and on October 2nd it was felt that he should be transferred back to the hourly roll. He improved rather quickly after this -- it seemed that a weight had been lifted from his shoulders. This case brings home the importance of the time element in these cases -- I feel we pushed him ahead a little too fast.

We believe that most of these men can readjust and perform as efficient an operation as is expected of any employee. In May, 1944, two of our engineers made a statistical study of the job performance of a group of 39 hourly rate veterans picked at random throughout the plant, with the performance of a similarly picked group of 78 non-veterans. Groups of this size are considered to be statistically significant. The performance ratings were done by the foremen as part of a routine rating of all employees. Therefore, the ratings should be impartial, since the foremen had no knowledge of the statistical study. The qualities rated were: Quality of work, Quantity of work, Attendance, Cooperation, Safety and Good Housekeeping. The conclusion from this study was, "There is no significant difference in foremen's ratings of performance on the job between veterans and non-veterans."

The ex-servicemen which we have employed up until now have been for the most part, men who for various reasons had to be discharged from service during their training period. Battle casualties have been relatively few as yet, but from now on the picture will change -- there will be more Major Physical Disabilities and probably relatively fewer "misfits."

In our work with veterans we have been impressed with the great importance of home and community influences in their readjustment. A good home can be a powerful positive influence, a bad one may undo anything we may try to accomplish in the plant. Take the case of "P" a boy who was discharged from the Army September 8, 1943. He was reinstated into his job September 21st as a metal former in the Fabrication Department. He lives with an older sister who is married and they have a pretty sound home life. However, he was put on the opposite shift from his sister and brother-in-law, so that he saw very little of them. He got into bad company in the plant and had to be reprimanded for over-staying his rest periods. Also, he got to drinking heavily on occasion and got into difficulty on this account with Plant Protection one day. He was seen by the psychiatrist who advised that he be placed on the opposite shift so that he would be on the same shift as his family. This was arranged and he quickly showed marked improvement. His sister says that he has not touched a drop of liquor and "everything is fine at home." This has been reflected in his performance on the job and he feels much encouraged.

Another important point illustrated by this story is that the human environment a man finds on the job is also a strong force for good or otherwise. It is necessary to consider this factor in placing these men. Also, it means that we must strive to build a spirit of understanding and teamwork throughout our organization -- one in which a veteran will feel at ease and at the same time not be coddled. In such an atmosphere the men will find it possible to make use of the valuable qualities they gained in service -- courage, discipline, teamwork and self-sacrifice.

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UNITED AIRCRAFT 1992 November

HWBR-001178

Comments by Mr. I. Dent Jenkins, Personnel Manager, Harrison Radiator Division, General Motors Corporation, Lockport, New York, in panel discussion on "Putting the Disabled Veteran Back to Work," at the Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 15, 1944.

Last year we presented the initial plan used by Harrison Radiator Division to analyze jobs for the purpose of determining what the job required of an individual, with the primary objective of facilitating handicapped veteran placement. This had the secondary objective of facilitating the placement of handicapped people generally. Today it is probably appropriate to say that our objective is to facilitate the placement of people, with the placement of handicapped veterans and others as an incidental value to be derived from the analysis. This changed point of view is in no sense a detraction from the importance of veteran placement, but rather it simply recognizes that the values from sound job analysis are by no means limited.

When discussed last year there was not, as far as we were aware, very much data available on this subject. Today there is a wealth of material. As a result of some of this material we have modified our own plan to its distinct betterment. One of the most elaborate studies is that prepared by Region XII of the War Manpower Commission, San Francisco, and the Permanente Foundation Hospitals in California, which covered shipyard operations on the West Coast. They not only had a plan of job analysis but also a matched plan of recording the individual worker's attributes, with the purpose of matching the one with the other.

Taking the obvious cue from this approach we have developed a form which we have titled "Summary of Placement Qualifications," for use by the Medical Department in furnishing placement data on the individual.

While our experience is still limited we are finding the information furnished by job analyses, together with the individual worker information furnished by the Medical Department, definitely facilitates placement. It is not foolproof, as individual judgment is still required to properly fit the worker to the job. It has, however, removed an element of guess work and made for a much more orderly and constructive approach. Those seriously interested in this type of work will be well repaid for the time required to study a booklet published by the War Manpower Commission, titled "Training and Reference Manual for Job Analysis," which may be obtained from the Government Printing Office, Washington, D. C. The plan which they outline may be more ambitious than many of you will want, but a study of this material cannot fail to give you a sound point of view on this subject and afford many suggestions which can be embodied in a plan devised to meet your own particular needs.

We believe that any plan of job analysis for individual placement should be viewed as a developing and progressive plan, and that one should be ready and alert to profit by experience. It is our conviction that there are real possibilities in this work, but that there is no cut and dried plan that suits every purpose, and further there is much more to be learned than has yet been learned about the technique of individual placement.

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HL-1003

OPER NAME _____ OPER NO _____

DEPTS _____ MALE _____ FEMALE _____

DATE _____ EITHER _____

SUMMARY OF OPERATION REQUIREMENTS

HWBR-001279

1 EYES	VISION REQUIRED					APPLICATION REQUIRED									
						CLOSE									
	1-1 SUPERIOR	1-2 AVERAGE	1-3 BELOW AVERAGE	1-4 VERY LITTLE	1-5 NONE	1-6 CONTINU-OUS	1-7 INTERMITTENT	1-8 NORMAL							
2 EARS HEARING	2-1 EXCELLENT		2-2 AVERAGE			2-3 VERY LITTLE			2-4 NONE						
3 HANDS	REQUIRED				DEXTERITY			GRIPPING			FOREARM AND WRIST			3-15 ONE CRIPPLED HAND PERMITTED	
	3-1 BOTH	3-2 LEFT	3-3 RIGHT	3-4 EITHER	3-5 GREAT	3-6 NORMAL	3-7 SLIGHT		LIGHT	STRONG	3-12 BOTH	3-13 EITHER	3-14 NEITHER		
								CONSTANT	3-8	3-10					
								OCCASIONAL	3-9	3-11					
4 FEET ARTIFICIAL PERMITTED	REQUIRED							WALKING							
	4-1 BOTH	4-2 LEFT	4-3 RIGHT	4-4 EITHER	4-5 NEITHER			4-10 CONSIDERABLE	4-11 LIMITED	4-12 NONE					
		4-6	4-7	4-8	4-9										
5 HEIGHT AND WEIGHT	HEIGHT							WEIGHT							
	5-1 UNIMP.	5-1 TALL	5-2 TALL OR AVER.	5-3 AVER.	5-4 AVER. OR SHORT	5-5 SHORT		5-6 UNIMPORTANT	5-7 MINIMUM						
6 LIFTING	6-1 NONE	6-2 UNDER 5 LBS.	6-3 5-25 LBS.	6-4 25-50 LBS.	6-5 OVER 50 LBS.	6-6 SPECIAL		6-7 FREQUENCY TIMES PER HOUR		6-8 HEIGHT OF LIFT					
7 POSTURE	MAY SIT AT WORK			POSITION STRAINED			STOOPING								
	7-1 ALL THE TIME			7-4 FREQUENTLY			7-7 FREQUENTLY								
	7-2 PART OF THE TIME			7-5 OCCASIONALLY			7-8 OCCASIONALLY								
	7-3 NEVER			7-6 NEVER			7-9 NEVER								

NOW AVAILABLE FROM UNIVERSITY MICROFILMS

8 WORK STATION CONDITIONS	8.1 INSIDE	8.2 OUTSIDE	8.3 IN & OUT	8.4 DRAFT	8.5 FUMES	8.6 DUST	TEMPERATURE 8.7 HOT	8.8 COLD	WATER EXPOSURE 8.9 SPLASH	8.10 CONTIN.	8.11 NONE	8.12 OTHER

9 WORK STATION SURROUNDINGS	NOISE			RELATION TO OTHER EMPLOYEES		9.7 OTHER
	9.1 VERY LOUD	9.2 AVERAGE SHOP	9.3 QUIET	WORK AS MEMBER OF CREW 9.4		
				NEAR OTHERS BUT INDEPENDENT 9.5		
				WORK IN ISOLATED STATION 9.6		

10 OPERATION HAZARDS	MOVING MACHINERY			10.4 SOLDERING FLUXES	10.5 ACIDS	10.6 MOLTEN METAL	10.7 HEIGHT	10.8 HOT OIL	10.9 OTHER
	10.1 PRESSES	10.2 SAWS	10.3 OTHER						

11 PROTECTION	FOR EYES		FOR HANDS		FOR FEET		FOR BODY	
	11.1 EYE SHIELD		11.6 CANVAS GLOVES		11.11 RUBBERS		11.16 CLOTH APRON	
	11.2 PLAIN GOGGLES		11.7 LEATHER GLOVES		11.12 BOOTS		11.17 WATER-PROOF APRON	
	11.3 TINTED GOGGLES		11.8 RUBBER GLOVES		11.13 SAFETY SHOES		11.18 LEGGINGS	
	11.4 WELDING HELMET		11.9 ASBESTOS GLOVES		11.14 SAFETY TOES		11.19 OTHER	
	11.5 OTHER		11.10 OTHER		11.15 OTHER			

REMARKS

HWBB-0031280

UNITED STATES STEEL CORPORATION (1999)

HD 984 REV.

SUMMARY OF PLACEMENT QUALIFICATIONS

NAME _____ SEX M F____ AGE _____ KEY NO. _____

BY _____ DATE _____

	VISION					PERMITTED APPLICATION					
						CLOSE					
1 EYES	1-1 SUPERIOR	1-2 AVERAGE	1-3 BELOW AVER'GE	1-4 VERY LITTLE	1-5 NONE	1-6 CONTIN-UOUS	1-7 INTERMITTENT	1-8 NORMAL	1-9 WITH CORRECT'N	1-10 WITHOUT CORRECT'N	
2 EARS (HEARING)	2-1 EXCELLENT		2-2 AVERAGE			2-3 VERY LITTLE			2-4 NONE		

	USE OF HANDS		FINGER DEXTERITY			GRIPPING			FOREARM & WRIST	
3 HANDS	3-1 LEFT	3-2 RIGHT	3-3 GREAT	3-4 NORMAL	3-5 SLIGHT		LIGHT	STRONG	R	L
						CONSTANT	3-6	3-8	3-10	3-12
						OCCASIONAL	3-7	3-9	3-11	3-13

	USE OF FEET			WALKING		
4 FEET ARTIFICIAL LIMB	4-1 LEFT	4-2 RIGHT	4-3 NEITHER	4-4 UNLIMITED	4-5 LIMITED	4-6 NONE

	HEIGHT			WEIGHT	
5 HEIGHT AND WEIGHT	5-1 TALL	5-2 AVERAGE	5-3 SHORT	5-4	

6 LIFTING PERMITTED	6-1 25 #	6-2 25-50 #	6-3 OVER 50 #	6-4 SPECIAL	6-5 FREQUENCY TIMES PER HOUR	6-6 HEIGHT OF LIFT	

	MUST SIT	REACHING ABOVE SHOULDER PERMITTED	STOOPING PERMITTED
7 POSTURE	7-1 ALL THE TIME	7-4 FREQUENTLY	7-7 FREQUENTLY
	7-2 PART TIME	7-5 OCCASIONALLY	7-8 OCCASIONALLY
	7-3 NONE	7-6 NONE	7-9 NONE

HWB 11281

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UNITED AIRLINES

8 WORK STATION CONDITIONS PROHIBITED	8-1 INSIDE	8-2 OUTSIDE	8-3 IN & OUT	8-4 DRAFT	8-5 FUMES	8-6 DUST	TEMPERATURE 8-7 HOT	TEMPERATURE 8-8 COLD	WATER EXPOSURE PERMITTED 8-9 SPLASH	WATER EXPOSURE PERMITTED 8-10 CONT	WATER EXPOSURE PERMITTED 8-11 NONE	8-12 OTHER

9 WORK STATION SURROUNDINGS	9-1 LOUD NOISE PERMITTED	9-2 AVERAGE SHOP PERMITTED	9-3 QUIET REQUIRED	RELATION TO OTHER EMPLOYEES	9-7 OTHER
				WORK AS MEMBER OF CREW 9-4	
				NEAR OTHERS BUT IND. 9-5	
				WORK IN ISOLATED STATION 9-6	

10 OPERATION HAZARDS PROHIBITED	MOVING MACHINERY 10-1 PRESSES	MOVING MACHINERY 10-2 SAWS	MOVING MACHINERY 10-3 OTHER	10-4 SOLDERING FLUXES	10-5 ACIDS	10-6 MOLTEN METAL	10-7 HEIGHT	10-8 OIL	10-9 OTHER

11 PROTECTION R-REQUIRED P-PROHIBITED	FOR EYES	FOR HANDS	FOR FEET	FOR BODY
	11-1 EYE SHIELD	11-7 CANVAS GLOVES	11-12 RUBBERS	11-17 CLOTH APRON
	11-2 PLAIN GOGGLES	11-8 LEATHER GLOVES	11-13 BOOTS	11-18 WATER-PROOF APRON
	11-3 TINTED GOGGLES	11-9 RUBBER GLOVES	11-14 SAFETY SHOES	11-19 LEGGINGS
	11-4 WELDING HELMET	11-10 ASBESTOS	11-15 SAFETY TOES	11-20 OTHER
	11-5 SAFETY GLASSES	11-11 OTHER	11-16 OTHER	
	11-6 OTHER			

REMARKS:

HWBB-0011282

(1988) INFLOW@IMLOD.NET

UNFRIENDLY ABBRAMS

IN BRIEF: ABRAMS November 1992

NWBB-0011283

Comments by Benjamin F. Streets, M.D., Medical Department, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., in panel on "Putting the Disabled Veteran Back to Work," at Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 15, 1944.

At Westinghouse, we have adopted practices which we shall discuss in brief outline. In the first place, the returned soldier makes formal application at the employment office and is given at once a working rank equal to that held at the time of induction. A tentative designation of a specific job is indicated which not only conforms to the old job rank but which, at the same time, takes cognizance of the desires of the applicant. Following the completion of preliminary forms, the veteran is interviewed by a physician who not only performs a searching physical examination, but who deals in considerable detail with the psychological background which will affect the working future of the veteran. The life history of the applicant is tactfully reviewed with the obvious intent of assisting the applicant rather than of merely obtaining irrelevant data of purely personal interest. It may be stated at this point that very little difficulty has been encountered in obtaining all the desired information in the cases which have been interviewed.

Should the particular case be of such character that psychiatric consultation is desirable, such consultation is obtained. Should the case be of such nature that a better relation can be established with a person other than that of the examining physician, the latter will leave the case to another physician in the department for the essential work-up.

Following the physical and psychological evaluation, an attempt is made to offer a type of work which will utilize the applicant's working endowment and which will, at the same time, minimize any traits which may constitute job-liabilities. In accomplishing this, the assistance of an official who is thoroughly familiar with job requirements and who is, at the same time, a veteran of the first World War is consulted not only on questions of initial assignments, but also on matters of job transfers.

Definite figures concerning our employment experience might be of interest. From March 1, 1944, to November 1, 1944, we employed at our East Pittsburgh Plant a total of 822 World War veterans. Of this number, 348 had been previously employed by Westinghouse and 478 had been employed elsewhere. The reasons for the discharge of these men from military service are varied. The most common cause of discharge was psychoneurosis. One hundred sixty-one cases were discharged for this reason or because of epilepsy or schizophrenia. The last two categories accounted for only five cases. War injuries or injuries suffered prior to service and aggravated by service accounted for 83 cases of discharge. Seventy-two discharges were due to gastric disorders, 70 were granted because of overage, 30 because of low-back difficulties, 25 because of renal disorders, 24 because of dependency entailing unusual hardship, and 23 because of otological defects. These constitute the causes of greatest incidence. Among the miscellaneous causes of discharge might be mentioned arthritis, flat feet, visual defects, asthma, cardiac disorders, rheumatic fever and others of less frequency.

We describe one case as illustrative of the problems involved and the procedures followed.

Mr. X, 22 years of age, family background unsatisfactory, parents divorced, mother remarried, relationship with stepfather difficult. This veteran entered service following a period of employment of less than one year with a rubber company. He enlisted in the Navy and, after a brief period of service, the cruiser to which he was assigned was torpedoed off Guadalcanal with a handful of survivors from the entire personnel of

NWB-001284

of the ship. Following seven days on a life raft, he was picked up by a plane and hospitalized for a period of 13 months, following which he was assigned to limited duty. However, because of a variety of nervous manifestations among which the memory of his severe experiences loomed large, he was given prolonged psychiatric treatment and ultimately discharged. He came to us with this history, applying for work. Physical examination was made and was negative, with the exception of infected tonsils and the complaint of recurrent headaches. In conformity with the plan discussed, this applicant was placed in the position of a production clerk. He was advised to follow his plan of making his home with a family which had lost a son in the Navy, which he did with complete domestic satisfaction. Later, he married and established his own household. Minor problems which arose in the course of his work were discussed and solved by repeated interviews. The present status of the case may be summarized by saying that this applicant no longer suffers from headaches, for which no physical basis had been found. He is, in fact, a satisfied and satisfactory worker.

Not all cases have the happy outcome of this one, of course. A small number fail, for a variety of reasons, to make the required adjustment, but many illustrations could be given in which the ultimate results have been desirable.

The follow-up of the cases begins with the first personal interview which takes place 30 days following employment. It is significant that the reaction of most returned soldiers to the effort to help has been not merely one of passive acceptance, but of grateful acknowledgement of the assistance given them. Naturally, one might expect a considerable amount of reticence on the part of men who may not be entirely convinced of the motive behind our efforts. However, failure to establish a proper understanding of our objectives has occurred very rarely. Most complaints have dealt with the matter of wages or of the working shift. The greatest majority have found satisfaction in their assignments and in their personal associations among other employees and declare themselves to be happy with their jobs.

Inasmuch as many have been helped, it is our impression that the effort has been justified and that it is worthy of continuance. Whatever has been done must be considered as a preliminary step to the more skillful management of cases that will come from continued experience with the type of problem which they present.

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NOVEMBER 1944
ARMED FORCES

NOVEMBER 1944
UNITED AIRCRAFT

MWBB-0011285

Abstract of report on "Protection of Workers Against Noise," given by Hallowell Davis, M.D., Harvard Medical School, Boston, at Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute on Wednesday afternoon, November 15, 1944.

Studies of the injurious effects of noise and of methods of protection against noise, initiated for military reasons, will benefit peace-time industry as the results become available. Military noise is of two types: the explosion and the high-level noise of machinery, as in tanks and airplanes. The second type is similar to the noise of industry, and concerns us today.

It is a generally accepted proposition that sufficiently long exposure to loud enough noise causes impairment of hearing, particularly for high tones. Temporary partial deafness, lasting from hours to a few days, is easy to produce, more readily in some individuals than in others. It is now becoming clear that individuals also vary widely in their susceptibility to permanent as well as to temporary impairment of hearing. Perhaps at some future date we shall learn how to identify these individuals in advance and give them special protection or a less noisy form of employment.

It has also been known for some time that a hearing loss very similar to that caused by noise occurs normally with advancing age. It will therefore be very difficult to assess the importance of noise in the causation of hearing loss and to define "danger zones" of exposure. We do not have rigid proof of permanent impairment of hearing by noises of less than 115 or 120 db (sufficient to drown the loudest shout), and concern about exposure to noise levels below 100 db (such as a subway express passing through a local station) is probably quite unwarranted. (A decibel is a unit of the intensity and volume of sound. Symbol equals db.)

There is a danger of being made too apprehensive by well-meaning medical warnings, and of inviting unwarranted claims for occupational hearing losses and also sales pressure from those with audiometers or earplugs to sell. We must hope that the medical profession will adopt a common-sense attitude and that it will not base its criterion of a "significant hearing-loss" on audiometric measurements of losses for high tones above the speech range. The ability to understand speech is the basic practical criterion of hearing ability and hearing loss. Methods for measuring it directly have been developed and are being improved, and a fairly successful attempt to correlate the ability with audiometric measurements has recently been made by a committee of the American Medical Association.

But equally, we must accept the fact that somewhere along the scale of exposure, with due regard to intensity, hours per day, and the over-all term of months and years, noise becomes an industrial hazard. Even if we cannot now define the limits, we do understand the obvious principles of protection against injury.

The first principle is to reduce production of noise. This may be practical in some situations if the problem of acoustics is considered in advance. Recent models of streetcars are an excellent example of this type of engineering. The substitution of welding for riveting is another.

A second principle is to absorb the noise after it has been generated. This is the basis of the familiar acoustic treatment of offices and cafeterias. It may be startlingly effective if the noise is not generated too close to the man who is exposed to it -- as we may learn if we step into a sound-treated telephone booth in a subway station.

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NWBB-0011286

Unfortunately, neither of these principles will eliminate all of the high-level noises from industry, and we shall frequently be forced to fall back upon the third principle, the exclusion of noise from the ear.

The improvisation of an earplug from absorbent cotton or cotton waste is probably as old as industrial noise itself, and this ancient trick is still the chief rival of the most recent types of earplugs. It is not very effective in excluding noise, but a five or ten decibel reduction is very important when we are just treading on the borderline of discomfort or of actual danger. Cotton meets successfully the other criteria of any useable earplug. It is comfortable, it is non-toxic and does not irritate the skin, it remains in place, it is cheap and available, and it is clean.

Many efforts have been made to improve the acoustic effectiveness of earplugs, and dozens of such items have appeared on the market. All, or nearly all, are more effective but less wearable than cotton, and plugs offer little protection if they remain in the workers' pockets or are thrown on the floor. It is unfortunate that to keep noise out effectively a plug must completely close the ear canal with an airtight seal. And, equally unfortunately, human ear canals are not built to engineering specifications with tolerances of a few thousandths of an inch. They vary tremendously both in size and in shape. Any rigid material is out of the question unless it is moulded to the individual ear like the insert mould of a hearing aid. Otherwise, the pressure required to make a tight seal becomes intolerable after a few minutes or hours. Soft plastic materials, such as cotton impregnated with wax, that can be moulded to the individual ear, are comfortable and moderately effective, but fail because they cannot be cleaned for repeated use.

A satisfactory degree of noise exclusion, and fair comfort in many ears, was achieved before the war by an ear plug made of soft rubber. Comfort and ability to fit all ears has been achieved by virtue of the flexibility of the vinylite plastic of which they are now made. They are also non-toxic and can be cleaned for repeated use.

I believe that the V-51R plugs, as they are called, represent a real advance and that they meet the various requirements well enough to warrant calling them to your attention as a practical step in the solution of the problem of protection of workers against noise. It attenuates noise by 30 decibels or more, which is enough to bring the extreme noises of present industrial situations down to the probably harmless level of 100 db. Until very recently they have been made exclusively for Navy gunners and Army artillerymen, but within the last few weeks samples have been released to some plants producing aircraft. They have been used in some of the noisiest situations, such as the riveting of the wings of B-29 bombers, and their reception by the workers in most cases has been favorable, and even enthusiastic. Of course we also encountered, as we anticipated, certain practical and psychological problems associated with the first use of these plugs. Many workers resist the idea of introducing anything, even cotton, into their ears. The trial in the industrial situation has been as yet too brief and on too small a scale to be considered conclusive, but one of the incidental results of one trial is as significant as it was unexpected. We have been told that the absenteeism among one group of workers provided with these plugs dropped so abruptly that it drew surprised and spontaneous favorable comment from those charged with the responsibilities of production.

The implications of such an experience are obvious. Regardless of the possibility, or rather the probability, of long-term injurious effects of such high-level noise on the riveters, noise may be sufficiently fatiguing, annoying, and distressing to contribute to a high rate of absenteeism in spite of great motivation for patriotic, as well as for financial reasons to continue on the job.

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IN THE AIR AMS November 1992

HWRB-0011287

Abstract of report on "Practical Psychiatry in Industry," by L. E. Himler, M.D., University of Michigan, presented at the Ninth Annual Meeting of Industrial Hygiene Foundation, held at Mellon Institute on Wednesday afternoon, November 15, 1944.

Many of the problems in the field of industrial human relations such as job maladjustment, inefficient work, and failure to get along satisfactorily with others, have their basis in the mental and emotional makeup of individual employees. This paper will attempt to summarize some of my own experiences while engaged as a part-time psychiatric consultant for an industrial plant having some 2200 employees. The overall period covered by this report is 10 months.

A total of 90 employees are considered in this survey, and these are distributed fairly evenly throughout the plant, from top management down to clerks and hourly-rated workers. Thirty-one are foremen, supervisors, or department heads. Five are women. Twelve of the men are veterans. The fact that next to foremen the veteran group is represented in somewhat higher proportion than other worker groups is a direct outgrowth of the current interest in the adjustment of these men. The types of problems found in this small group of veterans did not differ materially from those of the series as a whole.

The referral route was through foremen in 28, other supervisors in 19, and self-referrals occurred in 34 instances. Personnel, medical, and pre-employment referrals accounted for the remaining 9 cases. It is interesting in this connection that when a foreman refers a disproportionately high number of his employees it tends to be rather indicative of his own insecurity and lack of effectiveness in handling departmental human relations problems. On the other hand, the mere fact that a foreman makes no referrals does not indicate that problems do not exist in his department. This is readily apparent from the number of self-referrals and referrals by individuals outside the department who considered the foreman himself a problem.

As might be expected, the problems presented by the 90 employees in this series covered a wide range, from minor job adjustment difficulties to rather severe nervous and mental disorders. As determined by the interviews, 63 had problems related primarily to their own adjustment within the plant, 21 had problems involving both in-plant and extra-occupational adjustments, and only 6 had personal difficulties which were entirely unrelated to their job. This would indicate rather conclusively that consultation in by far the majority of cases had to do with on-the-job relationships and efficiency, and that there was no tendency for employees to utilize the psychiatric consultant exclusively for their own personal affairs.

For practical purposes, and as an aid in designating who shall give the needed assistance, the types of problems presented by the 90 employees in this series are divided into two groups. The first group could in my opinion be handled fairly successfully by physicians and supervisors or personnel interviewers with some additional training in mental hygiene, while the second group, consisting of individuals with more involved problems, would require more than ordinary understanding. In the following table the 90 cases are grouped according to ascending complexity, both as to types of problems and the possibilities of management within industry:

NWBB-0011288

UNITED ARMS November 1992

General problems of personality and adjustment.....74%
- Relatively simple job adjustment problems.....24%
- Difficulties associated with interpersonal relationships..13%
- Mild personality disorders.....21%
- Family, home, and marital problems.....16%

Problems with medical and neuropsychiatric aspects.....26%
- Functional nervous conditions associated with physical disorders.....11%
- Psychoneuroses.....2%
- Severe personality disorders.....9%
- Epilepsy and Hypnolepsy.....3%
- Psychosis.....1%

My own experience with the first group represented in the table leads me to believe that cases in this category could well be handled by an employee counselor who has a mature, balanced personality and some basic training in the techniques of mental hygiene. This is the type of individual who is representative of the ideal veteran's coordinator. The fact that there is a sizeable second group with rather complicated medical and neuropsychiatric disturbances cannot be minimized, and these individuals will require assistance of a more specialized nature. In most instances, however, this could be provided by the plant physician if he is skilled in the use of psychotherapeutic methods.

The outcome of treatment by means of interviews along psychiatric lines is rather difficult to appraise with any final accuracy, but so far as could be determined, the following is an estimate of results with the 90 employees at the end of the 10-months period:

- Benefit mainly to the employee.....23%
- Benefit to both employee and supervisor.....42%
- Benefit mainly to supervisor and to company.....16%
- Benefit doubtful or very slight.....19%

Thus some improvement in job relationships apparently occurred in well over half of the group, exclusive of the intangible benefit which results indirectly when extra-industrial problems are given sympathetic treatment. At the end of the 10-month period, 14 cases had quit, resigned or asked for transfer to another plant, two were promoted, two were transferred within the plant, and one was drafted. In five of the terminations this step was a definite advantage to both company and employee. It is of some interest that six were prevented from terminating their employment, while in 10 of the 16 who separated this step was favored or suggested as a result of the interviews.

In conclusion, it seems clear that the utilization of the psychiatric approach in interviewing should have a distinct place in the management of human relations problems on all levels of industry. There is a need to stimulate interest and provide training for plant physicians, personnel interviewers, and veteran's coordinators so that they will be enabled to develop and apply effective interviewing skills.

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UNRESTRICTED AIR FORCES NOVEMBER 1999

HWBB-0011289

Abstract of report on "Upper Limits of Tolerance to Heat and Humidity," given by Lt. Col. T. F. Hatch, Sn.C., Armored Medical Research Laboratory, Ft. Knox, Kentucky, at the Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute on Wednesday afternoon, November 15, 1944.

Man can tolerate dry heat well above 200°F, provided he is inactive and the duration of exposure is brief. On the other hand, if he is to carry on vigorous work for a prolonged period without loss of efficiency and with no significant rise in body temperature, the limiting environmental conditions will be found not far above the normal comfort zone. The acceptable limits will also be influenced by the age and physical condition of those exposed and their degree of acclimatization to heat. Finally, the limits will be determined, in part, by the criterion employed to define tolerance. Thus, it is seen that there is no unique point or any thermometric scale which can be said to represent the upper limits of man's tolerance to heat. Specific limits can be established only for clearly defined sets of conditions. It must be remembered, too, that there are four separate factors which, together, define the thermal environment; air temperature and moisture content, intensity of radiation and air movement. Since various combinations of these four will yield equivalent environments, the limits of tolerance must recognize the influence of each. A dry atmosphere with a temperature of 120°F, for example, may be well tolerated whereas a moist environment of 95° will be intolerable. Similarly, if the intensity of radiant heat is high, there must be compensating decrease in temperature or moisture content or a sufficiently high air movement to offset it.

Among the early observations on the limits of tolerance were those made by Haldane in 1905. He defined the limit of endurance as the most extreme heat exposure which could be withstood without experiencing abnormal rise in body temperature. For the clothed, resting man not especially acclimatized, the maximum endurable temperature of saturated, still air was found to be 88°F. Haldane further demonstrated the beneficial effect of air movement, reporting that the tolerable wet bulb temperature was increased to 93°F at an air velocity of 170 fpm.

More recent work of the ASHVE Research Laboratory demonstrated close correlation between physiological reactions and the so-called effective temperature, which takes into consideration air movement as well as temperature and humidity. It was shown in these studies that the hourly rise of body temperature and pulse rate during heat exposure increased sharply when the effective temperature was above 85-90° in the case of the resting man and at lower ET values for the working man. Employing as the criterion of tolerance this point of marked increase in pulse rate and rate of rise of temperature, the maximum tolerable atmosphere has an ET of 90° or less. In still saturated air an ET of 90° is equivalent to a wet bulb temperature of 90°F and therefore agrees well with Haldane's findings.

Recent work by Eichna and associates* at the Armored Medical Research Laboratory, has provided additional data on the upper limits of tolerance to heat and humidity. Observations were limited to a group of young men (average age 21.6 yrs.) in normal physical condition. They were previously trained to the working schedule followed in the tests and acclimatized to a high degree to both dry and moist heat. All tests for tolerance were carried out at a work rate of approximately 300 Cal/hr (marching at 3 mph, carrying 20 lb. pack). The work period was four hours with a total of 7-8 hours per day continuous exposure in the experimental hot room. Subjects were quartered in neighboring barracks and were under immediate supervision throughout the test period of approximately 2 months. A total of 14 test atmospheres, closely controlled with respect to dry bulb and wet bulb temperatures, were studied. They varied in intensity from 93° to 121°F, dry bulb and 90°F to 96°F, wet bulb. The temperature of the walls, ceiling and floor of the room was maintained as close as possible to the air temperature

* To be published.

HWB-3011290

NOVEMBER 1962

FROM: AIR FORCE

in all tests, resulting in a mean radiation temperature about 2°F less at the lower D.B. temperatures to 9°F below at the highest air temperature. No special air movement was set up, the subjects creating their own relative air motion by marching which resulted in average convection coefficient of 12 Cal/m^2/hr/°C, as measured on a heated cylinder wheeled around the test room with the subjects. Salted, cool water was provided and the men urged to drink enough to maintain water balance. Subjects were nude except for shoes and socks.

The test of tolerance employed in this study was the demonstrated ability or inability to complete the assigned work during the four hour period. For each test enviornment, exposures were repeated until the subjects had reached peak performance or definitely demonstrated their inability to complete the assigned task for the four-hour period. In the more severe environments various procedures were employed to persuade the men to carry on to their maximum ability. On one day each week the men were exposed to a relatively easy environment in order to recuperate from the severe stress of the test environments, and to provide "base day" observations. Direct observation of the subjects and their own subjective reactions together with measurements of body temperature and pulse rate provided the basis for a final decision with respect to any test environment. Other measurements included skin temperature, weight loss, water intake, urine output and respiratory rates. Records were kept of the symptoms, complaints and general appearance of the men during work.

On the basis of overall performance, considering work accomplished, subjective reactions and physiologic changes, averaged in every case for the whole group of 13 subjects, the results indicated that the 14 test environments fell into three distinct and readily separable groups, each including the entire range of dry bulb temperatures but differing from each other in the range of wet bulb temperatures: (1) "relatively easy" environments in which the work was readily accomplished without great effort or complaints and with all subjects alert at the completion of the work period and seemingly capable of continuing indefinitely; (2) "difficult" environments in which all of the subjects finished the assigned task of 4 hours continuous marching, but only with great effort, many complaints, and evidence of approaching exhaustion; (3) "impossible" environments in which the group of 13 test subjects as a unit never completed more than one hour of continuous marching and only 2 or 3 ever finished the four hours of work. The subjects were definitely exhausted and some frankly collapsed.

	Approaching Equilibrium Levels		
	Environmental Group		
	Rel. Easy	Difficult	Impossible
Rectal Temperature °F	Below 101	101 to 102	Above 102
Heart Rate, Per Minute	Below 130	130 to 145	Above 145

The findings of this study strengthen but do not alter in any significant way earlier conclusions respecting limits of tolerance to heat and humidity. The higher tolerance levels must be interpreted in the light of significant differences in the test subjects, namely, as a limited age group of young men in good physical condition who were especially acclimatized for the test. In the consideration of these limits in relation to practical industrial problems, it must be remembered, too, that only two of the environmental factors -- dry bulb temperature and moisture content -- were deliberately varied; the influence of radiation and more particularly of air movement upon the limits of tolerance require further study.

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IN RE: ALBRAMS NOVEMBER 1999

MWBB-0011291

Abstract of report on "Findings from Foundation Surveys of War Plants," by Francis R. Holden, Ph.D., and W. C. L. Hemeon, M. S., Industrial Hygiene Foundation at Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute, Pittsburgh, on November 15, 1944.

I. APPRAISAL

Field investigations by Industrial Hygiene Foundation during 1944 have included the appraisal and control of health hazards that are known and little known. At the present time information for the latter class, especially those involving chemicals, are limited by wartime restrictions.

Silica -- Considerable effort has been directed toward free silica with emphasis on the conversion forms of quartz, namely tridymite and cristobalite. In 1938 Gardner showed that these latter minerals, which are produced when quartz is heated to approximately 1850°F. and 2800°F., are more destructive of animal tissue than quartz.

In the glass industry, where the older clay pot process is used, the quartz present in the clays is also converted to the two other varieties of crystaline silica. Analysis of air-borne dust produced where discarded pots are reclaimed has revealed that the quartz is converted in almost equal portions to cristobalite and tridymite.

In the same industry the furnace and tuille stones, used in the construction of glass furnaces and tanks, contain approximately 15% cristobalite. It is of interest that the principal silicosis hazard in glass manufacture arises in departments where the clays and furnace and tuille stones are manufactured and handled. Batch houses, where the ingredients of glass are assembled, are quite free from lung disease. Numerous analysis of air-borne dust from mixed batches disclose only from 1 to 5% free silica.

Work in Progress -- We are currently engaged in an industrial hygiene survey of a portion of the ceramic industry. When completed, this study will be the most comprehensive from the engineering aspects that has ever been conducted in that field. We expect to be able to report next year some significant conclusions differing in some respects from prevalent ideas.

Under present methods in use in sanitary ware shops, it is not uncommon to dust the molds in the casting departments with ground body ware, whose free silica content is approximately 30%. While this operation may not require more than 10 minutes per day the dust counts are likely to be high. We have recently interested one member company in the use of an inert material as a dusting agent. It has been established that a light metal oxide is satisfactory in preventing the molds from sticking but the effect on the fired ware is not known at this time. Experimentation is also underway on the use of Carborundum as a coating for kiln cars. Preliminary data indicate that the substitution is practical to reduce a silicosis hazard which occurs during cleaning of kiln cars.

Soldering -- Numerous studies have been made of soldering operations during the past year. Our practice has been to determine the concentration of lead in the atmosphere by means of the electrostatic precipitator and by analysis of respirator filters. We have had good correlation between the two methods of measuring the degree of exposure. Urine analysis has also been used to measure the absorption of lead by the individual. No significant lead hazard is found where soldering irons are used. In some instances torch soldering or lead baths evolve dangerous quantities of fume. The latter occurs when the lead is heated excessively.

Employee Education -- Most workmen today are distrustful of any exposure to dust, gas, fume or vapor. Production may be affected and the labor turnover accelerated unless

HWBB-PDD11292

there is a frank consideration of the situation. Some member companies have requested Foundation investigators to present factual discussions of the toxicities of materials to workmen. On one occasion representatives of both a local and a national labor union were present for several days during sampling and the analysis of air contaminant. During the appraisal of this potential health hazard, splendid cooperation between management and labor enabled the Foundation to quiet unwarranted fears of health dangers from the non-hazardous exposure.

Dermatitis -- The need for careful investigation of dermatitis problems was illustrated during the past summer. Workers in one section of a foundry were aroused when a number of cases of skin disease occurred. It was believed by both management and the workers that contact dermatitis was resulting from exposure to some irritant. Investigation demonstrated that the hands and face were seldom affected and that cases occurred throughout the shop where men were exposed to heat. The picture was typical of "heat rash" and it seemed probable to our medical consultant that crystallization of body salt on the clothing caused the irritation. The plant physician introduced a campaign on personal cleanliness with more frequent changes of clothing. Within one week all the skin disease disappeared.

The plan of one member company for the development of information on new substances evolved in its research laboratories merits comment. Research chemists use every precaution while developing a new compound. When it is known that a new material will have commercial interest, information on its toxicity is obtained. Where no data are available or if high toxicity is suspected, "range finding" animal experiments are conducted so as to classify the new substance. The research engineer then develops manufacturing processes that will have safety as a prime requisite. As far as possible the only difference between the laboratory micro-pilot plant and the later full-scale plant is one of dimensions. In short, precautions are built into the production process.

II. VENTILATION

Proper design of industrial ventilation is almost completely dependent upon industrial hygiene, as has been repeatedly illustrated in our work during 1944. For proper design implies knowledge as to the exact sources of the contaminant, its toxicity and, frequently, existing concentrations. In many cases it is virtually impossible to proceed intelligently in the design of control equipment without the aid of industrial hygiene and its techniques; but one sometimes wonders whether industrial physicians do not appreciate their dependence upon the industrial hygiene engineer to a greater extent than do plant engineers.

Buying Industrial Ventilation -- The manufacturer with a health hazard in his plant who needs specialized ventilation would have no problem if he could obtain bids from different contractors or equipment producers in which each bidder would guarantee to meet a specification to reduce the dust concentration to below, say 10 million particles per cubic foot, or the vapors to less than 100 parts per million. But contractors and equipment companies will not make such guarantees and their reluctance is readily understandable.

The Foundation meets this difficulty for its companies by providing specifications that form a connecting link between the atmospheric concentration required and engineering language that is understood by contractors. These Industrial Hygiene Foundation specifications provide a common basis for obtaining bids and for the writing of contracts. The Industrial Hygiene Foundation specifications, in effect, guarantee an adequate end result in terms of air concentration while permitting considerable latitude to equipment companies and contractors.

HWBB 60E1293

UNITED ARMIES November 1960

Ceramics -- Consideration has been given to dust control for masons in glass and similar plants, and in particular to a portable exhaust unit for a brick-cutting saw in common use in that trade. We have been concerned in a number of plants with designs for minimizing dust around clay and flint storage bins, unloading freight cars and subsequent material handling. The shipment of flint with moisture is a measure of advantage.

Washed Silica Sand -- The object of one of our investigations, conducted in a sand washing plant, was to determine what additional measures for dust control might be necessary in and around the sand-drying equipment. A most interesting observation resulted. Notwithstanding the fact that there were several opportunities for material spillage in elevated conveying equipment and the like, and there were deposits of dust on all horizontal surfaces, there was no silica dust hazard in the plant. Dust counts were uniformly low. If this plant were handling dusty sand there would certainly have been a serious dust hazard, but the fine silica dust had been largely removed in the elutriation process and it was therefore practically impossible in this equipment to create important dust concentrations.

This finding means that in the plant of the consumer mere handling of washed sand would be very unlikely to cause hazardous dust concentrations. We have contrived a dustiness index which permits a comparison of different sands in terms of millions of dust particles per gram of sand which we anticipate may become useful to producers.

Asbestos -- Electron photomicrographs of a specimen of air borne asbestos dust obtained by us in a member plant disclose some interesting facts. Asbestos dust particles at ordinary magnifications do not appear at all fibrous as would be expected. However, under high magnification of 15-20000 times with the electron microscope it is demonstrated that they are overwhelmingly fibrous and that the ultimate fiber appears to be about 0.01 microns in diameter. We shall publish the details in a technical journal so no time will be taken here for further discussion.

Drafts from Improper Heating -- The season of year has arrived when some plant managers may be plagued by complaints of cold drafts from workers. Complaints may reach a crescendo of bitterness as occurred in this typical case. One worker pointed out via the suggestion system:

"Let's have some action on this draft in the_____department. I can't afford to stay home from work. I lost three days already and I can't lose my cold. I have a stiff neck, my back is sore."

Another employee in the same department said with equal emphasis: "Due to the fact that a few-weak blooded females don't have enough blood to keep circulation going and they are cold all the time, the rest of us must suffer for the lack of a little fresh air to move out the air that has become impure by breathing over and over again....."

Our investigation in a typical department disclosed a high rate of exhaust ventilation for spray booths and other equipment, but no controlled means for supplying heated air to the room. Some supply air did, of course, enter because the whole building was under suction, but it came in through doors when opened and cracks in windows, and exposed all workers at benches near the periphery of the building to cold air currents. Workers in central parts of the room, engaged at work producing excess heat and some smoke, wanted the cool air for comfort, but in the circumstances it would be at the expense of the comfort of the other groups.

A system of heated air supply was needed at a rate to match the volume being exhausted, plus an exhaust system to remove smoke from its sources in the central portion of the space.

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UNITED STATES STEEL CORPORATION
NOVEMBER 1999

HWBB-001294

Abstract of report on "Medical Aspects of Partial Disability in Silicosis," by George W. Wright, M.D., The Edward L. Trudeau Foundation, Saranac Lake, New York, at Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute on Thursday morning, November 16, 1944.

Discussion of this subject is pertinent at this time because of a widespread interest in this problem on the part of the legislators of several states.

Administration of the now existent total disability law reveals certain difficulties which would likely be magnified in an attempt to assess partial disability and prove its causal relationship to silicosis.

Silicosis produces disability chiefly by reducing ones capacity to breathe, hence limiting ones range of physical exertion. Partial disability may be said to exist when this reduction is not totally disabling but is more pronounced than is to be expected in view of the claimant's age. The assessment of slight to moderate disability would be difficult because the range of variation in the capacities of normal men is large and no methods exist for accurately predicting what should be normal for a given man.

To determine partial disability in the zone approaching total disability would also be difficult because values for respiratory capacity that are characteristic of total disability are not adequately defined. There is a zone of partial disability between these extremes which is definable but to divide it into degrees would be to assume a non-existent discriminatory capacity.

To show a causal relationship between silicosis and disability is often difficult even when the disability is complete because the failure of other organs, such as the heart and kidney, will simulate the symptoms of disability due to silicosis. As lesser grades of disability are considered, this problem becomes much more complex because of the lack of methods to adequately estimate the reserves of the kidney and cardiovascular systems.

The symptoms of respiratory failure due to silicosis, of heart failure and in some respects of kidney failure, are all very similar and at times indistinguishable. The fact that undoubted objective evidence (x-ray) of silicosis precedes the earliest symptoms of pulmonary failure due to that cause, while the earliest symptoms of heart and renal failure nearly always precede unquestioned objective evidence of disease in these structures, makes for a tendency to ascribe all symptoms in a silicotic to the co-existent pathological process in the lung. To do so is often erroneous and in mild degrees of disability this source of confusion would be very difficult to overcome.

The author believes that insufficient data exists at this time to permit completely adequate administration of partial disability law in silicosis. Avenues of investigation are indicated from which data might be obtained which would allow such a law to be equitably conducted.

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HWBB-0011295

NOVEMBER 1992 AIR WAMS UNCLASSIFIED

Abstract of report on "Existing Second Injury Funds and Recommended Legislative Provisions," by Marshall Dawson, Division of Labor Standards, U. S. Department of Labor, Washington, D. C., at Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute, Pittsburgh, November 16, 1944.

The postwar plans for the employment both of injured civilians and soldiers, have drawn public attention, as never before, to the role of second-injury fund provisions of workmen's compensation laws. The purpose of such a provision is to facilitate the employment of handicapped persons, and at the same time assure them adequate benefits in event of further injury. As of November 1, 1944, 23 second-injury funds or equivalent arrangements have been established under State or Federal laws, as follows: in Arkansas, the District of Columbia, Hawaii, Idaho, Illinois, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Rhode Island, South Carolina, Utah, Washington, West Virginia and Wisconsin, and by the United States Longshoremen's Act. The details of the provisions vary from State to State, and there has been, and still is, some confusion with regard to the desirable scope of coverage of injuries under such legislation, and the method of support of the funds.

The situation wherein employers in certain instances refused to give employment to men who had either lost a limb or an eye, for the reason that they felt that under the law they would be required to pay for life in the case of a subsequent injury where an eye or limb would be lost, has presented a continuing difficulty for several million workers who have serious physical impairments, a group which will be greatly increased by the returning soldiers. At present in the workmen's compensation laws of several States there is no specific imposition of an increased risk of loss to the employer in event of a subsequent injury to a handicapped worker. But this does not mean that in such States there is no discrimination as to hiring impaired workers, because court decisions sometimes do impose liability for the full consequence of combined injuries.

A broad type of second-injury fund provision enacted in Oklahoma became effective April 12, 1943. Awards made under this type of provision have included, for example, the payment of $139.50 where the second-injury impairment was 20 percent of the left index finger and the pre-existing disability was the loss of the "left second finger."

In another case $190.74 was paid from the fund where the second-injury impairment was 20 percent of the left index finger and the previous disability was a 20-percent impairment of the right thumb. Plainly, this situation is the reductio ad absurdum of a so-called broad coverage type of second-injury fund provision, and leads back to the original question, "What are second-injury funds for?" It is well to understand what such a fund is not. It is not a substitute for insurance, but a variant of the catastrophe fund. The main protection of the worker and employer is the insurance policy or its equivalent.

When a person who has lost an eye asks an employer for a job, his condition is apparent, and anyone knows that if the applicant loses another eye or member he may be awarded compensation for permanent total disability. The main purpose of second-injury fund legislation has been, therefore, to allay an employer's fear that if he hires a man who has lost an eye, hand, foot, arm, or leg he may, in event of another injury, be charged with the relatively high cost of an award for permanent total disability.

If one appraises the risk of permanent total disability caused by a second injury it is found to be negligible - in New York State the ratio of such losses has been about one in 11,000 compensated cases. On the other hand, to one of the smaller self-insured employers, or to an insured employer under certain types of experience rating, the loss in any permanent total disability case can be heavy.

NWBB-0011296

In selecting a draft, one must keep in mind the purpose of the workmen's compensation statutes, of which the second-injury fund provision is a part. That purpose is to provide prompt and certain compensation for work injuries, with a minimum of inconvenience and expense to the worker or his dependents. Any amendment of the compensation law should, therefore, be compatible with operating speed, and not drag the administration into a morass of controversy and litigation over confused and trivial issues.

At its 30th annual meeting, held in Boston in September of this year, the International Association of Industrial Accident Boards and Commissions adopted the report of its legislative committee recommending a draft provision of the specific type.

It remains to be said that the recent adoption of a specific type of second-injury fund provision by the International Association looks like a retreat to persons who have advocated the inclusion of aggravations of ordinary health conditions. The remedy for such situations properly belongs in a system of sickness and disability insurance.

NOVEMBER 1962
LOS ANGELES

IN THE ABRAMS NOVEMBER 1999

MWB-0011297

Abstract of report on "Legal Developments in 1944 Respecting Industrial Health," by Mr. Vandiver Brown, Secretary, Johns-Manville Corporation, New York, N. Y., at Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute, Pittsburgh, November 16, 1944.

New occupational disease laws have been enacted by the States of Kentucky and Virginia, and certain amendments to occupational disease compensation statutes have been enacted that are of interest to the members. There are now 15 states and the District of Columbia that provide full or general coverage for occupational disease injuries, and 13 states wherein schedule coverage is provided.

A. New Occupational Disease Laws.

KENTUCKY has enacted a new law whereunder the term "personal injury" by accident, as defined in the law, shall not include diseases except where the disease is the natural and direct result of a traumatic injury by accident, nor shall they include the results of a pre-existing disease, but shall include injuries or death due to inhalation in mines of noxious gases or smoke, commonly known as "bad air," and also shall include injuries or death due to the inhalation of any kind of gas.

The law specifically makes the occupational disease "silicosis" compensable and (a) Compensation is payable for partial and total disability; (b) It provides for a Medical Committee of three qualified physicians, two of whom shall be radiologists, and whose term shall be for four years. To this Board is referred all claims for compensation for disability or death from silicosis and the Board is empowered to make such clinical and X-ray examinations of the claimants as they deem desirable, filing their reports with the Workmen's Compensation Board; (c) When an employee, though not actually disabled from silicosis, is found by the Medical Committee to be affected with the disease to such a degree as to make it unduly hazardous for him to continue in an employment involving exposure to the hazards of such disease, the Board may order that he be removed from his employment, whereupon he becomes entitled to compensation until he can obtain steady employment in some other occupation in which there are no hazards of such disease; provided, that such compensation shall not be payable for a period exceeding 26 weeks.

VIRGINIA has enacted an occupational disease compensation law, effective July 1, 1944. This law is unique as to form, in that it permits the employer to reject the scheduled occupational diseases and, as an alternative, elect to be bound to pay compensation for general coverage of all occupational diseases. The scheduled diseases compensable include asbestosis and silicosis, and there is no limitation of an employer's liability for these diseases nor special provisions relating thereto.

An employer is permitted to reject the schedule and elect to provide general coverage for all occupational diseases, by written declaration filed with the Industrial Commission within sixty (60) days from July 1, 1944.

B. Amendments to State Occupational Disease Compensation Statutes.

NEW JERSEY has amended the Workmen's Compensation Act to make the diseases of silicosis and asbestosis compensable. This amendment becomes effective January 1, 1945 and the principal features of this new bill are the following: (a) Compensation is denied for partial disability from silicosis or asbestosis; (b) There is a limit of monetary liability in the amount of $1,000, in the event that disability occurs during the first month the Act becomes effective, i.e. January, 1945. Thereafter, the limit of monetary liability increases at the rate of $50 per month until the full benefits of the law are reached; (c) "Disability" is defined as the state of an employee being actually incapacitated, because of silicosis or asbestosis, from performing his work in the last occupation in which he was injuriously exposed to the hazards of such disease.

MWB-001298

NEW YORK enacted Senate Bill No. 1668, increasing compensation for dust diseases from $5000 to $6500.

New York has also enacted a bill providing for the appointment of a Committee of expert consultants on dust diseases, to be named by the Industrial Commissioner, for the purpose of making such investigation as shall be necessary for diagnosing and evaluating the progressive degrees of disability and incapacity that may result from silicosis or other dust diseases, and for determining the feasibility of allowing compensation for partial disability. Under the New York Dust Compensation Act compensation for partial disability from the dust diseases is specifically denied. I am advised that the Industrial Commissioner has appointed a Commission, but that to date the Commission has not prepared or submitted its report.

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There have been a number of decisions of industrial commissions and courts construing occupational disease compensation statutes that are of interest to the members. Reports on most of these cases are included in the monthly Industrial Hygiene Digest sent to the members of the Foundation.

CONCLUSION

In the post-war period the problem of industrial health will continue to be a matter of major importance in industrial relations. The legislative and judicial trend will continue to be to grant more liberal benefits to employees and to require employers to assume greater responsibilities for the protection of the health of employees. Activities of the state industrial hygiene departments will increase and industry is faced with the probability of increased regulation to control industrial health hazards. The legal responsibilities attendant to the control of such hazards will be intensified and our Committee advises the membership to follow carefully all legislative activities dealing with matters of industrial hygiene and the regulation and promulgation of rules, regulations and codes by state departments of industrial hygiene attempting to effect the control of industrial hazards.

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NOVEMBER 1944
IN THE AIR AMES

UNITED AUTO WORKERS (CIO) Solidarity House Archives

MWBB-0011299

Comments by Mr. Andrew Court, Labor Economics Section, General Motors Corp., Detroit, Mich., in panel on "Sickness Indemnification," at Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 16, 1944.

As you know, the Industrial Hygiene Foundation has been concerned primarily with the reduction in the sickness of employed persons from occupational causes. Industry has long been organized in an active program to reduce industrial accidents. Although there is still room for improvement, great progress has been made.

By contrast, non-occupational disability is a more serious problem with which little progress has been made. There are two or three basic observations which may be of some assistance in avoiding common errors. Because the employer's contact is pretty much limited to the economic bases of workers' lives, this discussion will be directed toward that area.

The general observation that high income families spend more for medical care and have better health than do low income families is often the major premise underlying the conclusion that the increased use of medical care by employed persons and their families will automatically improve their health.

I shall address myself to the problem: "What can the increased use of medical care and full disability indemnity contribute to the health of middle class urban families - particularly wage earners in well-paid manufacturing industries?

In the National Health Survey prepared by the Federal Government, in which the health and income records of more than 2 million persons were analyzed, the $1,800 a year families reported as little sickness as the families in the higher income groups. Durable goods factory wage earners are now averaging over $2,500 a year individual earnings. In periods of reasonably full peacetime employment, family incomes of these workers are distinctly higher than individual earnings because of supplementary sources of income and multiple family wage-earners. This suggests, on the face of it, that the average wage earner in the durable goods industry, with an average size family of four and with little or no additional income, has an economic basis for a standard of health which appears to be as satisfactory as that achieved by families at much higher income levels.

Among these moderate income groups an economic basis for full health is provided by their normal earnings and the traditional practices of the medical profession. There is no indication that a general subsidy of medical expenses would have markedly improved the health of moderate income families as a whole. The natural question is: "How much medical care did these moderate income families secure?"

It appears that, although persons in higher income brackets spent more money for medical care, they did not actually use a great deal more attention until incomes exceeded $5,000. The increased expenditures at the middle-upper levels is the result of the use of more expensive hospital accomodations and higher fees for physicians' calls, and for specific surgical procedures.

From experience with General Motors surgical and hospital indemnity program and from an analysis of results of the California Medical Plan, it appears that under a complete coverage with fee for physician plan, medical care usage would more than double.

UNITED AIR LINES NOVEMBER 1992

NWB-001300

That is, middle class families would use over 50% more medical care than do the families with incomes over $5,000 a year at the present time.

Is there evidence of any effect on the health of comparable economic groups of increased medical care resulting from group prepayment? There is very little to offer in this area except a statement for the Life Extension Institute that insured persons who had been examined subsequent to the issue of the policy had a distinctly better mortality record than insured persons of the same age who had not taken these examinations. This might indicate that group encouragement of regular examinations can improve health, even at moderate and higher income levels. What is the effect of encouraging surgery through a typical group prepayment plan? General experience with a plan of this character inaugurated in mid '39 showed an apparent doubling in the frequency of surgical operations with some tendency to season as the years have passed. The increase was particularly marked [redacted], there being comparatively little increase in surgery in the numerous other locations in which General Motors has plants. The total disability rate in these plants continues to be high, despite the great amount of surgery which has been performed over the last five years, and in spite of vigorous efforts of the local plant management to cooperate with the medical profession in doing something about the situation toward getting a substantial improvement.

The adoption of group prepayment for surgery which compensated the doctor on a fee-per-service basis made a tremendous increase in the frequency of surgery, particularly in two or three cities [redacted]. At the same time, the death rate does not indicate any savings of life as the result of the large increase in surgery. Any economic change which reduces the cost of surgical operations to the individual, although it does stimulate surgical care, is not demonstrated to be of any benefit to the health of the population so protected.

It is not infrequently alleged that if sick benefit plans pay full wages or more, with little or no waiting periods, workers will be encouraged to nurse minor indispositions and thus avoid serious subsequent complications and the spread of infection to fellow workers.

An examination of the evidence does not support that claim. For example, a study of over one million man-years of group insurance experience compares the rate of long and short term sick claims for insured groups who receive benefits after the third day with groups indemnified only after the seventh day of disability.

Payment after the third day of sickness naturally encouraged many more persons to take off time for minor indispositions. In fact, there were almost four times as many sick claims for disabilities lasting from 8 to 14 days in the case of those persons paid after the third day as there were among persons who drew benefits only after a week of uncompensated sickness.

It has been alleged that encouraging wage earners to spend a few days in bed when they feel ill will often "mean the difference between a quick recovery or the development of far more serious complications."

If this reasonable-sounding but unsupported assertion were true, an Actuarial Society study should show a frequency of serious illness among groups receiving benefits after a three-day waiting period less than that among groups receiving benefits after a seven-day waiting period. A comparison of the two groups, however, refutes the contention. Groups receiving benefits after three days, had in total 29% more sick claims of over two weeks duration than did groups receiving benefits after seven days of disability.

NW0088-0011301

The 15 day sick leaves granted Federal employees is often mentioned as an example of employer policy which encourages staying at home. The available agency-wide data on sickness among Federal employees, although not satisfactory, do indicate that a great many civil servants take most of their sick leave each year as a matter of right, often whether sick or not.

The Social Security Board made a special study of the detailed sick leave records of 1,500 male employees of the Baltimore Old Age Benefit Records Section for the year 1940. Detailed records of absences on account of sickness were also available at the General Motors' Baltimore plants for the same year for 1,500 male factory employees at those plants.

The group covered by the study of Old Age Benefit Records Section received full pay for periods of absence on account of sickness up to 15 days per employee per year with no waiting period. The General Motors group received sick benefits of $2 a calendar day after the first week of disability up to a maximum of 13 weeks' total for one diagnosis in one year.

The number of reported cases of minor sicknesses under the Federal plan was more than three times the number of such cases under the General Motors plan. The number of cases of reported serious sicknesses under the Federal plan was 30% greater than the number of such cases under the General Motors plan. That certainly does not support the claim that sick leave with full pay will tend to reduce the amount of serious illnesses, other things being equal. No evidence which would tend to support that claim has been found.

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NOV 1939 ARRAMS

IN THE ABRAMS NOVEMBER 1992

MWBB-0011302

Comments by Dr. N. Sinai, Professor of Public Health, University of Michigan, Ann Arbor, Michigan, in panel on "Sickness Indemnification," at Ninth Annual Meeting of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, November 16, 1944.

Health insurance has been described by insurance salesmen as a "hot line." It is, but in many home offices from which the hot lines extend the underwriters and actuaries are probably beginning to wish that asbestos gloves were included in their equipment. The element that made hospital insurance a hot line has forced the expansion of this protection to include surgery and obstetrics.

The responsible element in the growth of health insurance is a consistent and dynamic public demand. If the problems of health insurance appear to be large today, think of their proportions when the current forms of limited protection enlarge until they include the full benefits of medicine, dentistry, nursing, hospitilization and the laboratories.

The criteria by which any system or any application of the principle of health insurance may be judged are simple ones. The system must be medically sound, economically sound, socially sound and administratively sound.

There are certain common, too common, assumptions that appear to influence the general management of health insurance schemes. One is that illness and, therefore, the need for service, is precise and measurable. It is neither. Another is that illness is a contingency that occurs by chance and, except in unimportantly rare instances, is something that everyone seeks to avoid. This assumption is only partially true.

If insurance is intended to provide specific protection against a specified contingency -- be it 25 or 50 or 100 per cent of a loss -- then health insurance, as generally applied, fails to qualify. To provide, for example, a limited portion of hospital services or a specified cash payment per hospital day leaves the subscriber facing a great unknown. Not until the contingency is actually experienced does he have any idea of the percentage of protection that he has purchased.

It is a fallacy to assume that flat rates of payment to all hospitals in a community or to all hospitals and physicians in a state or across the country are the marks of sound administration. The wide variation in the costs of services between metropolitan centers and small towns or between general practitioner and specialist services is given no consideration.

What is there in health insurance that leads to the conclusion that it can function without administrative controls? No other important form of insurance is so loosely administered. When hospital insurance was initiated it was assumed that the economic burden of medical services -- surgery and other -- would act automatically as a deterrent to any excessive hospital use. That was only partially true. There was also the quaint assumption that physicians would refuse to recommend patients for hospitalization unless the condition called for hospitalization -- as if the indications for hospitalization can be precisely defined and as if physicians will accept and follow policing rules! And when the evidence of utilization becomes clear in terms of cost what courses were followed? As usual, the easy and least satisfactory ones. Either the subscriber costs were increased or the benefits were reduced -- and administration remained in the position of more of the same.

With the addition of surgery the evidences of inadequate administration -- the statistics of utilization, appendectomy rates running from 5 to 25 per thousand subscribers among generally comparable groups of the population, the loss ratios -- all these evidences and more almost literally shout messages of warning at the administrator.

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RWBB-0011303

Inattention to administrative controls is not flattering either to the hospitals or to the medical profession; it is only a mark of administrative timidity. If it were possible to express the qualities of honesty and morality in terms of percentages, physicians, as a group, would be given an extremely high rating. But the members of the profession are neither Aliees in Wonderland nor babes in the woods. They would be the first to agree that adequate control procedures must accompany any successful application of the principle of health insurance.

What is going on in health insurance? Step I, hospital insurance, and Step II, surgical and obstetrical insurance, have been taken. Step III, full hospital coverage, including professional care for surgical, obstetrical and medical cases, has been proposed and, apparently, is to be the most immediate expansion.

One of the inviolable principles of insurance is that there should be no incentive for a subscriber or policy-holder to collect on his contract or policy. But Step III offers such an incentive with unquestionable certainty. Why should a subscriber occupy a bed in his home and pay for medical services when, by entering a hospital, such services would be covered by his insurance? And, in this connection it is pointless to argue that the physician should refuse to approve hospitalization except as a necessity.

Enough has been said to indicate a primary need in health insurance, a need that influences its economic soundness, its social soundness and its medical soundness. To evaluate existing administrative methods and to devise, apply and evaluate new techniques is no one-man job. For that metter it is a job upon which a number of disciplines must be concentrated.

In Essex County, Ontario, general medical services were made available to a relief population. The elements included, first, about 20,000 people who were to receive services without having to climb over any economic barrier; second, about 100 practicing physicians who were to provide the services, and, lastly, a pooled fund from which services were to be purchased.

Essex County became a research center. The two major problems were to reduce paperwork, the hated "red tape" that so antagonizes physicians, and, more important, to determine whether under the hard conditions of complete free choice, unlimited access to services and fee payments to physicians it would be possible to devise any satisfactory method of administrative control. There was devised a mathematical formula of control. It produced the desired result in Essex County with approximately 90 per cent of the physicians completely unaware that any mechanism of control was functioning.

Essex County was a laboratory that was used. In the United States there are a hundred "Essex Counties," a hundred areas or systems that contain valuable basic elements.

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IN RE: ABRAMS November 1992

NWBB-061304

Text of address, "Increasing Importance of Industrial Health in Industrial Relations," by V. P. Ahearn, Industry Member, National War Labor Board and Executive Secretary, National Industrial Sand Association, at Ninth Annual Meeting of Members of Industrial Hygiene Foundation at Mellon Institute, Pittsburgh, Nov. 15, 1944.

It is true that this question of industrial health has already gained the status of a major problem, and one we have seen only in its expression stage, and by no means have we seen either the demand or the things that are going to be done to achieve that objective. I can say that in every War Labor Board proceeding there is hardly a major case coming before the Board which does not involve at one stage or another a demand that something shall be done, even to an order to the United States government, to improve industrial health. Even though the demand may not meet the objective, even though it may be unworkable, none the less, the realty of that demand is something that practical men in industry will not ignore.

Our old friend "physical examinations" comes up. It is unavoidable. It came up in the non-ferris industry in the western part of the United States. There, the Non-Ferris Commission, which is an agency of the Board, had ordered physical examinations requiring the applicants for work to undergo a physical examination; that x-rays shall be taken, but that the results of the examination by the company's physician, including x-ray plates, shall be made available, not only to the company, but to the worker as well. That was the order of the Non-Ferris Commission. When it got to the War Labor Board, there was a great deal of discussion. So far as the Public Members of the Board were concerned, they liked the idea; thought a worker was entitled to be told what this medical examination had disclosed, but because the Board was disturbed about the possibility of invading certain sacred grounds of the medical profession, the Non-Ferris Commission order was reversed.

It has also come up in the current Steel cases and in the current General Motor case, which are two of the approximately six major cases now before the Board and which will soon be disposed of. There the issue has been raised as to a sick-leave plan. The unions in both cases have proposed elaborate sick-leave plans. I know that you can prove, perhaps by statistical analysis, even by medical and engineering testimony, that sick-leave plans just won't work. I have no idea what the Board will do with reference to the sick-leave plans presented in these cases, but I recognize the strong emotional appeal which a sick-leave plan has, and I call attention to it only as a part of the increasing importance which industrial health has with industrial relations.

We had another interesting case involving the fur workers of New York City. There the fur industry and a fur industry union had a dispute, even though the parties have a background of 32 years of industry-wide collective bargaining. The panel which heard that case seemed to be very sympathetic with a statement of the union that the New York Workmen's Compensation Law afforded inadequate coverage for certain occupational hazards in the fur industry and at one stage, proposed that the War Labor Board cure these deficiencies in the New York statutes. That will give a sample. With the distinguishment they have made in the field of Workmen's Compensation, it seems almost an impertinence for anyone to suggest that an agency sitting in Washington undertake to cure a deficiency in New York law. Obviously, the place to go is Albany, if the deficiency exists. However, there is here an emotional appeal based on something very real in the minds of the workers.

NWBB-007305

Something else I hear a great deal about is group insurance. That is the issue in the Steel case at the present time. I have no idea what the Board will do with that; it's on its ways. It has worked out in many industries. The Board, so far as I know has never ordered group insurance, indeed, never sick-leave plans.

Although vigorously protested by unions, the pressure for demands for security is something that is only becoming felt. Most of you may have seen a CIO proposal on matters of this sort, and particularly this issue which was raised in the non-ferris industry about x-ray plates and the results of physical examinations. One of these proposals is that each employee will be furnished with a copy of all physicians' reports and laboratory reports made by the company or its insurance company. Passing a physical examination shall not be a condition of re-employment or continuing employment in the case of an active, continuing disease. No person shall be denied employment having a hernia, arrested tuberculosis or other known disabling, non-communicable disease. It is further proposed that if an employee is denied work that such denials shall be referred through the regular grievance procedure. That means that unions are going to try to have much more to say about sick-leaves and physical examinations, both pre-employment and periodic.

The A.F. of L. has not been quite so active in this field as the CIO, but none the less, there is a strong feeling in the A.F. of L. that physical examinations have been used, not for the purpose of screening off workers who are unfit for the hazard of the job, but for a purpose wholly unrelated to physical examinations.

I think the A.F. of L. is not quite so interested in group insurance as the CIO seems to be. I don't know whether they will make too much of the issue of sick-leave plans, but none the less, the strength of feeling in the whole rank and file of labor on all these things, is something that should not be dismissed lightly.

I heard the discussion here about pre-employment examinations but very little about periodic examinations, which are in most cases more important.

It has been said from this platform before that physical examinations are not a job of the doctors alone. It is only a part of the job so far as the doctors go. It is an engineering problem, a management problem; it's a human problem.

I wonder what we would say, trying to get a realistic view of labor's position, if it were proposed for instance, that men in our walk of life should have to stand, not only a pre-employment, but a periodic physical examination, conducted by a physician, not of our own choosing, the results of whose examinations would not be made available to us, but whose decision might mean the difference between a job and no job. I wonder what our individual reactions would be to any such proposal, particularly, if the company physician was young and inexperienced; if he should be, in our eyes, an incompetent man to make such a serious and solemn decision, when we say, as you and I, and perhaps others have said, "After all, the only thing we are trying to do with physical examinations, old fellow, is to keep you from getting killed or dying." Maybe it is so. Suppose you have worked for an industry for five years and it is the rule that you must stand a periodic physical examination; you are at a job paying a dollar and a quarter an hour, which carries with it an occupational hazard or else this periodic examination would not be made, and the result, in the manner that I have just described, is that you are told that it is unsafe for you to continue to be exposed to that occupational hazard. Well, that sounds as if the fellow is really being snatched from the jaws of death; but he's transferred to another job, and the only job in the plant is a job paying seventy-five cents an hour. Now the worker has adjusted himself to a dollar and a quarter an hour. His budget calls for that kind of income. Just how reasonable is it to tell him under these circumstances that we are saving his life and cutting down his income? I only ask the question -- I don't know the answer.

NOVEMBER 1946
IN THE AIR AMES

NOVEMBER 1942 IN THE AIR AMS

HWB 001306

Now, I have spoken about the fear of the workman about the inexperienced company physician. That is also expressed in this CIO proposal. You find it in paragraph 8 of that proposal. One of the things - "First Aid and nurses shall not remove foreign bodies from eyes, give medical or subscribe treatment." That wasn't drawn out of the thin air. Undoubtedly, there have been cases where First Aid men and nurses have given medical treatment which proved disastrous to the worker. That is something else you are going to hear about as time goes along.

Industry has a magnificent opportunity as this war approaches an end, and that is to show what can be done to give employment to workers who at one time would be regarded as disabled and therefore not be able to qualify for a job. We found out during this war that blind people, for instance, can do work of a very skilled character, which people with normal vision cannot do anywhere near as well. We found people who were regarded as too crippled to permit of doing heavy physical work; other types of work have had the top of our manpower barrel. We used them and these people have made a magnificent contribution to production for war. Think how much more dramatic that problem is going to be after the war. Many are going to be disabled and if industry, if insurance companies stand on a letter on the Selective Service Act, then trouble is going to follow.

Perhaps one of the unfortunate results of the Workmen's Insurance legislation is to force perfection -- physical perfection, where physical perfection just does not exist. So insurance companies and industry together have the job of providing useful employment for all workers, even though there may be cases, as there undoubtedly will be many cases, where, under normal circumstances, you would say that physical disablement is so far advanced, our insurance company and ourselves feel they would be a dangerous risk. We must not expose this fellow to the hazard of this job. Where is he going to find work?

Unions haven't been without their dereliction in this record either. That is particularly true with unions that have begun to accumulate vast sums of money in their treasuries. I served as a member of a committee on the War Labor Board. Sitting as a member was a doctor from a very prominent CIO union and there was a talk on industry's use of physical examinations. The doctor said that the question of physical examination should be turned over to the unions entirely, that the union should be the judge of whether a man was physically able to work. It happens that this union has a very elaborate insurance, pension, retirement and hospitalization plan. They have accumulated a substantial sum of money in their treasury. No man or woman can go to work except the union advises the industry that the applicant is worthy of the job, in a physical sense, and yet, this union has screened out every worker who does not meet that kind of physical test which will preserve the integrity of their insurance fund. I have even heard that it is getting so conservative with its funds that it refuses to finance a strike --- it was too expensive!

Let me say just one word about the physical examination. It is real in the terms of the worker himself who does face these things about physical examination, pre-employment and periodic, which have been pointed out, and we must not discuss it as just another union agitation. We must come to grips with it. It is a job that requires men of good will on both sides of the table. Once we recognize the existence of the problem, I am confident that industry can at least approach a solution of it.

I have made some notes here on something which isn't too important perhaps, but it is something which I wonder if it wouldn't be good for all employers to do a little introspective examination about from time to time. These I have gleaned from work on the War Labor Board from time to time, and also in my work in the industry with which I am associated -- little things in many cases, but they have become major issues in other cases.

HWGB-0011307

IN RE: ABRAMS November 1992

Ventilation -- This seems a rather small thing to a great many people, but I am confident that at the working level, the lack of adequate ventilation has done as much to contribute to poor labor relations as anything.

Illumination -- Men have to stumble around in poorly lighted buildings because the small question of illumination has not been seen and solved with the aid of the great industry that provides illumination.

Toilet facilities and showers -- I have seen places, I am confident that every man in this room has, where no worker should be asked to work. Toilet facilities indescribably dirty; shower facilities in name only.

The question of protective clothing, protective equipment. I once heard a worker say the dirtiest place in a foundry was the First Aid box.

That's the employer's responsibility. I know it needs cooperation, but it's his plant and his job to launch a course for the men.

Something new -- in-plant eating. That's a new thing in name only. It won't work in many cases, but it is working in many cases where they said it wouldn't work before. I think it is something that needs examination.

The isolation of dangerous processes -- simple engineering technique, in many cases.

Last, but not least, this question of hospitalization. I followed with a great deal of interest, the discussion by the recent panel. I think it affords one of the most magnificent opportunities if industry is to establish that good will and morale which are necessary for this postwar world we are all hoping to see. But running through all these issues, it is my fervent belief that the dignity of every individual has to be realized by those who have often neglected to see the dignity of the individual, and by management, who, on occasion, have been equally derelict. I saw that in a recent issue involving vacation. The claim was the worker was not given enough notice of the time he should take his vacation. He wanted more notice. It seemed to me he was entitled to it. A man's position with his family -- he goes home and says, "My vacation starts tomorrow." It seems to me he loses face and prestige in his own home where he must preserve his dignity. A man wants to say, "The question of my vacation is a matter of discussion. They have given me two months' notice." In this way, the family can take that trip to the mountains; get ready for it; go over maps. Contribution to the dignity of that individual is well worth while.

We on the management side have got to look it squarely in the face that a change has taken place -- a very real change. I wonder if any of you read a book called "Inheritance" by Phyllis Bentley. It's about England, about 1820. It traces the history of a family. At that stage of its existence, the family had a "Communist." What was he agitating? For a law limiting employment of children to 12 hours per day -- a law requiring the employer to give his children Christian education on Sunday. As Walt Durant said, "Custom lends propriety and time lends sanctity."

Again, running through all of this is the worker's fear of insecurity; the fact that he may lose his job overnight. Men spend right up to their budget or income. That is why we hear so much about sick-leave, group insurance, dismissal pay and guarantee pay. I heard Bob Watt of the American Federation of Labor say from this platform that a man's fear of insecurity, his desire to maintain and hold on to that job, will cause him to work at that job regardless of the occupational hazard until he dies in his tracks. We have to show him that this private enterprise system that I have so much faith in is a better system than any other. What did Hitler offer his people? Jobs for everybody, and he gave all of them jobs. We found out that there is more

NWBB-0011308

IN REPLY REFER TO: ABRAMS NOVEMBER 1992

than social security. Personal security and political security -- securities well worth while. We have to be sure that this "Jobs for all" slogan isn't picked up by an American demagogue, because, back of it lies undoubtedly the intention to change, not our economic system but our political system as well. But industry in this country has behind it a record that once it sees something, once it grasps the realty of a specific fact, it will meet and overcome that problem.

It seems to me that the Industrial Hygiene Foundation has shown the realism of that approach. So far I have heard very little pontificating from this platform. This is the problem. One hundred years from now, it will still be a problem, but we are not going to sweep it aside; we're going to do it. If we don't, unions will solve it for us, and I am afraid that their solution won't be as good a solution as management's will be, if it really goes to work.

This really isn't inside the title of my talk. Let me say just one word about unions as an individual, not from a standpoint of representing anybody. I don't represent anybody when I say this, I am not one of those who believes that the veterans are going to be anti-union. I know they are irritated with strikes. A man fighting for his life in the Philipines can't understand why supervisors at the Wright Aeronautical Plant called a strike. He resents it and if he could, he would do something about it, but I think, on the whole, looking at it in total perspective, the unions have done a swell job honoring the no-strike pledge. I know you can say, "Look at Wright Aeronautical, look at this case, look at that case." What was it that Stalin toasted at Teheran? It was American production, and that has won this war for the Allies. We have our system to compare with their systems. In Germany, there weren't any strikes; in Italy, there weren't any, and I understand there haven't been any in Japan, but we're beating the hell out of these countries, and I was under the impression that one of the reasons we had war was because their system threatened ours. The integral part of their system is no-strike pledge -- or, no pledge.

Being from Washington, I would like to say as a final chapter that I have great faith -- unlimited faith in the ability of employers -- management -- private industry, to do the great job that lies ahead of us. Certainly this fine system that we have had, which has produced more employment, more real wealth than an engineering man has ever thought of, is worth fighting for. We must do this job. I am convinced that the political and economic system which we prefer above their systems is the necessary link with the private enterprise system.

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MWBB-0011309

NOVEMBER 1992 LIT. ABRAMS

Abstract of report on "Effectiveness of Tall Stacks in Minimizing Objectionable Emanations from Industrial Plants," by George R. Hill, Ph.D., Director, Department of Agricultural Research, American Smelting and Refining Company at Ninth Annual Meeting of Industrial Hygiene Foundation held at Mellon Institute on Wednesday, November 15, 1944.

The use of high stacks emitting gases at high temperatures has done away with objectionable concentrations of sulfur dioxide at many American Smelting and Refining Company plants and has materially reduced them at the others.

The end of the first decade of this century found different companies struggling to control the losses of solids in the smoke, and there came into general use about that time, first the baghouse for filtering non-acid smoke, and second the Cottrell plant for electrical treatment of acid smoke streams. These have been improved until today they are so effective that the losses of solids from smelters are quite negligible. Neither the baghouse nor the Cottrell plant has any effect, however, on the gas, sulfur dioxide.

The late Dr. P. J. O'Gara and Edward P. Fleming made field studies of sulfur dioxide concentrations and correlated these with stack height and temperature, proving thereby that high stacks, operating at high temperatures, are generally very effective.

It is not the average concentration but the high peaks of occasional concentration, which are now the cause of difficulty at some smelters.

It remained for the invention of the Thomas SO_2 autometer, which continuously and automatically analyzed and recorded concentrations before and after the building of the high stack at Selby to get proof of what that high stack was accomplishing.

The discovery of great divergence in direction of ground smoke compared with that from a tall stack during periods of low wind velocity, probably explains the satisfactory results of tall stacks.

The month by month record of the Dillon recorder, with a short and a tall stack, tersely summarized, boils down to the following:

During the 41-month period prior to the erection of the tall stack at Selby, the SO_2 concentration exceeded 0.5 p.p.m. for 842 half-hour periods, averaging 0.717 p.p.m. During the next 15 months immediately following its erection, it exceeded 0.5 p.p.m. only once, with 0.52 p.p.m. recorded.

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