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INTELLIGENT
SELFISHNESS
and
MANUFACTURING

by
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THE LINCOLN ELECTRIC COMPANY
Cleveland, Ohio

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FOREWORD

"For thou hast made him a little lower than the angels and hast crowned him with glory and honor. Thou madest him to have dominion over the works of thy hands; thou hast put all things under his feet."

Great as American industry is, it leaves largely untapped its greatest resource, the productive power, initiative and intelligence latent in every person. The prophet states it—"Thou madest him to have dominion over the works of thy hand." That conception is a far cry from the normal evaluation of man by his contemporaries. Truly man is so made but our industrial system does not now fully develop these abilities.

There have been many who have guessed what the result would be if a large, intelligently led, enthusiastic organization should use the powers latent in all the individuals to a common end. What would happen when all are equally anxious to produce a product at the lowest possible cost? What would happen when all want to make the wages of all workers, from sweeper to manager, a maximum? What would happen when all want to make the company profitable since it is largely owned by the workers in it?

This cannot be done by human beings except by the exploitation of the driving force fundamental in all of us, namely, selfishness. Selfishness has a bad reputation but that is because of a narrow conception as to what it really is. No program involving the human race developed as it has been through the ages on the concept of the "survival of the fittest" can be founded on any other principle than selfishness. The only necessary corollary to this principle to make it attractive, helpful and satisfying to all concerned is to make this selfishness intelligent. The greatest heights we attain as humans—patriotism, parenthood and friendship, are all based on this same human trait—selfishness. The results which can occur when this incentive is tapped can be illustrated by the following example:

The Lincoln Electric Company of Cleveland was started by one man with a capital of \$150.00 of borrowed money in 1896 and has had no outside capital since. The Company has tried to follow the principle of appealing to the intelligent selfishness of the worker, the manager and the investor. It has gone along its unique path for a long enough time so that its results are proven. There is sufficient history back of the facts so that no error can be made in appraising the outcome.

The results are:

- (a) Lincoln workers, at least in the factory, are the highest paid employees in industry anywhere in the world.
- (b) Lincoln workers produce more per hour than any organization making a comparable product in the world.
- (c) Lincoln selling prices are less than those of any company making a comparable product. Obviously, companies making specifically competing products must sell at the same price if they are to remain competitors.

1st Printing September, 1942
2nd Printing December, 1942
3rd Printing May, 1943
4th Printing September, 1943

(d) Lincoln stockholders have never missed a dividend since the first payment was made in 1918.

(e) The Lincoln Electric Company does approximately half of the total arc welding business of the United States and more than a quarter of all the arc welding business of the world.

(f) Practically speaking there is no labor turnover.

(g) There is no labor union.

Following is the story of this company's methods used to produce these results:

1914—An Advisory Board was formed. The basic job of this board is the developing of the normally unused abilities inherent in the organization. In order to bring the intelligence of all people in the organization to bear on the subject this board was chosen from the entire personnel of the plant. This was done by electing one man from each department by the vote of all the people in such department. The foremen in the plant also elected a representative foreman from their group. These men with the plant superintendent and president (who acts as chairman) constitute the Advisory Board. This board has authority over all matters affecting the man and shop operations. They are the board of directors for the plant.

This is what that board did from 1914 when formed, to date:

1914—Decreased the hours of work from 55 (then standard) to 50, with a 10% increase in wage rates. The result of this action was to increase efficiency so that the cost per piece was definitely reduced.

1914—Installed a piecework plan which has been satisfactory to all concerned (both workers and management), without change of this plan to date. The rates are guaranteed by the company after being set by an expert time-study man who has been trained in that department. The worker, however, has a right to eliminate the price by challenge. When this is done the time-study man runs the job himself for a day. Whatever his earnings are, whether higher or lower, is the new price. This price is subject to the same rules as the first one, however. The company can change the price only by changing the method, design or tooling, thus making it a new job.

1915—Insured the lives of all workers for the equivalent of a year's wages at no cost to the worker.

1918—Tried bonus payment which was not successful at that time. This was the "silk shirt era." The amount of this bonus was not a large percentage of the year's wages although it was half of the dividend declared that year. Also, the mutual understanding between management and men which longer experience developed was not then present.

1923—Adopted the policy of vacation of all workers with pay, shutting down the entire factory for this purpose the second and third weeks of August each year. This was a radical departure at that time although it has become more common in recent years.

1925—Sold stock of the company to the employees who desired it, providing the workers had been continuously employed for one year. More than half of the normal workers are stockholders. They largely own their own plant.

1929—Established a Suggestion System. Suggestions which were accepted, made by any man outside of engineers, time-study men and others who from the nature of their jobs were responsible for improvement in methods or design, were rewarded in cash. The amount of this award was half of the net estimated saving for the first year of use after acceptance. This plan not only resulted in many good ideas, but it also kept those executives primarily responsible for such progress on their toes.

1934—Paid the second bonus which started the present bonus plan. This new plan was more workable than that of 1918 and has thoroughly succeeded. This second bonus was paid after the slump of 1929 to 1934 and was perhaps much more attractive because of that. In any case, it had a profound effect and resulted in greatly increased production, interest and cooperation. These bonuses are based on the success of the company and are distributed on the basis of value of the man to the company for that year. The decision as to division of bonus is made by the president who alone, of all the personnel, gets no part of the money.

1936—Installed an annuity plan so that all faithful workers may be retired with pay when their working life is over. This results in not only rewarding the faithful employee but eliminates him from the possibility of accident which his failing powers may introduce.

1941—Installed a trust fund plan for the workers.

1914 to 1942—Handled the countless problems which arise in any operation as involved as a large manufacturing plant.

The results of these acts in total are manifold. If they did not increase production at least as much as their cost they would have been impossible. It must be seen in action to believe how great the result can be. No one otherwise can understand the advance that can be made when a man works in his own company, for his own benefit, and with his full enthusiasm.

The following graphs will show what the results of these policies have been:

CHART I

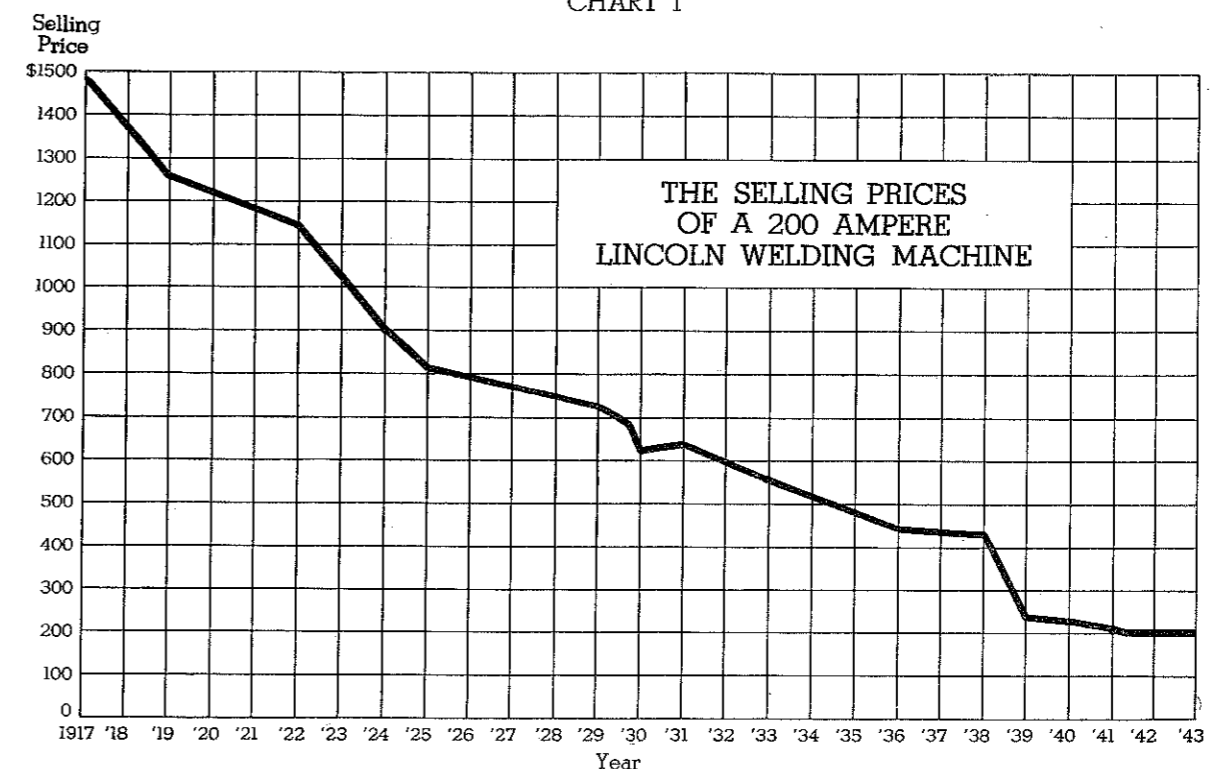
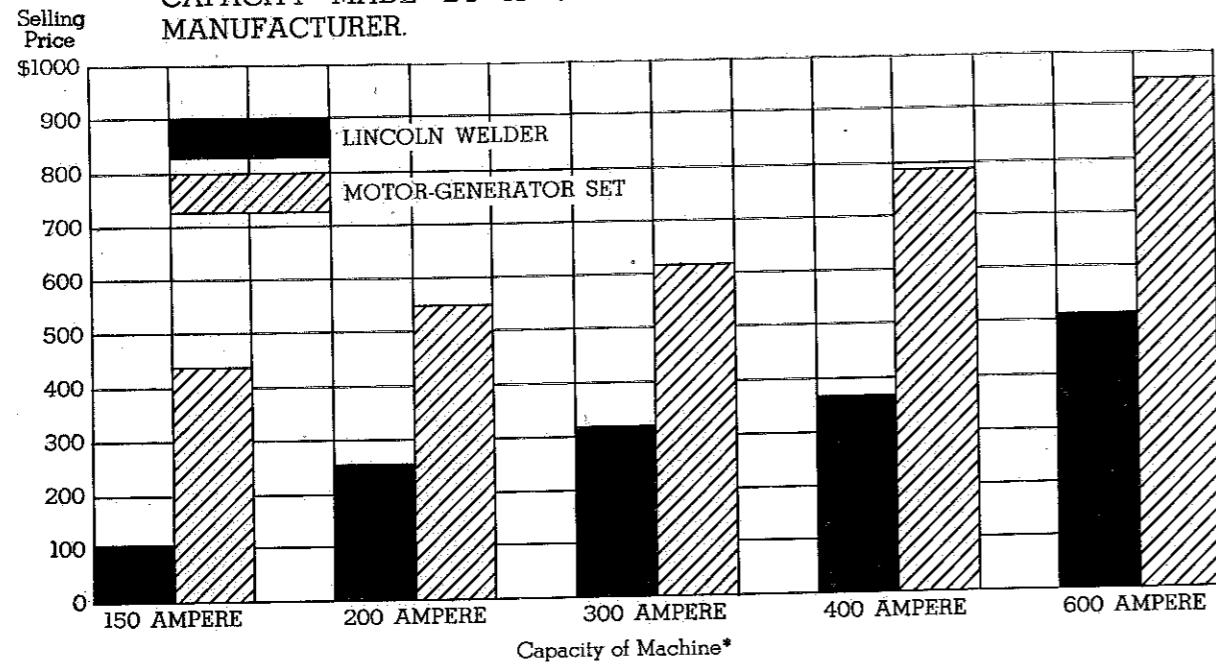


CHART II.

SELLING PRICES OF LINCOLN WELDERS COMPARED WITH THE SELLING PRICES OF STANDARD MOTOR-GENERATOR SETS OF EQUAL CAPACITY MADE BY A SUCCESSFUL ELECTRICAL MACHINERY MANUFACTURER.



*Ratings are welder ampere ratings. Motor generator sets have equivalent current output at similar voltage.
Welders have special controls which are not ordinarily used on motor generator sets. To obtain accurate comparisons of similar equipment the proportional cost of the controls has been removed from the selling price of the welder.
Source: A Certified Public Accountant in the City of Cleveland.

CHART III

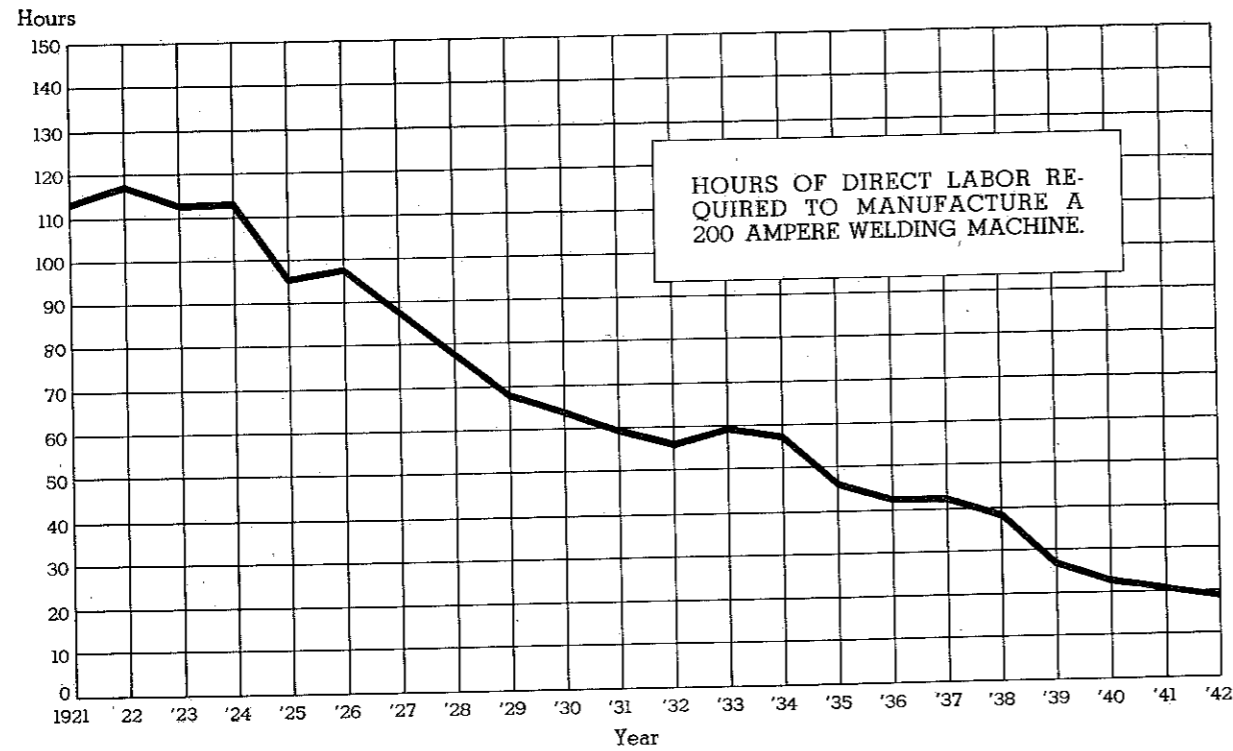
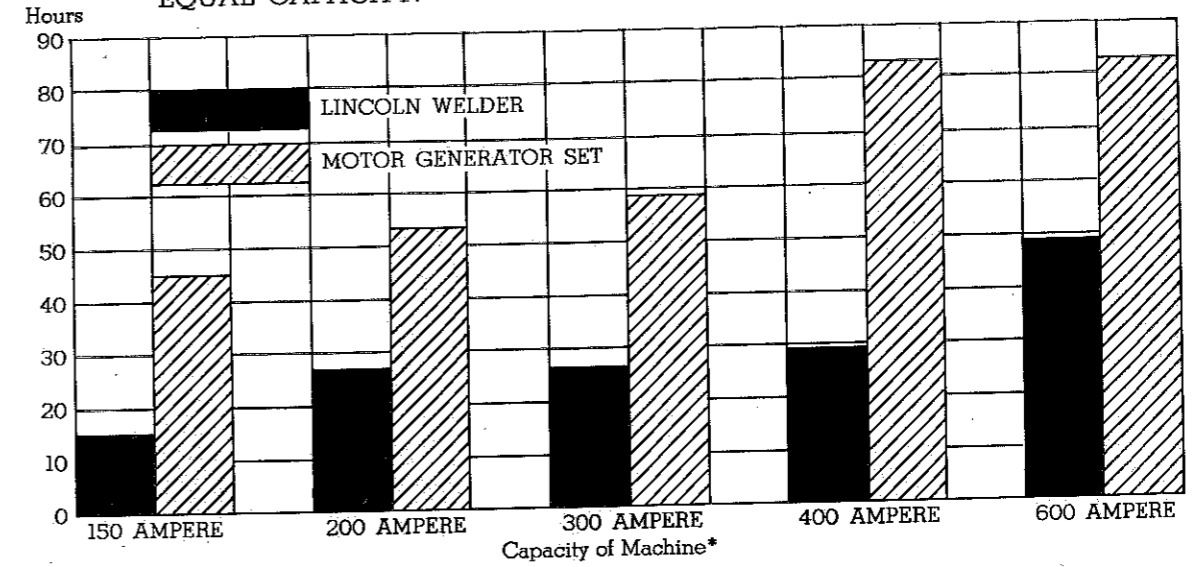


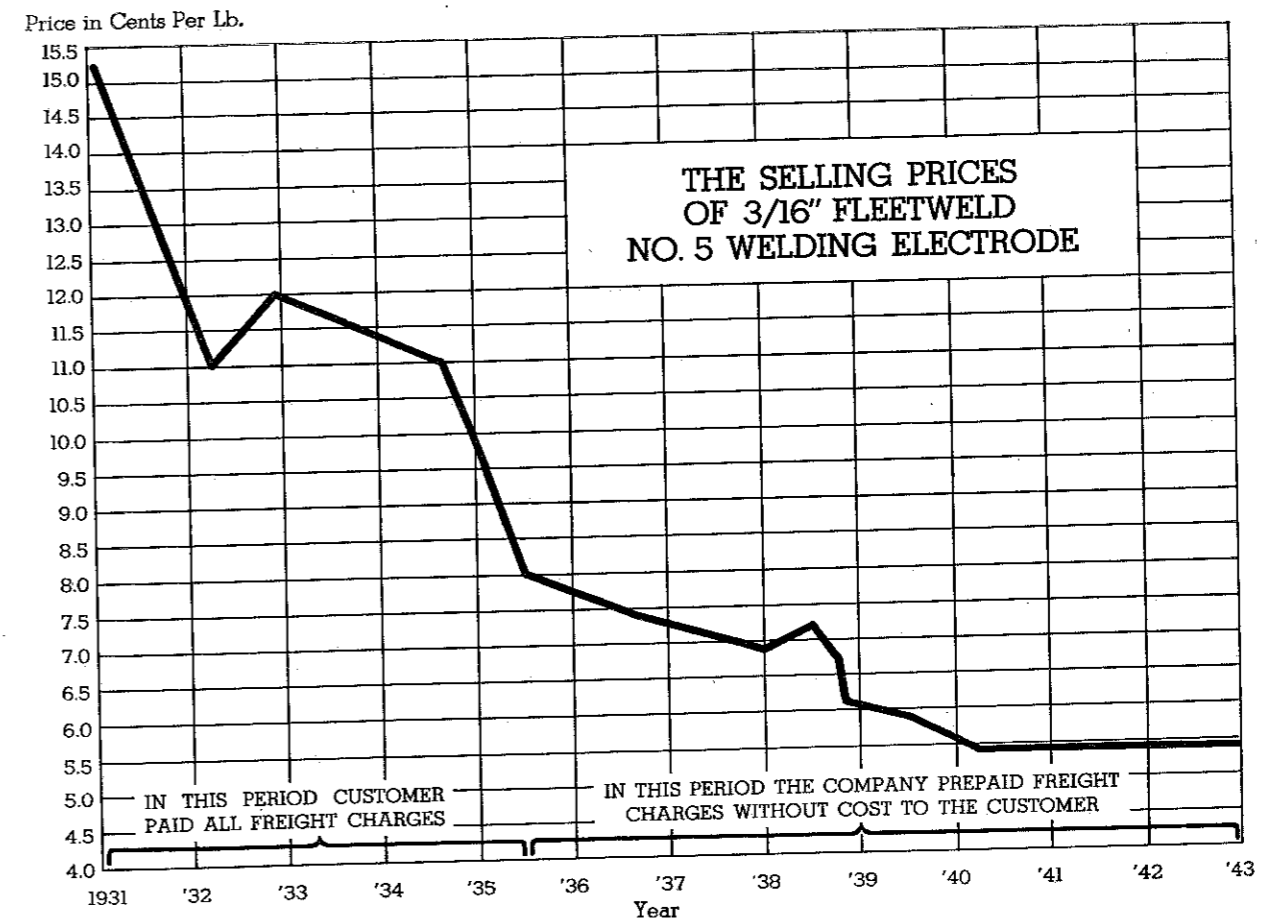
CHART IV

HOURS OF DIRECT LABOR ON VARIOUS TYPES OF WELDING MACHINES COMPARED WITH THE HOURS OF A SUCCESSFUL MANUFACTURER OF A STANDARD MOTOR GENERATOR SET OF EQUAL CAPACITY.



*Ratings are welder ampere ratings. Motor generator sets have equivalent current output at similar voltage.
Welders have special controls which are not ordinarily used on motor generator sets. To obtain accurate comparisons of similar equipment the hours of labor in manufacturing these controls are not included.
Source: A Certified Public Accountant in the City of Cleveland.

CHART V



IN THIS PERIOD CUSTOMER PAID ALL FREIGHT CHARGES (1931-1935)
IN THIS PERIOD THE COMPANY PREPAID FREIGHT CHARGES WITHOUT COST TO THE CUSTOMER (1936-1943)

CHART VI

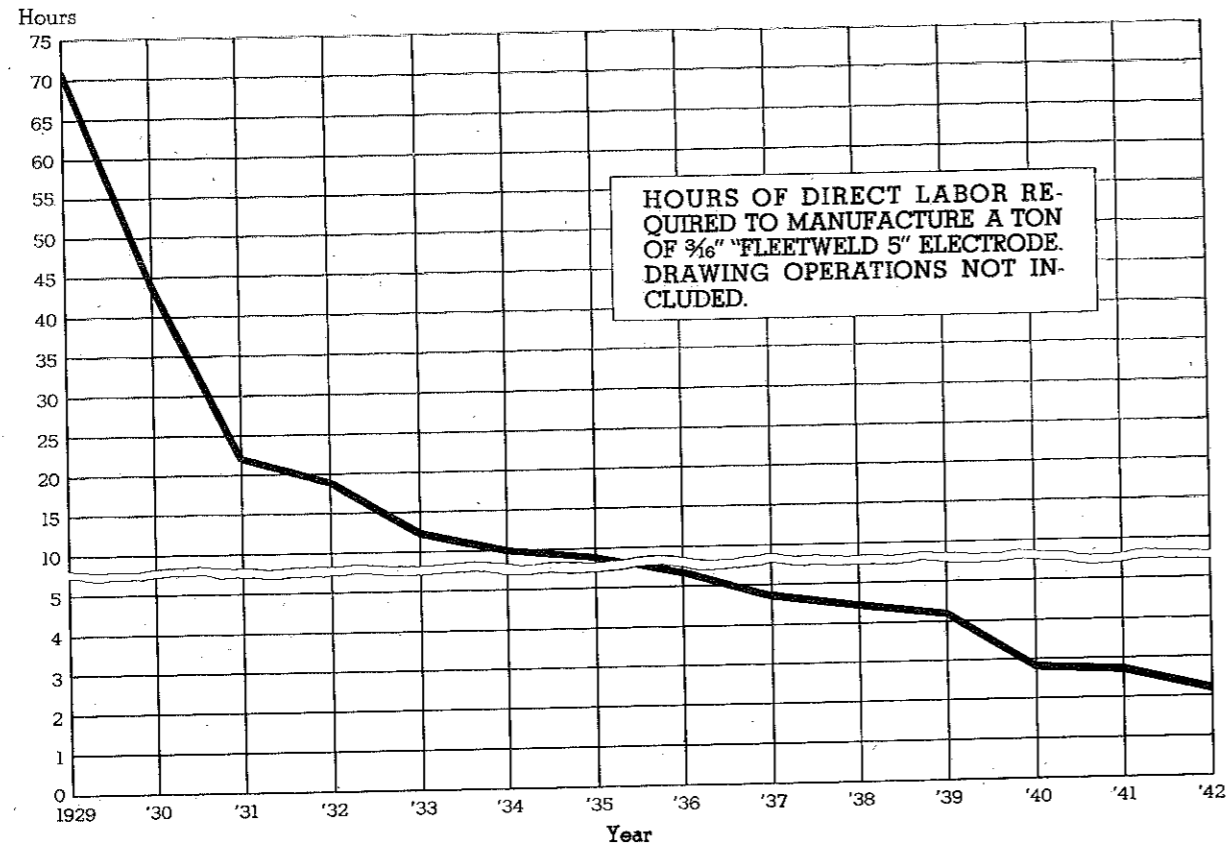


CHART VII

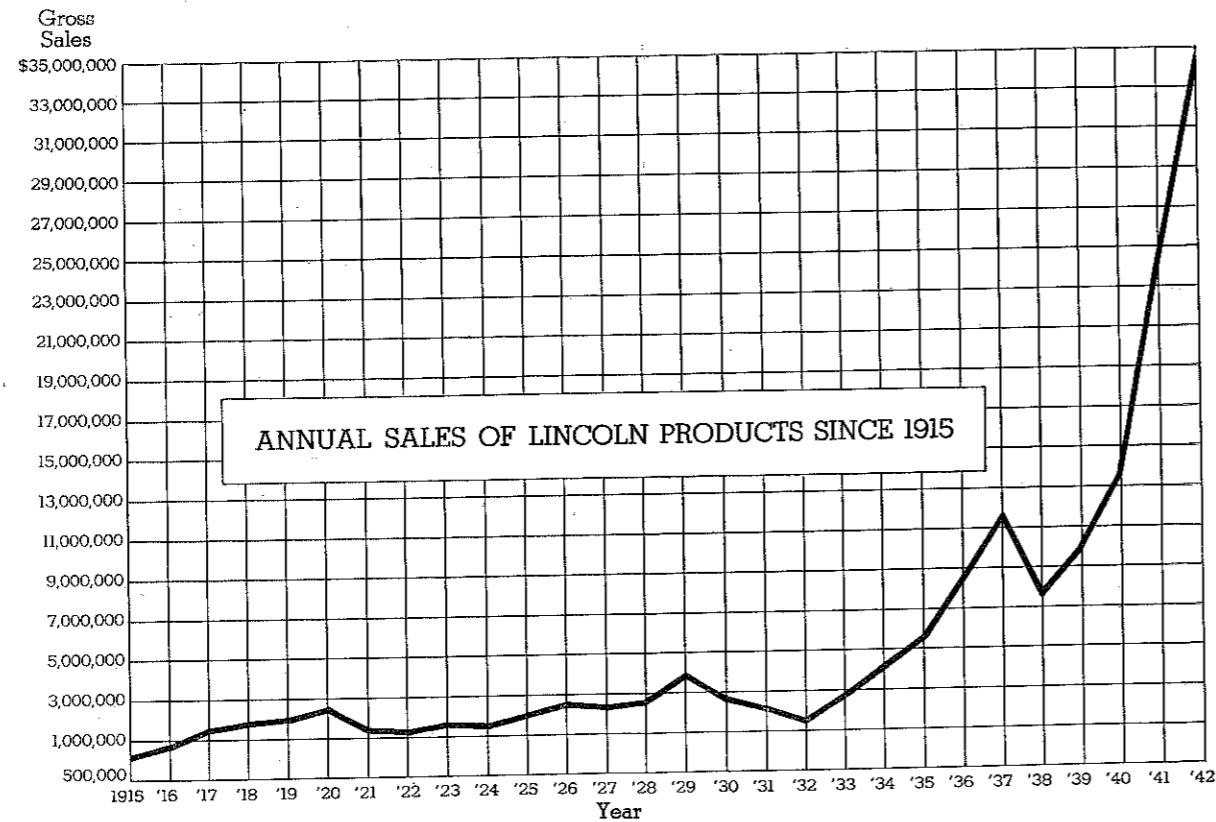


CHART VIII

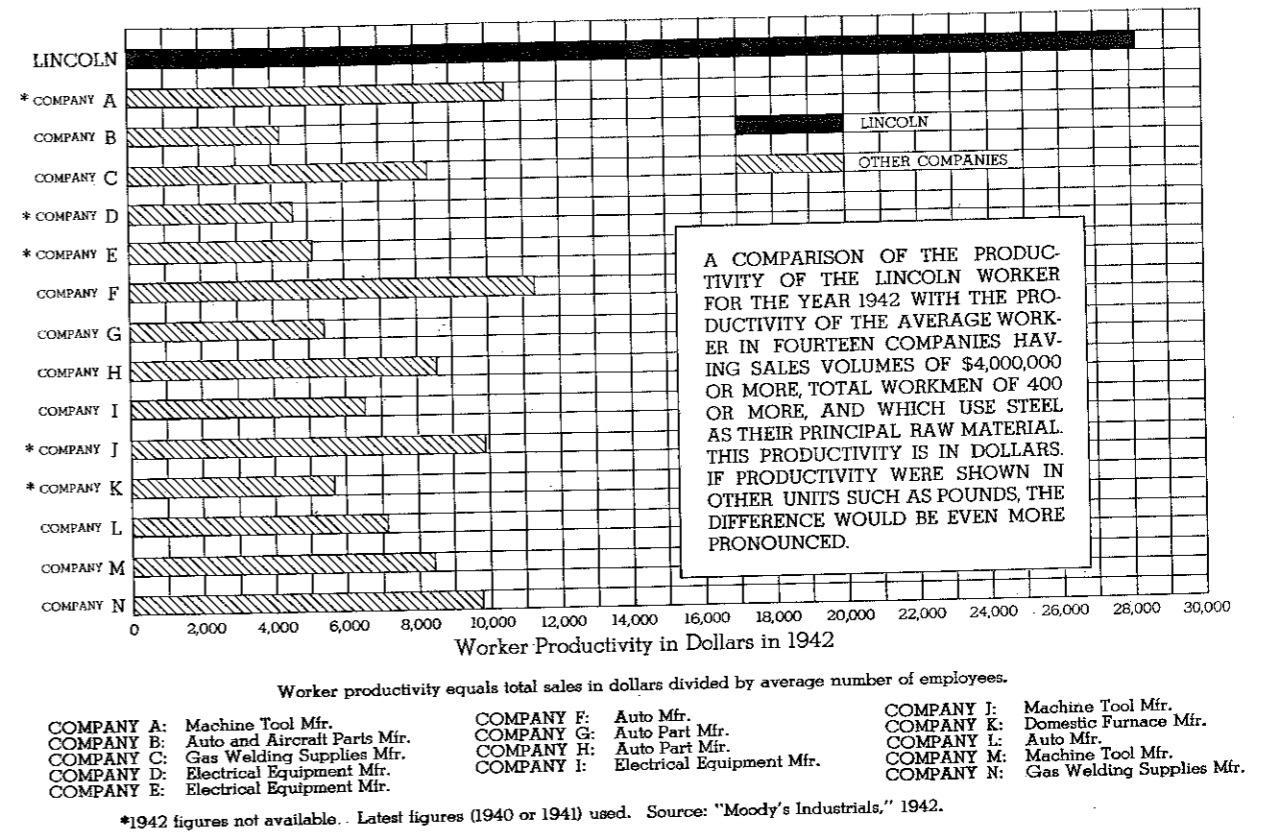


CHART IX

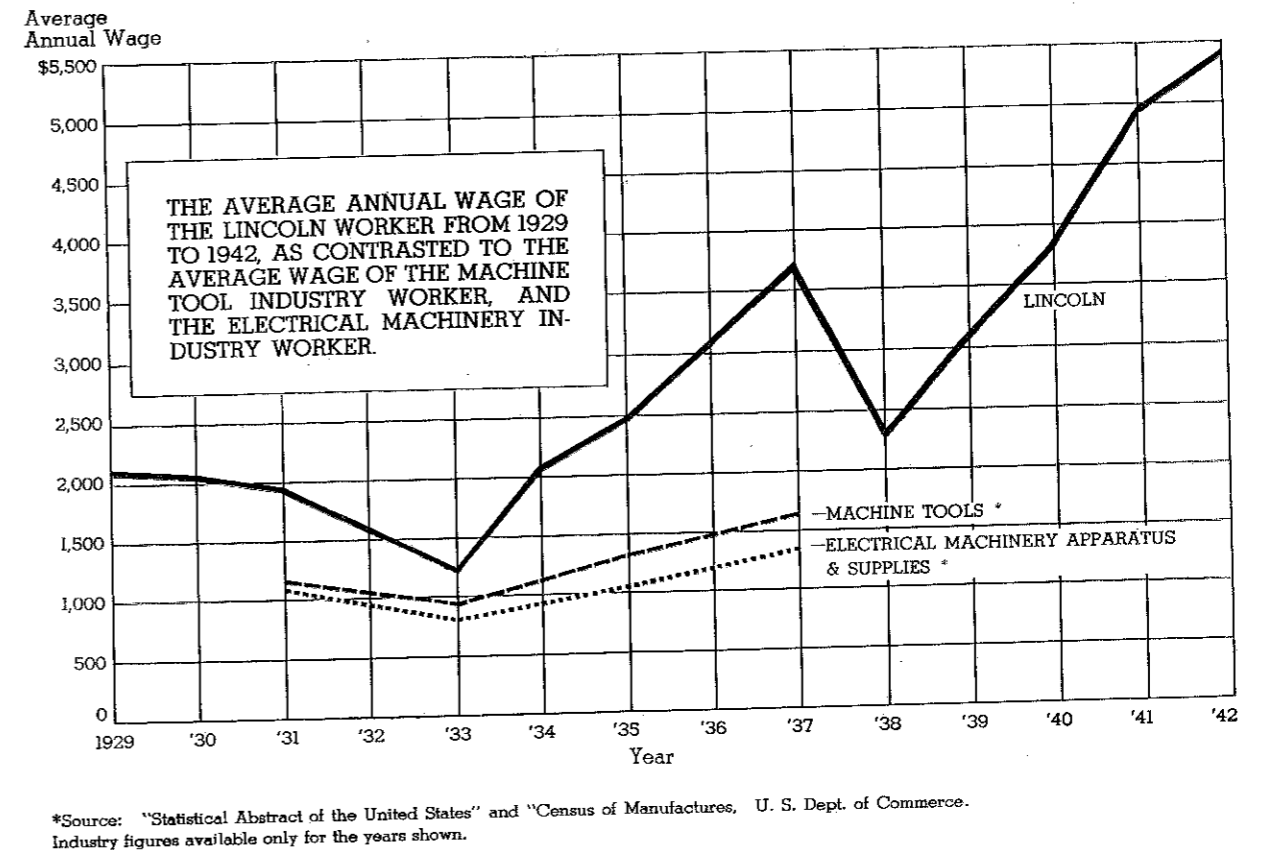
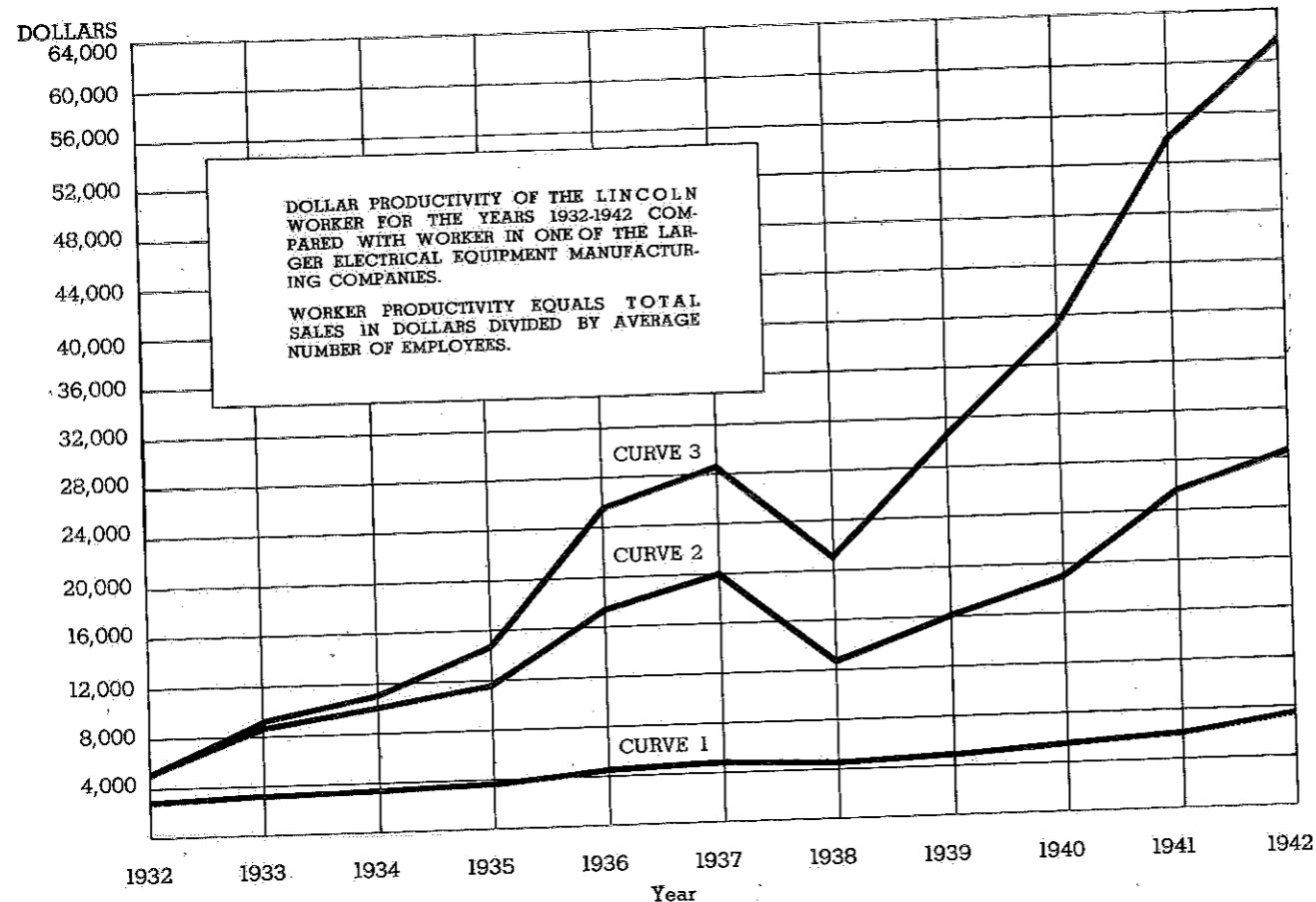
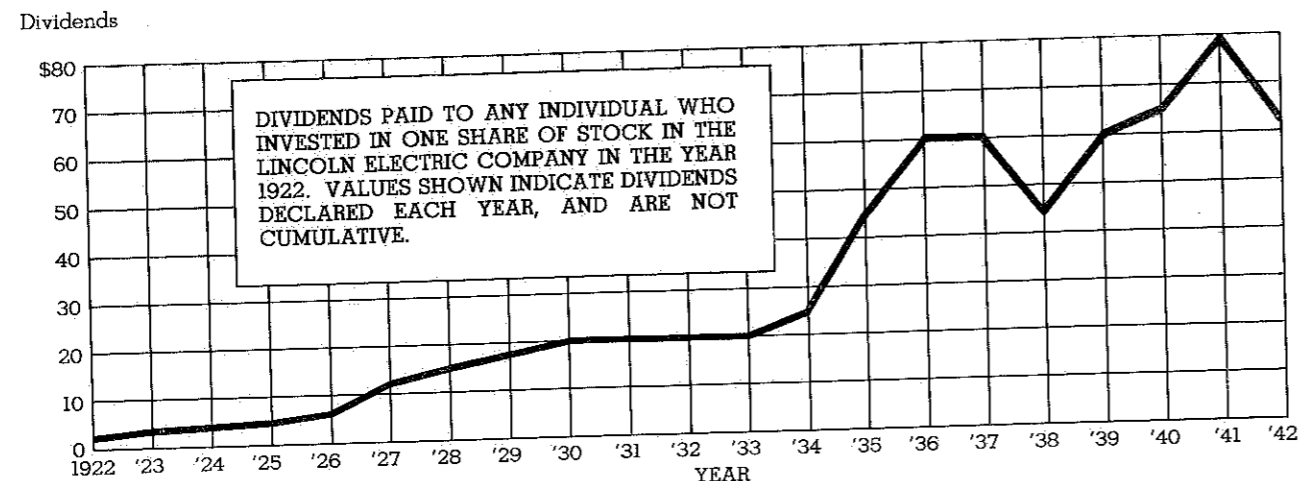


CHART X



CURVE 1—Dollar productivity of worker in large electrical equipment manufacturing company where selling prices remained approximately constant.
 CURVE 2—Dollar productivity of Lincoln worker where, through worker efficiency, costs and selling prices were steadily reduced.
 CURVE 3—Dollar productivity of Lincoln worker with prices stationary at 1932 level, as was the case in CURVE 1.
 These curves show the remarkable effect of proper use of incentives.
 It should be noted that due to increased productivity of Lincoln workers the cost and selling prices of Lincoln products were steadily reduced in the face of generally rising prices. (See previous Charts I and II on previous pages.) These lowered selling prices widened the market and were a potent factor in the development of the welding industry.
 In 1938 and 1939 the number of workers remained fairly constant, but worked less hours. This, plus decreased selling prices, accounts for decrease in yearly productivity per worker for those years.

CHART XI



Suggestions

Perhaps the following comments may be valuable in helping others to put in the same or a better method of arousing the intelligent selfishness of their own workers:

- (1) Management must be able to lead the organization in the direction of more efficient methods as fast as the method can be absorbed by the organization. This will be found to be the chief difficulty in most plants.
- (2) Management and men are "fellow workers." Neither is superior but each is responsible for their part in the result. Of course, management's direction is unquestioned and enthusiastically followed. Consequently, management must be made up of the best managerial ability in the organization. When a man with new managerial ability arises he is recognized. When one who is a manager slips he is eliminated. Accomplishing the elimination may give some trouble both in understanding and in doing in some organizations. Management must be able to stand on its record and be accepted by *all the workers* as being fair, able and intelligent.
- (3) A factory worker cannot express his ideas as well as a trained man of the world but he has them just the same. Management must be able to see, select, grade and apply these ideas accurately and fairly.
- (4) The goal of the organization must be this—to make a better and better product to be sold at a lower and lower price. Profit cannot be the *goal*. Profit must be a *by-product*. That is a state of mind and a philosophy. Actually an organization doing this job as it can be done will make large profits which must be properly divided between user, worker and stockholder. That takes ability and character.

(5) It must be kept in mind at all times that this is a natural working out of our inherent selfishness. The only difference between The Lincoln Electric Company and the usual industry is that in this case the selfishness is more nearly intelligent. A sneak thief is selfish but not intelligent. The civil war called "collective bargaining" is selfish but not intelligent. The exploiting of workmen is selfish but not intelligent. The practice of raising prices in a seller's market is selfish but not intelligent. The charging of "All the traffic will bear" is selfish but not intelligent. War is selfish but not intelligent. The only difference between these acts and the program explained herein is that these acts are stupidly selfish and the activities outlined herein are intelligently selfish. When we as a nation adopt this principle of intelligent selfishness into our philosophy of life and industry we will have stopped unemployment of the employable, stopped poverty for the able-bodied, and, what is more, we will have gone far toward the elimination of misery no matter how caused.