

charge these excess costs to the proper expense account and distribute them together with other overhead charges.

Piece Work as a method of wage payment should be based on a guaranteed minimum. This is in accord with the best modern practice and is based on simple justice. The worker should be safe-guarded during the probationary period of learning and against idle time later on, as for example, when a machine breaks down; or, where, though busy, he fails, for cause beyond his control, to make standard. It is only by guarantee against loss occasioned by idle time that it becomes possible to get a true idea of what a workman can do under incentive payment.

E. *The M. R. A. Wage Payment Plan would establish definite breaking-in periods for new operators.*

This is predicated on the grounds that it is fair to both management and men, in that it allows the operator sufficient time to become accustomed to the work and protects the management from paying day rates to workers who should be operating under an incentive method of payment.

F. *The M. R. A. Wage Payment Plan would provide instruction cards prescribing the exact conditions under which all operators should work; i.e., feeds, speeds, number of pieces per hour, set-up time, etc. In addition to these instruction cards, there would also be rate cards showing base rates and the amount of production an operator must turn out in order to obtain these rates.*

Explanation of How "Rate and Instruction Cards" Are Used

On the work used in this illustration the operators are supposed to make \$.48 per hour. A chart (like the following) on this basis shows the price for all productions necessary to make \$.48 per hour.

CHART	
Pieces per hour	Price per 100
1	\$48.00
2	24.00
6	8.00
10	4.80
100	.48
140	.34

Looking at this chart, in the price column opposite 140 (140 being the average pieces per hour taken from the Instruction Card) we find \$.34 which is the price per 100.

As the operator is going to set up his own job in this example, he is allowed \$.48 for set-up time. The operator should receive both the rate card and the instruction card before he starts the job. The instruction card should never be changed unless the process is changed; but any price chart may be used.

RATE CARD.						
Workman						March 24, 1925
Pieces Ordered	Name of Work	Pieces Made	Time Number	Lot	Price	Hrs.
450	Meat Grinder Cutter—No. 3	450	S-3352	10	34	4-1
.48 for set up						
Total Amt. 1.53 + .48		Aver. per hour 145				
Oper. No. _____			Sheet No. _____			
Approved by X _____			Given by Y _____			

INSTRUCTION CARD									
6875									
Name	Meat Grinder Cutter No. 3								S-3352
Material	M. S.								
Operation	No. 3 Mill Back angle of share opening								
Spn. R.P.M.	Fd. Inch Per Min.	Cooling Lubricant	Cut Time Per Pc.	Sec. to Mk. 1 Pc.	Av. Pos. Pr. Hr.	Machine Used	Machines to Run		
2500	Hand	Oil	7	21	140	Vertical	1		
Remarks: Set-up time, 1 hour									
Position test									
John H. Smith									
Date 3-24-26					Checked by E. Wood				

G. *The M. R. A. Wage Payment Plan would advocate paying a flat reward to any operator who presented an improved method for performing a task, after which it would recommend that a new rate be established for performing the task in accordance with the new method.*

Often, part of the reward which employees receive for new inventions lies in the fact that the inventors become marked for promotion to better positions

Whenever a new method is developed, it should be reported to the constituted authority whose duty it is to determine or estimate the amount of savings which will result. The management would then decide upon the proper reward to be given. This provision is made to promote initiative on the part of workers in the matter of developing improvements.

H. *The M. R. A. Wage Payment Plan would provide and maintain accurate records of production and scrap. Whenever it is possible to do so, it would pay a bonus for minimum scrap.*

Wastage of materials can often be traced to a gradual breaking down in morale which shows itself in the innate human tendency to treat lightly objects which have come to seem commonplace. A bonus which stimulates the interest of the worker in material economies has been found to help greatly in combating the growth of demoralizing habits.

I. *The M. R. A. Wage Payment Plan would provide that a weekly ANALYSIS SHEET be made up from the reports turned in. This would permit executives to obtain direct control of labor costs.*

It has not been thought necessary to suggest any definite type of analysis sheet for the reason that whatever form is used would be in large measure determined by the exigencies of the particular business. There are several labor analysis sheets in common use. Perhaps the one advocated by Bedaux is as complete as any of them and covers the item of scrap referred to in section "H" above.

J. *Under this plan of Wage Payment, the tasks of all indirect workers are studied and the proper ratio of direct to indirect labor established for each department.*

A careful study is made to determine the number of indirect workers (supervisors, movemen, helpers, sweepers, etc.) actually required by each division of the shop and the various duties performed by each of the indirect workers in any given department is listed and assigned a proper time allowance. Next, the total number of standard hours which would be credited to the direct workers in the department, if each operator turned out normal production is computed. The number of standard hours allowed as above for indirect workers divided by the number of standard hours which would be credited to the direct workers for normal production gives a percentage figure indicating whether the established ratio of direct to indirect labor is being maintained.

K. *If so desired, a bonus may be paid to indirect workers based on the ratio of the direct to the indirect labor hours in any given department, established in the manner described in the preceding paragraph. The exact method of computing this bonus, and the time interval between any two payments thereof should be determined by the management of any company in such a way as to satisfy the needs and requirements of the particular business.*

It has often been found advantageous to pay a bonus to indirect workers. Several variations of the method suggested above have been advocated by different wage payment plans and have worked out very successfully. Our reason for not making a definite recommendation for the payment of bonus to indirect workers is based on our belief that the plan should be modified in each instance to meet the exigencies and requirements of a particular business. The satisfaction resulting from paying bonus to indirect workers depends upon the extent to which this measure is made an integral part of the wage payment plan as a whole.

II. Group Piecework

A. *The M. R. A. Wage Payment Plan would include Group Piecework where such a plan would lend itself to the work in hand.*

This entails the establishment of a piece rate for the output of the group. Under the scheme, each worker in the team is paid an hourly wage commensurate with the type of work which he is doing. The difference between the group piece rate and the total hourly earnings of all the members of the team represents the bonus earned. Dividing the hourly earning of each individual worker by the hourly earnings of the group would give the percentage of the total bonus which is to be added to each worker's earnings computed on an hourly basis.

III. Day Work

A. *Where the cost of establishing standards exceeds the savings which may be reasonably expected to result from the substitution of unit rates of production for day wages, a day wage is recommended.*

Systematic records of past performance offer a ready criterion on which to base decision as to whether it will, or will not pay to use an incentive method of payment.

With good records, much can be accomplished toward increasing production, even though an hourly