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LABOR-MANAGEMENT RELATIONS

REPORT

of the

JOINT COMMITTEE ON LABOR-MANAGEMENT

RELATIONS

CONGRESS OF THE UNITED STATES

Pursuant To

SECTION 401 OF PUBLIC LAW 101 (80TH CONG.)
ESTABLISHING A JOINT CONGRESSIONAL
COMMITTEE TO BE KNOWN AS THE JOINT
COMMITTEE ON LABOR-MANAGEMENT
RELATIONS

This is a portion of the report relating to
The Lincoln Electric Company and its policies

Prepared under the direction of
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LABOR-MANAGEMENT RELATIONS

MR. BALL, from the Joint Committee on Labor-Management Relations, submitted the following

REPORT

(Pursuant to Sec. 401 of Public Law 101, 80th Cong.)

The Joint Committee on Labor-Management Relations was established under the terms of section 401 of Public Law 101, enacted June 23, 1947. Relevant sections are as follows:

SEC. 401. There is hereby established a joint congressional committee to be known as the Joint Committee on Labor-Management Relations (hereafter referred to as the committee), and to be composed of seven members of the Senate Committee on Labor and Public Welfare, to be appointed by the President pro tempore of the Senate, and seven members of the House of Representatives Committee on Education and Labor, to be appointed by the Speaker of the House of Representatives. A vacancy in membership of the committee shall not affect the powers of the remaining members to execute the functions of the committee, and shall be filled in the same manner as the original selection. The committee shall select a chairman and a vice chairman from among its members.

SEC. 402. The committee, acting as a whole or by subcommittee, shall conduct a thorough study and investigation of the entire field of labor-management relations, including but not limited to --

- (1) the means by which permanent friendly cooperation between employers and employees and stability of labor relations may be secured throughout the United States;
- (2) the means by which the individual employee may achieve a greater productivity and higher wages, including plans for guaranteed annual wages, incentive profit-sharing and bonus systems;
- (3) the internal organization and administration of labor unions, with special attention to the impact on individuals of collective agreements requiring membership in unions as a condition of employment;
- (4) the labor relations policies and practices of employers and associations of employers;
- (5) the desirability of welfare funds for the benefit of employees and their relation to the social-security system;
- (6) the methods and procedures for best carrying out the collective-bargaining processes, with special attention to the efforts of industry-wide or regional bargaining upon the national economy;
- (7) the administration and operation of existing Federal laws relating to labor relations; and
- (8) such other problems and subjects in the field of labor-management relations as the committee deems appropriate.

SEC. 403. The committee shall report to the Senate and the House of Representatives not later than March 15, 1948, the results of its study and investigation, together with such recommendations as to necessary legislation and such other recommendations as it may deem advisable, and shall make its final report not later than January 2, 1949.

SUMMARY OF FINDINGS

In the light of the studies and inquiries that have been carried on in the first 6 months of operation of the Labor-Management Relations Act of 1947, the committee feels warranted in making certain affirmative findings, even in the possibility they may be modified in some slight degree in the committee's final conclusions and recommendations. The committee takes this action in view of the fact that in over-all application, and basically controlling aspects, this law is working well, without undue hardship upon employer or employee, and promoting the adjustment of labor problems equitably and in more friendly and cooperative relationships. The committee finds --

1. A large proportion of the officers of labor organizations have complied with the requirement to file non-Communist affidavits and, in many other instances, the memberships of unions have acted decisively to compel compliance of reluctant officers, or to remove them for failure to do so.
2. An aggregate of 4,447 international, national, and local unions had met compliance requirements on February 29, 1948. Of these, 78 were of AFL's 105 internationals; 27 were of CIO's national and international unions; and 35 were national unaffiliated unions. Among local unions meeting compliance requirements, 3,192 were AFL locals; 421 were CIO locals' and 694 were locals of unaffiliated unions.
3. The number of secondary boycotts are steadily decreasing. The few cases in which the new law has been used as a means of terminating them have conclusively demonstrated its effectiveness. The already established precedent is serving as a strong deterrent.
4. A great number of jurisdictional strikes are being settled without necessity of formal action, and prevalence of such strikes is declining. Facts are persuasive that these disputes can best be adjusted by parent unions and, under provisions of the new act, a growing number of parent unions are assuming this responsibility. The building-trades department of the American Federation of Labor, working with National Associations of General Contractors, have reached agreement in principle on a plan of Nation-wide application which holds promise of solving the great majority of such disputes without recourse to the facilities of the National Labor Relations Board.
5. Unfair labor practice complaints against employers, filed with NLRB under the Labor-Management Act, are still far in excess of similar complaints filed against unions. In the first 5 months of the law's operation, 1,306 charges of this nature were filed against employers, 355 charges against unions. Two hundred of the charges against unions were filed by employers, the remainder being filed by individuals and other unions.
6. After a slow start, a strong trend has set in among labor unions to accept responsibility to comply with restrictions on compulsory union membership. Increasing use of the act's procedures for obtaining union-shop contracts is being made.
In Sept. 10 petitions for such contracts were filed with NLRB; in January 1948, 2,119; with a total of 4,217 in the first 5 months of the law's operation. The building-trades unions to whom the closed shop has been most traditional have agreed to the use of the act's orderly procedure to obtain union-shop contracts.
7. Traditional and identifiable groups of skilled workers are being organized and recognized in craft units in a rapidly growing number of instances, and creating a more satisfactory condition of employer and employee relationships for workers whose skill, vocation, and special community of interest are best served through the craft form of organization.
8. Strikes, in number, in man-days of idleness, and in total number of workers affected, have steadily declined in each successive month since the law became operative. The committee has substantial reason to believe the 60-day-notice requirement, the prohibition of jurisdictional strikes and strikes in support of secondary boycotts, the provision making unions suable for breach

of contract, the more equitable balancing of rights of employers and employees, and other adjustment procedures set up in this law, are serving with growing effectiveness in discouraging strikes and controversial work stoppages.

9. Wages, either in average hourly earnings or in over-all "take home" pay, have not suffered through operation of any of the law's provisions. The Bureau of Labor Statistics reveals that average hourly earnings of all industrial workers increased in monthly progressions from \$1.236 in August to \$1.277 in December.

10. Many unions have made substantial gains in membership as the law has become fully operative, especially as a result of union-shop contracts entered into by majority choice of employees, and the larger measure of control over unions conferred upon members by the law's provisions. In illustration, the AFL's International Teamsters' Union has acquired approximately 100,000 new members since passage of the act.

11. Settlement of disputes, and the expeditious adjustment of differences, has been facilitated in every instance coming to the attention of the committee. The most difficult disputes in adjustment are those, in an exceptionally few cases, in which one of the parties has resisted compliance with the law and acceptance of its provisions and procedures.

12. Rights of individual workers, in job security, in seniority, in the disposal of grievances and in relationships with employers, have in no wise suffered under the law's provisions. On the contrary, there is persuasive evidence that guaranties of the rights of employees are materially strengthened and clarified under terms of the act which prescribe boundaries of the rights of employers and unions.

13. Elimination of Communist partisans and adherents from official posts and positions of responsibility, in both national and local unions, is one of the most pronounced and significant effects of the Labor-Management Relations Act, 1947. There are still unions, in a steadily declining number, however, whose officials have not filed non-Communist affidavits in compliance with the law. A number of unions have fully met this provision with the ouster of officials who have failed to meet this statutory requirement.

14. The revision in the organization and procedures of the National Labor Relations Board made necessary by the act has operated to promote more public confidence in the Board, and the Board members themselves express considerable satisfaction with the changes.

15. Gains to the public welfare and the national economy are to be recognized in all of the substantial advances under the law. Growing stabilization in labor relations, and in equitable adjustments of differences, cannot be measured quantitatively. Beyond question these gains are outstanding among the law's effects and benefits, and evident in terms of more unbroken employment, uninterrupted wages, rising production, and a growing volume of industrial activity.

I. INTRODUCTION

The joint committee has been frequently referred to as a "watch-dog" committee to observe the effect of the law in operation. It should be made clear the committee has not sought to interfere with the independence or judgment of any agency or Department charged with its enforcement or interpretation. Rather, we have conceived our function to be one of keeping in daily contact with administrative developments in order to be in a position to call to the attention of the Congress any defects which might develop in the law itself or in its administration, requiring remedial action. While the committee has been, as is indicated throughout this report, favorably impressed with the spirit of the National Labor Relations Board and its general counsel in trying to effectuate the policy of the law, it should be emphasized at the same time that this does not constitute a blanket approval of all policies or procedures which thus far have been announced. In addition, there are many important questions of interpretation yet to be determined and no adequate appraisal of administration can be made until many of these questions and procedures are resolved.

A considerable portion of the following report will be devoted to our observation of the first 6 months of operation of the Labor-Management Relations Act of 1947. The act was a comprehensive piece of legislation which has had considerable impact on every phase of labor-management relations. We believe that a report setting forth the methods and procedures by which the agencies entrusted with the administration of the act have adapted and developed their procedures under it, together with a discussion of the volume and type of cases they are being called upon to consider, should be helpful at this time.

With respect to those specific subjects the act directed the committee to study, this report must be only a progress report. Our studies to date have not been sufficient to qualify us to draw conclusions or make more than a very limited attempt at evaluation.

PROGRAM OF STUDY

At one of the first meetings of the committee several programs of investigation and study were agreed upon. Additional programs will be necessary to develop all the specific information the statute directed us to ascertain, but the following major studies which the committee has been pursuing since its creation include much about which Congress desired further information.

1. Studies of the principles, procedures, and personalities involved in employee-employer relations in a selected number of plants. The studies are designed to develop information, not only as to what principles and procedures in collective bargaining have proven most successful, but also as to the operation of welfare funds, profit-sharing plans, annual wage, and incentive systems.
2. Study of industry-wide bargaining procedures and agreements and their effects on the national economy. Staff investigations of the history, procedures followed, types of agreement reached and their effect on labor relations in the particular industry and on the economy, followed by hearings. Attempt in first instance to study such industries, as coal, steel, glass-making, garment, maritime, meat-packing, foundries, and trucking.
3. Study of welfare funds, covering the existing funds insofar as they can be ascertained, and also the relation of such funds and the benefits provided to social-security programs.
4. Study, in cooperation with NLRB and other affected agencies, of the operation of the new law with a view to recommending any changes found to be necessary or desirable.
5. A study, in cooperation with the Bureau of Labor Statistics and Departments of Commerce and Labor, of union constitutions and internal organization and government, and of employer associations, how organized and what part they play in labor relations.

COMMITTEE POLICIES

Realizing that labor-management relations is a highly controversial subject and one in which emotions are easily aroused, the committee early determined that certain policies must be adopted and strictly adhered to in our investigations if they are to accomplish their desired purpose. Therefore, the committee unanimously agreed that --

1. Every attempt must be made to obtain the cooperation of both labor and management in any study undertaken.
2. All investigation necessarily must be conducted on an objective and impartial basis with no preconceived notions of what the facts are before they are found.
3. Only in the most exceptional of cases should the committee inject itself into a current dispute.

WORK OF THE COMMITTEE

The day-to-day activities of the committee in gathering the information in this report have been of a varied nature. We have --

1. Consulted informally with representatives of industry and labor.
2. Held numerous conferences and had many informal contacts with officials of the

National Labor Relations Board, the Department of Labor, the Department of Justice, the Mediation and Conciliation Service, and the Bureau of Labor Statistics.

3. Investigated numerous complaints of alleged maladministration of labor law by governmental agencies charged with its administration.

4. Acted as a clearing house of information for members of Congress and their staffs on problems raised by the new act.

5. Kept informed on the progress of all important cases being considered by the NLRB and the courts.

6. Conferred with many State Officials on problems created by conflicts between State and Federal labor laws.

7. Considered and analyzed many suggestions for further labor legislation.

8. Cooperated with the Senate Committee on Labor and Public Welfare and the Education and Labor Committee of the House of Representatives on mutual problems and to prevent duplication of effort.

9. Conferred with various public and private agencies which are conducting studies of labor-management relations.

10. Solicited information from unions, employers, Government administrators, and the public with respect to the operation of the act and its effects.

11. Had extensive staff studies covering all phases of labor-management relations made at a selected number of plants.

12. Collected and analyzed available contracts containing provisions establishing welfare funds.

13. Considered available background material and commenced field studies in industries where bargaining is conducted on an industry-wide basis.

THE LINCOLN ELECTRIC CO., CLEVELAND, OHIO

The Lincoln Electric Co. is the largest manufacturer of arc-welding equipment in the world. The company states that its employees are among the most efficient and greatest producers in the world. Lincoln's success in maintaining high wages, full employment, high production, and low selling prices for more than 15 years attests to the substance of this claim.

The concrete achievements of the company are spectacular. Among the most significant are the following:

1. Between 1921 and 1947 the company achieved an 87-percent reduction in the hours of direct labor required to manufacture an arc-welding machine, and between 1919 and 1947 it achieved a 96-percent reduction in hours of direct labor required to manufacture an electrode, its other major project.

2. The selling price of a 200-ampere welding machine decreased from \$1,500 to \$230 between 1931 and 1947. The selling price of a class E6010 electrode decreased from 15 cents to 7 cents per pound during the same period of time.

3. Between 1932 and 1947, while prices were declining, the output per man, or productivity, measured in terms of dollar sales, increased from \$4,000 to \$28,000. If prices had not been reduced, but remained at the 1932 level, this productivity figure would be \$56,000.

4. Dividends have steadily increased, and since 1922 stock has been split 10 shares for 1. The stock today pays \$6 per share. The owner of 1 share in 1922 received \$3 in dividends. Today, if that share had been retained, the investment would bring \$60.

5. Between 1928 and 1947 the average annual wage of its employees increased from \$2,000 to approximately \$6,000 per year.

6. The personnel on its pay roll increased from about 350, in 1932, to 1,024, in November 1947.

7. The company, compared to other manufacturers, has succeeded in holding to a minimum the ratio of direct labor cost to the selling price of its products.

The company unhesitatingly attributes these achievements to the successful operation of its incentive system.

This report is primarily concerned with the company's labor relations and the extent to which the company's incentive system and other factors in the relationship between management and employees have elicited the employees' wholehearted cooperation in the enterprise and contributed to the company's substantial industrial achievements.

I. THE COMPANY AND ITS LABOR FORCE

During 1947 electrodes constituted approximately 47 percent of the company's products on a sales dollar basis. Arc-welding machines and generators constituted 46 percent. In addition to its manufacture of electrodes and electric-welding machines, the company manufactures and sells welding accessories which constitute the remaining 7 percent of its sales. Such accessories include helmets, arc-welding cable, cable connectors, electrode holders, protective lenses and ground clamps. Helmets, lenses and cable are not manufactured by the Lincoln Electric Co. but are supplied to Lincoln by other manufacturers.

The company was established in 1895 for the manufacture of motors and dynamos. It was incorporated in 1906, and the first welding machine was made in 1909. Welding was used first commercially as a tool for repairing broken castings and other minor repairs. During the period between the First and Second World Wars it was developed, however, as a production tool for joining metals and became the standard fabricating process in many industries. The role it played during World War II is well known and as a result welding received a tremendous impetus. The Lincoln Electric Company discontinued making motors completely by 1940 and concentrated on

the welding field. From its initial beginning, with only \$150 capital, it has grown to become the producer of over half the arc-welding equipment made in this country.

The company's only plant in the United States is located in Cleveland, Ohio. At the present time, the company has two plants in other countries: one in Sydney, Australia, which employs approximately 100 persons and one in Toronto, Canada, employing approximately 155 persons. In 1947 the company sold a third plant located in London, England. The same products are manufactured in these foreign plants as at the Cleveland plant. Although Lincoln owns these foreign plants as subsidiaries, they are locally managed and no effort is made to exercise any control over their operation from Cleveland. This study is confined to the Cleveland, Ohio, plant.

The Cleveland plant consists of two buildings known as plant 1 and plant 2. The company's electric welding machines and generators are manufactured in plant 1. Plant 2 houses the electrode department. The Cleveland plant employed about 1,024 persons in 1947, of whom 899 were production workers, including 20 women. The number of women employed in the factory is about the same as it was before the war. They are employed only on jobs of light work at which in the company's experience, they have proved efficient. The office staff in Cleveland is composed of 74 men and 51 women. The company also employs approximately 100 salesmen in offices located throughout the country. The employees are almost entirely recruited from the Cleveland area. Examination of the names on the company's pay roll discloses a cross section of Cleveland's heterogeneous population and indicates that the company's recruitment of new employees is not discriminatory on a nationality background basis.

The factory is organized into 13 production departments, each of which is supervised by a production foreman. As of November 1947, the largest of these departments had 94 employees, the smallest 12. In addition to the production departments, there are seven other departments, such as shipping and the stock department, which are not directly engaged in production. Company officials describe the work of the great majority of the production employees as semi-skilled in character, as measured by the training period needed to attain normal efficiency at the operation. The company also employs a number of skilled employees in traditionally craft occupations, particularly electricians, machinists, and die-makers, as well as highly skilled testers.

The most outstanding evidence of the success of the relationship between management and workers of the company is the high productivity of the individual employee, which exceeds an annual average per employee of \$28,000 in terms of dollar sales and the high take-home pay of the employees which in 1947 averaged somewhat more than \$6,000 for each employee. The company denies that any special manufacturing or marketing conditions exist in the arc-welding industry which account for the high productivity and wages of its employees or its demonstrated ability to undersell its competitors in the United States and abroad. Neither the industry nor the company is favored by tariff protection or other beneficial governmental regulation. The industry it is asserted, is highly competitive. Among the company's competitors in the manufacture of electrodes and machines are such well established companies as Westinghouse Electrical Corp., General Electric Corp., Allis Chalmers, Hobart Bros., Harnishfeger Corp., A.O. Smith & Co., as well as many smaller companies. The company assigns as the principal reason for its business successes the effect of the incentive system in encouraging and developing the ingenuity of every employee in devising methods for making a better and better product at a lower and lower cost.

Finally, with respect to the company's labor relations, it should be noted that no union organization exists at the plant, and at no time has any union seriously attempted to organize the company's employees. For many years, however, there has existed at the plant an advisory board, composed of employee and management representatives, which serves as an important medium of communication between employer and employees and which, it is claimed, has had a

profound effect through the years upon the success of the company.

Mr. James F. Lincoln is the company's president. He assumed the general management of the company when his brother, J. C. Lincoln, retired in 1913 and turned over control to him. He has been the directing head of the company since that date. From the beginning Mr. Lincoln sought to enlist the cooperation of the employees as an indispensable factor in the successful operation of the company. It has been his purpose to develop an organization in which the way of life and work is directed by a philosophy of incentive. It has been his belief that, given the incentive, people respond with their latent abilities and enthusiasm with respect to their work. He has, therefore, sought through the adoption of incentive methods to arouse the latent abilities of the employees and thereby to increase production. Finally through fair dealing and qualities of integrity, as well as business success, Mr. Lincoln commands general respect.

II. THE INCENTIVE SYSTEM

The incentive system serves as the keystone of the company's management-employee relationship. Lincoln describes his incentive plan as an economic system designed to obtain the cooperative effort of all its employees for maximum production and attributes to incentive methods its unique success in maintaining high hourly wages, steady and increasing employment, high production, and low selling prices.

The incentive system embraces and touches every phase of the operations at the Lincoln Electric Company. At its core, Lincoln explains, it is an appeal directed to the basic instinct in every individual for self-expression. Every man wishes above all else to be recognized as a man among men, as a person who does his job better than the next man, and to be accorded recognition and rewards for such excellence. The system as such, therefore, is a system for appraising and rewarding performance and of keying that performance to low-cost manufacture of the best possible product. The lower costs in turn are passed on to the consumer, whose continued favor in the end is the support of the system.

How Lincoln appraises and rewards performance on the job is described hereinbelow. The measure in which it is rewarded is one of the most striking aspects of the entire operation.

During 1947 the average annual wage of its employees with the bonus was in excess of \$6,000 and foremen were paid an average of \$11,000. Typical bonuses paid were \$5,500 to a foreman; \$4,025 to a lathe operator, \$3,700 to a cleaner, \$3,960 to a trucker, \$2,750 to a sweeper, and \$4,300 to a grinding-machine operator. The bonus paid at the end of 1947 equalled approximately 117 percent of the total wages paid during that year.

A. THE PIECE RATE

Basic to Lincoln's incentive system is the piece-rate method of wage payment. It adopted this method in 1916 as the best way of assuring that employees in the enterprise be rewarded in accordance with their contribution to the business. The piece rate, it is held by the company, is the only method whereby accurate payment for production can be made. Accordingly the company has given the widest possible extension to the method of payment and nearly all jobs in the plant are paid by piece rate. Lincoln's time study men have even applied the piece-rate method of payment to employees in such departments as the stock and shipping rooms, where it has not generally been deemed applicable.

The work in the plant is of a kind to permit the successful application of the piece-rate method of payment. The company manufactures approximately 160 arc-welding machines per workday and about 70 percent of its production employees are engaged in this work. These machines are a standardized product in large measure uniform in construction. The substantial volume and relative uniformity of the products permits the break-down of the manufacturing process into a large number of specialized operations. This means the continued recurrence on

most jobs of a uniform cycle of operation. At the same time, machines do not set the pace. The individual employee has scope to exercise initiative and skill to increase his output. Indeed, the company prides itself upon the constant ingenuity displayed by its employees in devising short cuts and improved methods to increase production and thereby to increase their earnings.

The electrode, which is the other principal product of the company, is manufactured on a mass-production basis and the extent of the individual employee's initiative and capacity to increase his production is somewhat restricted by the interdependent character of the jobs in that process. The plant in which the electrodes are manufactured is not open to visitors. For this reason no specific conclusions can be drawn as to the applicability of the piece-rate method of wage payment to the jobs in this plant.

Excluded from the piece-rate method are certain jobs lacking in standardization or where the use of the peice rate would result in wage inequities. Clerical employees, maintenance and repair men, and tool-room employees are paid on time or day rate as their work is not easily susceptible to standardization in terms of a repetitive cycle of operation. Nor are piece rates paid to new employees, employees on new jobs, or for experimental work. It is generally held that the piece-rate system does not permit employees in such circumstances to earn a fair wage.

Job evaluation and time study are basic elements in establishing the piece-rate system. At Lincoln after a particular job has been defined by a job description, the foreman, the time-study man and, frequently, the employees on the job evaluate the specific job in relation to the other jobs in the plant. Through this process an effort is made to determine the relative importance of the job as a basis for fixing its money value. It is the job and not the employee performing the job which is evaluated through this process. The present scheme of job evaluation was instituted in 1942 by the advisory board, an organization, described hereinafter, composed of management and employee representatives.

Job evaluation is used to determine the base rate to apply at a given work station. The base rate is used to set individual piecework prices when the time element for particular operations has been determined. When job evaluation was installed, in no case was a man's base rate revised downward.

The company plan of job evaluation involves a consideration of six major factors: Mentality, which refers to the amount of basic education which the job requires; the skill needed to perform properly the job, which is usually dependent on the length of training and experience a normal individual needs to achieve normal production; responsibility, measured by the possible amount of damage to machinery or scrap and wastage which might result from error; mental application, which refers to the amount of mental concentration and thinking required on the job; physical application, which refers to the amount of effort or endurance required on the job; and, finally, the working conditions on the job, such as heat, cold, noise, and other physical factors which affect the degree of discomfort on the job.

The relative importance of the job and the base rate of pay varies between 55 and 85 cents per hour, and the great majority of the jobs fall in the rate brackets between 67 and 77 cents. Establishing a base rate by means of a comparative evaluation is essential to a system that proposes to give an honest appraisal of performance. Other than the cost of living adjustments and changes resulting from the restudy of specific jobs, discussed hereinafter, there has been no change since 1931 in these basic pay rates.

Each worker has the right to challenge his base rate. In cases of challenge the method of establishing rates is gone over with the worker in a conference with the director of personnel, the foreman, and the head of time study. The company states that a satisfactory adjustment or a justification of the old rate has been reached in every case of a challenge. Men are encouraged to ask and understand about their base rates. Knowing how their job is rated in comparison with others gives men a broader understanding of the contribution of other men to the company.

The evaluation of all jobs is periodically reviewed to determine if conditions have changed that would warrant a change upward or downward. If the job is to be reevaluated downward, the old operator is given the choice of being moved to another job that takes the same higher rating or staying on his old job at the lower rate. In no case is a job evaluated downward with the operator unwilling to accept it. He will not be graded down until there is an opening for him to move to at his old rate.

With the worker understanding how his base rate is set, and believing that his job has been rated properly in comparison with others, the matter of setting piecework prices on unit jobs is a matter of measuring time only.

To compute the unit price on a job, it is necessary to determine the amount of work which should reasonably be performed on each job within a given time. As part of the task, the time-study department must develop the best methods for doing each job. They must determine the amount of time required to perform each unit of work in accordance with the best possible method. This permits a calculation of the number of work units which an employee should perform in an hour with reasonable ease. The piece rate is then computed by dividing the base rate of pay by the number of units which time study has fixed as the normal hourly rate of production. For example, on a 70-cent-hour job evaluation where time study has fixed 1.17 minutes as the normal amount of time required to produce a unit of work, the piece rate is computed in accordance with following formula: $1.17 \text{ minutes per unit} \times 0.70/60 = 0.0136$; 0.0136 cents then is the base piece-rate price for this particular operation.

To this base piece-rate price is added certain percentage allowances for safety, personal time, and fatigue factor. All piece rates carry allowances in varying percentages according to the nature of the work.

There is still one more element used in establishing rates. At the end of every 2-week pay period each worker's pay is figured either by multiplying the number of pieces he has made by his piece-work price, or multiplying his hourly rate by the number of hours he has in. To this total pay figure is added an upward adjustment commensurate with the increase in the cost of living. The company adjusts the pay roll upward whenever the cost-of-living index prepared by the Bureau of Labor Statistics in the United States Department of Labor varies by five points. This has always been upward ever since 1929. In November of 1947 the upward adjustment amount to 75 percent. In other words, a piece-work price of 50 cents is adjusted to be 87 cents, although for simplicity, the adjustment is made to the total pay at the end of the period.

The company lays great stress upon the accuracy and integrity of its time-study method. Lincoln states that the piece rates must be set in such a way as to induce the employee to use his skill and ingenuity for production at a maximum speed. For the successful application of the piece-rate method of payment as an incentive to greater production, the rate set must constitute a proper reward to the employee for the work performed. The piece rate must not be used as a device to speed up work and it must not be used to obtain the same or greater production for less pay.

Lincoln, since the institution of its piece-rate system, has made it an iron-clad rule never to cut a piece rate once it is set. The piece-work price set by the time-study department is guaranteed as long as that job is being performed, no matter how high the operator's earnings may be. Only where there is a change in the method, the design, or the tooling, will the company make changes in the piece rate set for the job. And the changes, the company states, must be substantial and not merely incidental changes made for the purpose of lowering a rate because the employee's earnings on that rate have increased beyond expectation.

Piece rates will not work as an incentive for production where the jobs have not been properly priced. If the price set is too low, this fact causes dissatisfaction among the operators because they cannot earn sufficient wages and it will destroy their confidence in the piece-rate system. If the price on a particular job is too high, the fact tends to make men on other jobs

dissatisfied who are paid relatively less for the work they do. Should management cut the price to meet this situation, again the employees' faith in the integrity of the piece-rate system is destroyed. Under such circumstances, the piece-rate system, instead of serving as an incentive for increased production, will, and frequently does, cause employees deliberately to limit their production to protect themselves against increasing output without receiving commensurately increased earnings. The institution of a piece-rate system does not of itself provide an incentive for increased production. If improperly applied, the piece rate may serve to limit production. To stimulate the employees' desire to increase production, competent time study, proper pricing, and devising of the best methods of operation are necessary. And to these prerequisites the company adds the price guaranty as an indispensable factor in establishing and maintaining the employees' confidence in the integrity of the piece-rate system and in stimulating the employees, as a matter of self-interest, to use their capabilities to the fullest in doing their work.

The importance and extent of the functions performed by Lincoln's time-study department necessitates the training of competent time-study men. Four men and a supervisor do all of the time-study work. Each of these five employees has had extensive experience in the company's production department.

The time-study department sets approximately 5,000 piece rates each year. Many rates are estimated on the basis of previous experience in similar operations. A large number however is the result of detailed time and motion study. The methods used in doing jobs are continuously restudied in order to find speedier and less costly methods of production. The company has a policy of restudying the methods of doing each job at least once every 5 years.

An employee may at any time challenge a rate set by the time-study department. When a rate is challenged the employee making the challenge is taken off the piece rate. He is paid at the corresponding time or day rate until a decision has been made as to the proper piece rate. The day rate is regularly 80 percent of the job's base rate. When question is raised with respect to a specific piece rate the foreman in charge checks the methods used in doing the job at the time when the price was set with the methods utilized by the employee on the job. If this check does not solve the difficulty, the time-study department makes a study of the job. If necessary, the time-study man will demonstrate the job to test the correctness of the rate.

Although the company places no limit on challenges, there are in fact surprisingly few disputes as to piece rates. Between 6 and 12 arise in the course of the year. The time-study supervisor states that in almost every instance the challenge results from faulty time study. The company attributes the infrequency of challenges to the skill of the time-study men and the reputation for fairness and thoroughness which they have gained among the production employees.

In 1947 the average hourly earnings, exclusive of bonus, of the company's employees was about \$1.50. This pay is equal to or slightly higher than the average wage paid for similar work by manufacturing companies in the Cleveland area. The company states that the differential between the \$1.50 average hourly wage paid during the year and the average base rate (adjusted for cost of living) varying from 96 cents to \$1.40 per hour reflects the skills and speeds which the employees have attained at their jobs over and above the skill and speed contemplated by the time-study department in fixing the piece rate.

B. THE BONUS

The company pays its employees on the 7th and 22nd day of each month, what they have earned in the preceding semimonthly period, ending on the 30th and 16th day of the month as the case may be. These semimonthly payments do not include any bonus payment. The pay checks are as large, however, as other workers are taking home in the Cleveland area and are generally adequate to sustain a reasonable standard of living. The addition of the annual year-end bonus to the wages paid during the year establishes the company's claim of paying the highest industrial wages in the world. The aggregate amount of the annual bonus is tremendous. For the past

several years it has equaled or surpassed the total wages paid during the year. The average bonus paid each employee has steadily increased from the \$350 paid in 1934, when the bonus was started, to the more than \$3,000 average payment made in 1947.

The bonus was instituted in 1934 as the result of a request for a 10-percent wage increase made by the employee representative at an Advisory Board meeting. When Lincoln told the employees that the company's profits did not warrant an increase in wages, one employee representative suggested the payment of a bonus at the end of the year if increased production and lower costs made this possible. With some hesitation, Lincoln agreed to the plan. He emphasized, however, that there would only be a bonus if improved efficiency justified its payment. That year production and profits increased beyond all expectation, and the employees' awareness toward the end of the year of the increase in production stimulated spirited speculation as to the amount of the bonus which would be paid. The general belief at the time held by the employees that the bonus might average from \$35 to \$50 per man was, in fact exceeded many times and the average bonus paid for that year amounted to \$350. Lincoln announced to the employees that the results for the year justified continuance of the bonus and that there was no limit to what the employees might earn if they put forth their best efforts. He stressed, as the company has since that time, that the bonus was not a gift or hand-out but was compensation which the employees earned through increased skill and efficiency.

The success of the first year of the bonus stimulated countless suggestions to increase production and lower costs. Production and profits continued to increase and in 1935 a bonus averaging \$480 per man was paid. As already indicated, the amount of the bonus has increased enormously until in recent years it has exceeded \$3,000 per employee. The company's bonus paying record between 1934 and 1947 is as follows:

Year	Base pay of those getting bonus	Amount of bonus	Estimated average annual compensation per employee	Percentage of bonus to base pay
1934...	\$ 588,400	\$ 131,800	\$ 2,000	22
1935...	754,000	226,500	2,500	30
1936...	862,800	436,400	3,100	51
1937...	1,055,300	672,800	3,700	64
1938...	808,900	211,900	2,300	26
1939...	997,200	495,700	3,100	50
1940...	1,295,000	980,000	3,800	76
1941...	1,860,700	2,071,300	4,900	111
1942...	2,748,000	2,961,700	5,400	108
1943...	2,901,700	3,180,100	5,500	110
1944...	2,637,906	2,968,903	5,107	113
1945...	2,603,233	3,057,282	5,500	117
1946...	2,312,855	2,891,627	4,829	125
1947...	3,217,610	3,767,830	6,048	117

The company states that the return to its employ in 1946 of a number of veterans accounts in substantial part for the relatively smaller average compensation paid that year. The returned veteran was not employed the full year and consequently this lowered the average compensation paid that year.

The amount of bonus money available at the end of the year for distribution to the employees depends upon the profitability of the enterprise for that year. After operating expenses

are paid and the board of directors has established how much is to be put aside for seed money, for research, and for reserves, and after reasonable dividends for the stockholders have been computed, the remainder of the company's gross profits for the year is distributed to the employees. Every employee on the company's pay roll prior to October 30 of the particular year and still on the pay roll at the date of payment, except the president of the company and the chairman of the board of directors, share in the bonus. The individual's share of the bonus depends on an appraisal of the relative worth of his contribution to the company's efficiency of operation and profit for that year.

The appraisal of a person's contribution to the company is not an arbitrary judgment but is based on evidence submitted by several different people. Each person is given a merit rating several times a year. Furthermore, those on piecework give a reasonably accurate picture of their concrete output by the size of what their take-home pay has been for the year.

It should be recalled here that all jobs have been evaluated comparatively. The job and not the man doing the job is rated. The merit rating is intended to reveal how each individual is performing on his particular job. Thus, with job evaluation, merit rating, and the size of a man's take-home pay, an accurate estimate of a person's contribution to the company can be made.

Four principal factors are considered in assessing the merit rating of each employee. An individual employee may receive a point rating from one to a maximum of seven for each of the factors. These factors are cooperation, job knowledge, and performance, quality of work done, and quantity of work done.

The head of the time-study department and his assistants rate each worker on his cooperation. Since Lincoln philosophy insists that there is always a way of improving methods, change is the rule rather than the exception in the factory. The employees' willingness to accept change, his initiative in suggesting improved methods of production on his job, and his effort to reduce production costs through improvements in method constitute what is called cooperation. In a plant with approximately 1,000 production employees, 5,000 new piece rates in a year, and 15,000 current piece rates, the time-study department clearly has a substantial basis for evaluating the individual's adaptability and attitude to changes in manufacturing methods.

The employee's foreman or department head evaluates his job knowledge and performance. Comprehended in this factor is the employee's experience, his ability and judgment with respect to the work to which he is assigned, the degree of supervision which he required and the extent to which he uses this knowledge for the benefit of the company's cooperative effort. The production control department rates the employee with respect to the quantity of work which he has done and his contribution in maintaining production. Included within this evaluation are the employee's absentee record and proneness to tardiness. Finally, the inspection department rates each employee with respect to the quality of his output. A high degree of quality is normally expected, however, as the company does not pay for defective work. Each workman guarantees his work. Therefore, this quality rating largely is a measure of how much responsibility a man takes in making this guaranty effective so that little or no inspection is required.

The merit rating, it should be understood, is a comparative rating. Each man is measured on all factors as to how he compares with his fellow workers in his department doing comparable work. A good trucker will receive a 6 for a high degree of cooperation just as will the highly skilled die setter. The truckers will be compared to other truckers only, however. The ratings for one department if made properly, will, therefore, average out to around 3.5.

Through the comparison of the plant average for each factor with the averages for the factor in the individual departments, adjustment is made for any variation in the relative severity or looseness of rating between the different departments. The totaling of the four grades which each employee receives results in an individual score varying from 4 to 28 points. The point score of each employee is then converted into a percentage figure. For this purpose a score of 16 points is deemed 100 percent. Accordingly, a score of 4 points will be valued at 25 percent;

one of 8 points at 50 percent; and one of 28 points at 175 percent. If the total amount available for bonus payment equals the aggregate amount paid the employees semimonthly during the past year, an employee with a 100 percent rating will receive a bonus equal to the amount which he had earned during the year. An employee with a 175 percent rating will receive a bonus equal to 1-3/4 times what he was paid. If the total amount available for bonus payment at the end of the year were only 30 percent of the aggregate wages paid during the year, the bonus received by each individual would be proportionately smaller in amount.

The vice president in charge of manufacturing and the director of personnel directly supervise the merit ratings and check the four grades of each employee for accuracy and fairness. In view of a fixed company policy requiring top management to be keenly aware of the individual employee and his capabilities and potentialities, this procedure assumes significance as a check upon possible supervisory favoritism or abuse. Mr. Lincoln does not participate directly in determining the precise share of the bonus received by the individual production employees. He, nevertheless, closely follows the merit evaluation procedure to assure that the ratings are fair and accurate and sees that the bonus checks are made out according to evaluation. He personally determines the size of the bonus to be paid to the company executives and to his immediate subordinates. The size of these payments is, in most instances, substantially larger than the base annual salaries received by these officials.

The year-end bonus, the company insistently states, is not a gift or a present. It is not a gesture made by the company intended to buy the worker's goodwill. Every cent of it Lincoln claims is earned and this fact is constantly brought to the attention of those who receive it. Lincoln says that the size of the bonus is eloquent evidence of what a man will do working under an incentive system where he is paid for what he produces rather than for the amount of time he puts in. The bonus is payment for the measurable results of the cooperative effort put into the operation of the incentive system. The size of the bonus, it is stressed, reveals the success which the company has achieved in stimulating the "normally unused abilities of the workers."

The company states that its annual payment of the bonus and its piece-rate system have engendered in the employees an attitude and state of mind which tends to induce employee responsiveness to the incentive which it offers. The company emphasizes to the employees that the size of the bonus and of the individual employee's share in the bonus depends upon profits and the effectiveness of the individual employee's work in augmenting profits through increased production the saving of materials and tools, the reduction of overhead and of unit costs in every possible way. The employees tend to consider every saving and improvement as of direct concern to themselves. Accordingly they have become keenly cost conscious and anxious to improve methods of production.

The trucker in a department, aware of the close relation between company profits and his take-home pay, anticipates the materials and parts which the operators will need to maintain continuous production. He knows that time lost for want of the necessary parts or materials adds to cost of production and he does not wait to be told what to bring. The individual employee clearly understands that the careless use of tools resulting in damage to tools and materials increases costs and correspondingly lessens profits. He realizes that not only will defective work directly affect his earnings because the company does not pay for substandard work, but that such work will increase the cost of production and thereby adversely affect bonus payments. Illustrative of the responsibility felt by the employee is a conversation heard by the investigator in which two employees mused why a trucker had failed to notice a defect in a run of parts which was conspicuous and easily discernible through visible observation.

While great emphasis is put on improving the output of piece-rate workers the importance of the effect of this cost consciousness on day-rate workers is not overlooked. Efficiency is marked in every service or overhead department. The small size of the time study department has already been cited. The personnel department is composed of two people. The toolroom over the past few

years has been able to increase die life by well over 60 percent.

In this connection, the company also attributes its low accident rate and its low absentee rate to the employees' orientation to production, profits and costs. Lincoln has a low experience merit rating under the Ohio State compulsory workmen's compensation law. Its safety program, however, is not extensive and it does not have a separate safety department. The director of personnel is responsible for maintaining safety standards. The company publishes in its Employees' Handbook, a number of basic safety regulations and maxims prohibiting, for example, running in the plant. Additionally, each department has its special safety rules. Company officials hold that an alert employee spurred by a desire to do his work efficiently will take necessary safety precautions and that the extensive and costly safety programs maintained by many industrial establishments is not needed in its plant.

Similarly, the company's absentee rate compares favorably with that of other companies. Thus, during 1947, absenteeism for all causes (other than vacations) amounted to less than 6 days per employee.

Today, as few as 25 inspectors take care of the company's entire inspection needs in plant 1, both with respect to materials received and to its manufactured product. The deepening sense of responsibility by the employees toward their work has made possible the substantial contraction of inspection as a separate function and department. In some departments, the company has succeeded in entirely eliminating inspection. It has made the employees responsible for the job of policing their work, adding, however, a higher job evaluation and correspondingly higher piece rate to compensate for the additional work and responsibility. In other departments where accuracy and quality are of more critical importance, it has established a spot-check system by members of the inspection department and partially eliminated inspection. The company's confidence in the reliability and competence of its employees has enabled it, without impairing, it is claimed, the quality of its products, more and more to place full responsibility for quality upon the production employee, where it initially belongs.

Moreover, the importance of the merit rating with respect to the employee's annual income, and his relative standing in his department based upon the merit rating, has developed a competitive spirit among the employees which reacts as a further incentive to effective job performance. The merit rating has had the effect of raising the level of performance of entire departments. As men learn of their deficiencies through the rating, they strive to improve their relative standing. It is perfectly possible for a man who was at the top of the list to maintain his performance on the same level yet discover his rating has gone down because the rest of the department has come up.

C. PROMOTION POLICY

Promotion on merit is an integral and important part of the company's incentive system. The Employees' Handbook tells the employees that each individual's efforts to progress are carefully watched and his competitive spirit encouraged. It states that "no obstacle, such as seniority, bars his way," and that the more the individual employee "uses his initiative and the more he contributes to the company's success, the greater his reward in advancement and responsibility." Promptness in rewarding ability through advancement, the company states, characterizes its promotion policy. The employee must have every opportunity to advance as rapidly as his expanding abilities permit. It is the prompt recognition and advancement commensurate with added skills and abilities which encourage continuing efforts by the employee to develop his abilities and thereby to benefit the company. Promotion to better jobs in the organization are always made from within the rank. The company maintains that its progressive expansion coupled with vacancies that occur naturally have provided full opportunity for advancement to all employees in accord with their abilities.

Each year, through an arrangement with principals of Cleveland high schools, particularly technical high schools, the director of personnel interviews a number of high-school graduates. Choosing from those who have distinguished themselves in high school as class officers, athletes, or in some other capacity, the director of personnel will hire as many new people as are needed. The company does not have many vacancies, and during 1947 it only hired about 35 high-school graduates. The company also hires each year a small number of graduates from technical colleges. These, together with a few promising individuals picked from the company's employees, constitute a group known as management trainees, discussed hereinafter, from whom the company expects to develop its future executive and technical staff.

The company's scheme of job evaluation is an important factor in the promotion policy. Although there are no fixed ladders of promotion, the newly hired high-school graduates are started, as a general rule, on the simpler and less responsible jobs, usually in the factory, which have the lowest base rates. As an employee gains skill and experience and demonstrates his increasing value to the company, he will progress to jobs having a higher evaluation and base-pay rate. The company encourages its employees to continue their education, particularly in mathematics, engineering, and other fields which may increase their usefulness to the company.

Jobs in the nonproduction departments are open to production employees. Many of the employees in sales, time study, inspection, engineering, and other departments have been promoted from production jobs to their present work. And, in turn, the company's executive talent has, in substantial measure, been drawn from employees with such a background in the company's work.

The company's aim is to draw its employees from school and to keep them until their working life is over. Because of this policy and the high wages paid, relatively few employees leave the company. During 1947 approximately 70 employees voluntarily left the employment of the company and about 55 were discharged for inefficiency or other cause. Additionally, several older men were retired during the year. The company has no fixed rule of discharging automatically men whose merit rating is below a given minimum. It discharges those men, however, whose merit rating, attitude, and lack of responsiveness to the incentive offered by the company demonstrate their inability to adapt themselves to Lincoln work practices and procedures.

To take care of its older men, the company has a retirement-annuity plan which includes all employees. This pays the retired employee, as long as he lives, a monthly income, dependent upon his earnings and length of service. The employee's annuity rights accrue when he reaches the age of 60. The company, however, reserves the right to retire employees at an earlier age, and company officials intimate that the annuity plan is used to retire men who no longer, because of age or other reasons, have the full power of adaptation to change which the company deems of primary importance. At present the company has about 40 annuitants who draw an average monthly pension of \$100.

Top management, foremen, and other supervisory personnel consciously assume responsibility for keeping in close contact with the quality and potentiality of all employees and constantly scrutinize the field for talent. The merit rating and job evaluation both serve as a review of the entire organization. Department heads, foremen, the director of personnel, and vice president in charge of manufacturing must make a thorough examination of each individual every time the rating is done. The director of personnel and vice president in charge of manufacturing both spend most of their day in the plant and know most of the men personally.

The advisory board, discussed below, has also served as a means of appraising qualifications of employees. The board meetings have uncovered potential executive talent among the employee representatives. Company officials assert that "a number of persons in responsible positions with the company had originally come to the attention of the management through the good judgment, intelligence, and knowledge of the company's operations which they demonstrated while members of the advisory board."

A further vital factor in the company's promotion policy is the management trainee program to develop executive supervisory and technical talent. The company places upon a special status promising employees in production and other departments as well as small groups of recently graduated college men. At the end of 1947, there were 15 trainees, of whom 5 or 6 were high-school graduates and the others had college degrees. A committee composed of the vice president in charge of manufacturing, the director of personnel and the heads of inspection, time study, and production control is in immediate charge of the management trainees. The committee meets every 6 weeks or so. It shifts the trainees to different jobs with a view to developing them and giving them an extensive experience with respect to the company and its operations. All trainees, at some point, receive production experience. They are given experience in time study, production control, and in inspection. One job is reserved for the management trainees in each of these departments. The committee may assign special problems to the individual trainee with a view to testing their development and challenging their abilities. The experience of and jobs to which each individual is assigned depend upon his aptitudes and the assignments available for the trainees at the particular time. The management trainees are under continuous scrutiny of the committee which carefully follows their development and attempts to place them ultimately in the kind of work to which their talents and aptitudes are most closely related.

The vice president in charge of manufacturing also holds a weekly meeting with all the foremen, at which budget questions, production problems, job evaluation, waste, and all phases of the company's operations are discussed. These meetings serve to inform the foremen concerning company activities and developments. Frequently, a committee of foremen presents to the full assemblage of foremen a report on a topic selected by the committee and approved by the vice president in charge of manufacturing. The reports are in written form and generally result in tangible benefits. One such committee of foremen undertook as its report the drafting of the Employees' Handbook. The foremen meetings give top management a further opportunity to become "keenly aware" of the ability and potentialities of its employees and thereby they implement the company's promotion policy.

D. THE SUGGESTION SYSTEM

"The suggestion system," the Employees' Handbook states, "is another means by which the Lincoln worker can contribute to his own progress.***" What distinguishes the company's suggestion system from that of other companies are the substantial monetary awards paid by the company to its employees for valuable ideas. The company pays employees 50 percent of the estimated net savings for 1 year for any idea offering "new methods or new products, new ways to eliminate waste, easier manufacturing methods, better sales ideas, or any other kind of progress." All employees are eligible except department heads and employees in the engineering and time-study departments. The engineers and time-study men are excluded because it is their regular job to devise improve methods of production and to reduce operation costs.

The suggestion system is administered by the director of personnel who acts as a neutral party in seeing that employees' ideas are clearly and adequately presented for consideration and that the company's action on specific suggestions is understood by the employee submitting it. A committee composed of the director of personnel, the vice-president in charge of manufacturing, chief engineer, chief of methods, and chief inspector reviews all suggestions submitted. They decide the usability of the idea and if usable compute the amount of award. When an idea is deemed not usable, a letter or personal interview explains to the employee the reasons for the decision.

The number of ideas submitted is fairly large. One week saw the submission of 33 suggestions; another, of 20; and in a third week, the committee considered 19 suggestions. The awards vary in size. Examples of the amounts paid are \$27.50 for a cost-saving substitution of an automatic saw for a friction saw to cut hinge barrels; \$5 for a tooling change in connection with

a pressing and welding fixture; \$2 for the shortening of a flex lead on a certain type of coil; and \$13 for the elimination of a certain type of tag used on the assembly floor. Each year there are a number of awards which pay in excess of \$200. The largest award in 1947 was \$2,235 for an idea received from a shipping room employee. An employee on the assembly line received \$685 for his idea. During 1947 the company paid a total of approximately \$10,000 in awards to its employees for their suggestions. The company also pays a small award for suggestions which do not result in savings but which, nevertheless, have some utility and merit. As an example, \$2 was paid for an idea which although it did not result in any measurable saving, made it possible to perform a certain job under cleaner conditions.

The suggestion system affords employees the opportunity to bring themselves to the attention of management. In this connection, the director of personnel cites an example which, although unique, nevertheless is illustrative of the utility of the suggestion system in attracting the attention of management to capable employees. A production employee who had displayed not more than average ability and skill on his job asked to be transferred to the methods department. This department, as previously indicated, is primarily concerned with devising improved methods of production. The director of personnel told the employee that his job performance did not justify the transfer. He added, however, that if the employee demonstrated any increased skill or ability, consideration would be given to his request. Thereafter the employee began to submit numerous suggestions. A substantial proportion of these had value. The ingenuity and mechanical skill displayed in these suggestions and the large number submitted by the employee convinced the company that he would be a distinct asset to the methods department where the skill and ingenuity which this employee clearly possessed is at a premium.

III. THE ADVISORY BOARD

The advisory board is an important adjunct to the company's incentive system. Mr. Lincoln established the board in 1914 when he first assumed active direction of the company. The board was formed to give the company "the benefit of every worker's intelligence in the management and advancement of the company." In Mr. Lincoln's words, "If I could make those men as anxious to make the business succeed as I was, I knew it would succeed." The board was formed, then, as an organization of the company's employees to enlist the cooperation of all the employees for the successful operation of the company. The statement in the Employees' Handbook that "few other developments have been as significant in the history and growth of the company as the advisory board," attests to the company's satisfaction with the board and its contributions.

Mr. Lincoln, the vice president in charge of manufacturing, the plant 2 superintendent, the director of personnel, 2 foremen, and 24 employee representatives constitute the board membership. Each of the 20 departments has 1 employee representative. In addition, there are 2 representatives for the women employees and 2 for the office employees. The representatives are elected for 1-year terms, and departments have elections in monthly rotation. There are no nominations. The retiring board member distributes the ballots to the employees in the department, who write in the name of their choice. The director of personnel counts the ballots in the presence of a few employees. To be eligible for election as a representative, the employee must have served 2 full years with the company. No member may serve on the board for more than two consecutive terms. Because of this rule and the relative stability of the company's work force, a substantial number of the employees have served as representatives on the board. The board has no officers. All its members have an equal standing, and each has one vote. Each representative receives \$100 per annum to compensate him for the time spent in attending board meetings and in communicating information and the decisions of the board to the other employees in their

departments. The board meets regularly every other Monday during the year. Mr. Lincoln attends all the meetings which are held in his office.

The constitution of the board describes the duties of the representatives as follows:

To bring up and discuss the grievances and complaints of those whom they represent, to make suggestions regarding the improving of working conditions, and to pass upon plans for the welfare and safety of the employees in this plant.

The board has, in large measure, functioned as a labor management production committee of the kind set up in so many plants during World War II. An examination of minutes of the board meetings discloses its primary concern with the business of the company and its problems.

Subjects discussed are matters of mutual concern to all. At the beginning of each meeting all members of the board are given the opportunity to bring up for discussion any matter or question to which an answer or explanation may be desired. This may be a request for action on some particular problem existing in the office or shop or may be a question on company policy. It may be a request from the vice president in charge of manufacturing for cooperation during some plant change. Each matter is open for discussion; and if official action is required, it is put to a vote of the entire board.

Following the handling of specific requests, the meeting is thrown open to a general discussion of some pertinent problem or phase of the company's operation. General business conditions, production problems, legal or financial problems, the suggestion system, length of work-week, annuity retirements, all at times have been before the board.

The company attributes to the board such significant accomplishments as the installation in 1915 of the price-rate system; the introduction of life insurance for all employees in 1915; the adoption of a policy of paid vacations in 1920 when paid vacations were not common for manufacturing employees; the introduction of the bonus system in 1931; and the establishment of an annuity retirement plan in 1936.

In addition to broad company policy, the advisory board is concerned with "grievances and complaints of those whom they represent." The need for repair of windows in the stenographic department, which could not be opened, is a typical grievance matter appearing in board minutes. Minutes of the board meetings, however, disclose but few matters generally considered as grievances. Most grievances are settled at the foreman's level, and the board, for the most part, devotes its time to more general matters affecting the employees and to production and other operational problems.

The board is an invaluable instrument for two-way communication between management and employees. Mr. Lincoln stresses the importance of employees learning about company developments from the company rather than from the newspapers or other outside sources. The board, then, has an important educational value in appraising the employees concerning the operations of the company, the economics of the industry, and basic Lincoln philosophy as applied to business operations. Its discussions impart to the employees an understanding of such matters as the importance of production costs, the relationships between profits and wages, and the constant need for improvements in production methods. The company states that it always follows a policy of full and complete disclosure to the employee representatives of all important developments affecting the welfare of the company. In addition to discussions based upon specific agenda, Mr. Lincoln takes the opportunity at the board meetings to give the employees general talks. In the past, these talks have dealt with such subjects as the further development of the incentive system, the necessity for lowering costs and prices as a means of reaching wider markets, and cooperation as a basic need for business success.

Conversely, the board conveys to management the employees' attitudes and is a rich source of information about the problems and preferences of employees. The employee represen-

tatives are given the explicit right to bring up any question at the meetings without fear of retaliation from management or the supervisory staff. The company states that the board's long history and the demonstrated immunity of the employee representatives from retaliation has given them full confidence that they may speak freely at the meetings. The frankness of President Lincoln at the meetings has also served as a stimulus for uninhibited discussion by the employee representatives.

The board is an advisory body. The president of the company may veto any board decision which is contrary to company policy. During the 33 or more years, however, in which the board has operated, President Lincoln has never exercised his veto power. Mr. Lincoln states that all board members have the same fundamental philosophy. The principal tenets of this philosophy as expressed by Mr. Lincoln are: (1) The company's job is to make more and more of a better and better product at a lower and lower price; (2) a man should be rewarded in proportion to his contribution to the success of the company; (3) the consumer should receive the major portion of the savings affected through better product design, improved methods of manufacturing, and more efficient operation. The acceptance by all board members of these basic assumptions substantially contributes to the harmonious functioning of the board and makes unnecessary the exercise of the veto. In this connection, Mr. Lincoln insists that basic to the successful functioning of the board is the renunciation by management of authority in the formulation of board decisions. Management must persuade the employee representatives through full and complete disclosures of the facts and explanations of the why and wherefore of actions and policies under discussion which it favors. Board decisions and support of company policy must not and cannot be the result of management command.

Lincoln, then maintains that the advisory board has made positive and substantial contributions to the company and its operations. It has, according to the company, served to inspire effective cooperation between management and all employees. It has enabled management to keep itself informed of the problems of its employees, and, conversely, it has informed the employees about the problems of the business. The board has uncovered much executive and technical talent among the rank-and-file employees, and it has been an invaluable instrument for demonstrating to the employees the company's integrity and sincerity in its relationship with the employees.

IV. OTHER ASPECTS OF THE RELATIONSHIP BETWEEN THE COMPANY AND ITS EMPLOYEES

Other working conditions and aspects of the relationship between the company and its employees accord, for the most part, with the principles and procedures described hereinbefore.

The company views the plant as "a place to work." It provides adequate light, heat, water, washrooms, and a suitable cafeteria. But the plant is not equipped with "frills" such as smoking rooms, snack bars, or an address system. And the cafeteria, washrooms, and similar facilities which the company furnishes are unpretentious. Management has stressed to the employee; particularly through the advisory board, that all such nonessentials must be paid for as business expenses and therefore reduce the company's net profit. The reduction in net profit correspondingly reduces the size of the bonus, hence nonessential conveniences are recognized by employees as affecting their pay check. Accordingly, the employees themselves share the company's attitude of Spartan simplicity and consider expenditures for such facilities in the light of their effect upon profits. Economy in use of factory and office space and the simplicity of the workshop reflect the same attitude toward unnecessary expenditures. Lincoln's basic opposition to spending money for "frills," as they are called, stems from hostility to "handouts." The company views such expenditures as gifts and considers them paternalistic in character. The benefit derived by the individual employee from lavish facilities is not measured in accordance with his

contribution to the success of the enterprise. All employees share alike in such benefits. Expenditures, therefore, for such matters contradict the basic tenet of Lincoln industrial philosophy that each employee should be rewarded in accordance with his contribution.

All of the company's employees work on an 8-hour shift and a 40-hour week. Neither the executives nor any other classification of employees have special privileges in this respect. Punctuality and a full 8-hour workday is expected from all alike. The employees of plant 1, where the welding machines and accessories, other than the electrodes, are manufactured, work in two shifts of 8 hours each. The manufacture of electrodes is a continuous process. For this reason, there are three daily shifts of 8 hours each in plant 2, where this product is manufactured. During World War II, Lincoln employees, like those of other companies, put in substantial overtime at their jobs. Lincoln, however, believes that the average man cannot put forth his best efforts for more than 8 hours a day. Accordingly, since the end of the war, overtime has become a negligible factor.

In 1918 the company adopted the policy of having paid vacations for all of its employees. All employees take their vacations at the same time, and every year the plant is completely closed down for this purpose for a 2-week period during the second and third weeks of August. Efficiency dictates the adoption of this policy in preference to a plan of staggered vacations. By completely closing the plant for a vacation period, the company avoids the inefficiencies attendant to the absence of employees and key personnel while the plant is in operation. Employees who have been with the company for 5 years or more are given 2 weeks' vacation pay; employees having from 1 year to 5 years of continuous service with the company by July 1 preceding the vacation period are paid 1 week's vacation pay. A week's vacation pay is considered one-fifty-second of the regular earnings in the 12 months prior to the vacation period. With respect to vacations, as in all other matters, executives have no special privileges. The vacation policy is applied alike to all employees whatever their rank or position.

In 1915 the company undertook to give each employee, within 60 days after his hiring, a life-insurance policy with a face value equivalent to a year's wages, not exceeding \$2,000, payable to whomever the employee selects. This feature of the company's employment policy is in some degree an exception to its basic policy that earnings and employment benefits should correspond, as accurately as possible, with the employee's effectiveness as a producer. All employees receive the same benefit insofar as insurance is concerned, whatever their contribution to the success of the enterprise may be.

Lincoln also permits its employees to purchase stock in the company. Every employee who has been employed continuously by the company for 1 year or more may buy stock. The company's board of directors fixes the price of shares, and the employee buying stock pays the current price set by the directors. Lincoln stock is not registered on any stock exchange or for sale to the public. If a person leaves the employ of the company, the stock reverts to the company at the current price. Approximately 67 percent of the employees have bought Lincoln stock; and all of the stock, with a few minor exceptions, is held by employees. About one-third of the shares are held by workers. As previously indicated, the remaining two-thirds of the stock is held about equally by President Lincoln and his brother, J. C. Lincoln. In its Employees' Handbook, the company states that under its stock-purchase plan, the employee "works not only for his wages, but also to benefit himself as owner."

The personnel office consists of the director of personnel and one secretary. Under the immediate supervision of the personnel director are the functions of hiring, discharging, job evaluation, merit rating, the maintenance of employment records, job placements and transfers, as well as the cafeteria. The director of personnel also regularly attends the meetings of the management trainee committee, of the advisory board, and of the foremen.

In the employees' handbook the company states that "employees are discharged only if they build up a poor record." The employees have no employment status as the result of something

like a collective agreement. Lincoln's insistence, however, upon fair dealing and the importance which the company attributes to the retention of the employees' confidence serves to prevent arbitrary discharge. Discharge must be for good cause and for cause which appears good to other employees. Mr. Lincoln takes personal interest in discharges and will always listen to the appeal of a dismissed employee. Company officials intimate that Mr. Lincoln's intervention in the discharge procedure has made supervisors and executives reluctant to discharge except for the best of reasons. In conclusion, the company's understanding of the need for maintaining employee confidence in its fairness gives the employees a form of job security and militates against arbitrary and "off the cuff" decisions.

V. EVALUATION

The company attributes its success in large measure to the incentive system. There are, however, other factors which must be considered in evaluating the Lincoln plan. Among them are the expanding character of the welding industry during the lifetime of the company, the company's selective recruiting of its employees from the "cream of the crop," and Mr. Lincoln's personality as a dominant force in the company.

A great deal of the company's success in enlisting the cooperation of its employees for production is attributable to the personality and integrity of President Lincoln. In the operation of the incentive plan, as in all phases of plant activity, he exercises great authority and discretion. Because of his unquestioned integrity, coupled with the ability of the company to pay its employees high earnings over a period of years, his decisions have been accepted without serious question. Mr. Lincoln's qualities unquestionably account for a great deal of the success the company has had in enlisting the cooperation of its employees.

The qualities of integrity in all levels of management serve as a guaranty of the security which in an organized plan seniority commonly supplies. The small turn-over of personnel, however, and the expanding character of the business has made negligible the problem of job securing through seniority.

Trade-unions and others have sometimes charged that the company's success is due to speed-up. In 2 days spent in the plant the investigators observed that the employees worked steadily at their jobs. There was no evidence of loafing or the marking of time. The company states that higher production is the result of increased efficiency rather than increased speed and stresses that its employees work a 40-hour week without overtime. Data, however, pertinent to the question, such as the length of the working life of Lincoln employees in comparison to those of other companies in the same industry, are not available.

The Lincoln employer-employee relationship, however, embraces several employment practices which are generally deemed of great value in increasing output. The company has succeeded beyond question in stimulating the interest of the employees in their work. The ingenuity displayed by the individual employee on the job, has affirmative sense of responsibility, and the number of suggestions submitted all attest to this fact. Through the incentives which it offers, the company has made the employees feel a personal and individual sense of responsibility for the success of the enterprise. The company's policy of apprising its employees through the advisory board, and otherwise, of company plans and problems similarly affects output. The company's active concern is keeping its employees informed about the business formally emphasizes to them their common interest in the success of the enterprise and convinces the individual employee that his job is something more than an 8-hour day a week confinement within factory walls. In turn, the advisory board serves as a vehicle to give the company the benefit of advice from its employees. Through its policy of receptiveness to suggestions and ideas from the employees, the company draws upon the aggregate work knowledge of all persons working in the organization.

Also important is the opportunity which the company gives its employees through the advisory board, as well as through its system of challenging piece rates, to question management decisions. Any practice which enables employees to challenge management decisions tends to make management more careful and less arbitrary in reaching its conclusions. This, in turn, by inspiring employee confidence in the fairness of management has its beneficial effect upon production. The company has made a further signal contribution insofar as employees' security is concerned. It has succeeded in combining with the maintenance of steady employment a practice of making frequent and drastic technological changes. Finally, Mr. Lincoln's faith in the limitless abilities of the average employee as reflected through the company's employee policies has given the individual employees a sense of status and personal prestige. The opportunities for advancement, the encouragement given employees further to educate themselves, and the high monetary awards paid all contribute to a sense of participation and status on the part of the individual employee.

The accomplishment of the Lincoln Electric Company in rising from a small concern to its present position in an industry where competition is with industrial giants is spectacular. It has been the result of incentive management as defined by the preceding pages. The Lincoln Electric Company had no artificial advantage over other small concerns starting business at the same time it did.

The employees' response to the Lincoln incentive plan has been a conscious effort on the part of the employees, production men, engineers, maintenance men, office workers, to exercise all of their ingenuity in making more of a better product at a lower price. Because the system rewarded their successful efforts, it has continued to receive the response of the employees.

NOTE: Complete copy of the report can be secured from the Government Printing Office, Washington, D. C. Contained in the balance of this review is only the portion covering the visit to The Lincoln Electric Company and its operations.

In addition to The Lincoln Electric Company, the following companies were visited and the report of the Committee contains the report of visits at all six of these companies:

- The Botany Mills
- The B. F. Goodrich Company
- The George A. Hormel Company
- The International Harvester Company
- The Murray Corp. of America
- The R. J. Reynolds Tobacco Company