

Incentive Schemes in Railways

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PAYMENTS BY RESULTS

Need :

Improve productivity by better utilisation of

- ❖ manpower,
- ❖ M&P
- ❖ and covered area.

INTRODUCTION

- Piece work bonus system was in existence in certain workshops like
 - Jamalpur
 - Kancharpara and
 - Perumbur prior to independence.
- However the system adopted was varied from workshops to workshop.

INTRODUCTION

- Railway Board took decision to introduce incentive scheme in 1949
- The first and formal scheme was introduced in CLW in Dec'1954
- The scheme was successful and further it was extended to ICF in 1960.

REVIEW

- Review of productivity revealed that low standard of efficiency could be improved with this scheme.
- Provide better control of activity.
- More systematic flow of work.
- More effort by individual worker.

SALIENT FEATURES OF THE SCHEME

- The basic wages are guaranteed.
- Time is the yard stick for measuring work.
- The various operations in the workshops are subjected to time study.
- The allowed time is so fixed that the workmen of normal ability may earn 33 $\frac{1}{3}$ % bonus.
- The allowed time includes all allowances such as fatigue, general handling, gauging and productivity bonus allowance.

SALIENT FEATURES

- ✓ Based on the concept that an average worker while working under non-incentive conditions is assumed to be working at a rating of 60 units.
- ✓ The same worker under incentive conditions would be working at 80 rating.
- ✓ It means that the average worker would finish the work in $\frac{3}{4}$ of the allowed time.
- ✓ Calculation is done on monthly basis, and the gain or loss cannot be carried out to the next month.
- ✓ The ceiling limit is fixed at 50% of the time taken.

TYPE OF WORKERS

The Incentive workers are classified as

- ❖ Direct workers
- ❖ Essential Indirect workers.
- ❖ Indirect workers.

DW: Engaged in work which can be assessed through time studies.

EIW' S: Those who contribute to the continuity of the work. Whose work cannot be assessed through time studies.

IWS: Who are provided for cleaning etc. do not contribute directly or indirectly.

TIMING OF OPERATION

- The only check on the efficiency of the Labour is the systematic comparison of time taken with actual time.

TIME STUDY

- Fixation of time standards for each operation.
- It is a technique for determining accurately as possible from a limited number of observations.

SYNTHETIC TIMES

Synthetic times are time standards built up from element times previously obtained from direct time studies.

Time studies are taken to arrive @ synthetic data such as:

- Loading and unloading values.
- Setting up values
- Changing tool values.
- Preparational value.

RATING

- Rating is the assessment of the skill and effort involved in each element.
- Different operative workers performing the same job are studied and the results checked by superior rate fixers.

NORMALISING

On completion of time study the actual times of all the elements in the work cycle should be converted to time @ 80 rating.

Normalized time = $\frac{\text{Actual time} \times \text{observed rating}}{80}$ i.e. Incentive rating

ALLOWANCES

- General handling and contingencies – $12\frac{1}{2}\%$
- Gauging on Machining – 5%
- Fatigue – $12\frac{1}{2}$ to 25%
- Production bonus – $33\frac{1}{3}\%$

CALCULATION OF ALLOWED TIME

Let Normalized time = 1 Hour

Add allowances as under

$$\begin{aligned} \text{a) Fatigue } 25\% &= 1 \times 0.25 = 0.25 \\ &= 1 + 0.25 = 1.25 \end{aligned}$$

$$\begin{aligned} \text{b) Contingency } 12 \frac{1}{2} \% &= \frac{1.25 \times 12.5}{100} = 0.156 \text{ Hrs} \\ &= 1.25 + 0.156 = 1.406 \text{ Hrs} \end{aligned}$$

$$\begin{aligned} \text{c) Bonus } 33 \frac{1}{3} \% &= \frac{1.406 \times 100}{3 \times 100} = 1.87 \text{ Hrs} \end{aligned}$$

$$\begin{aligned} \text{d) Gauging } 5\% &= \frac{5 \times 1.87}{100} = 0.09 = 1.87 + 0.09 = 1.96 \end{aligned}$$

EXTRA TIME

Extra time over the allowed time can be allowed due to

- ✓ Excess machining work required on castings, forgings, bars.
- ✓ Hard material
- ✓ Defects in the machine for which worker is not responsible.
- ✓ Change in batch quantity against a work order.

JOB CARDS

- Job / Squad cards are the basic documents on the basis of which incentive is calculated.
- Job/Squad cards should be punched on/ off with aid of time recording clocks.
- From the time of punching, the job cards should remain in the custody of time booth clerk.
- All completed Job/squad cards should be sent to incentive bonus section with in 48 hours.

MATERIAL SCRAP

- Normally bonus is payable on quantities of work which confirm to specifications.
- If inspector certifies, rejections are owing to material scrap, the reject of outturn will also be taken into account upto the % of work done on rejects.

INCENTIVE BONUS TO ESSENTIAL INDIRECT WORKERS AND SUPERVISORS

- Paid 80% of the bonus earned by the section.

- Std Hour =

$$\frac{\text{Total GA Hrs actually worked by DW's during last six months} \times 208}{\text{Total GA Hrs which they should have worked}}$$

- Section Percentage = $\frac{\text{Total net time saved by the section}}{\text{S.H} \times \text{No. DWs in the section}} \times 100$

- Actual Bonus = $\frac{\text{Sec. Per}}{100} \times \frac{80}{100} \times \text{No. of GA hours} \times \text{Hourly rate}$

IDLE TIME DEDUCTION FROM SUPERVISORS

Shop chargemen / maistries are responsible for

- ✓ Lack of work
- ✓ Lack of tools

IDLE TIME DEDUCTION FROM SUPERVISORS

Idle time of DW's	Percentage debited
2 – 10%	10%
5% - 15%	20%
>15%	No Bonus

IDLE TIME BOOKING

Idle time can be booked on accounting the following reasons.

- ✓ No Power
- ✓ Machine Repair
- ✓ Lack of Material
- ✓ Lack of tools
- ✓ Waiting for work
- ✓ Crane repair
- ✓ Misc

CHECKING OF JOB CARDS

The Job cards received in incentive section of WAO should be checked to see that

- Inspected and signed by shop inspector.
- All Corrections bear rate fixer signature
- Time struck on the job cards tallies with the time records of TBC
- Hand written job card should be certified by AWM/PE.
- Outturn statements are certified by shop supervisors and Inspectors.

SALIENT FEATURES OF GROUP INCENTIVE SCHEME

- Min 20% bonus is ensured.
- No idle hours are permitted on account of material and other reasons.
- Rectification work increases the allowed time i.e. Allowed time = $AT + 3 \times \text{Rectification man hours}$.
- Group attendance will affect the group bonus.
- Quality linkage factor affects the Group incentive.

SALIENT FEATURES OF GROUP INCENTIVE SCHEME

- Enroute detachments affects the Group incentive.
- Cycle time affects the Group incentive.
- 0.7 percent of the individual + 0.3 percent plant production index is taken for the calculation of the Group Incentive.

Group Incentive Scheme

- The new scheme namely Group Incentive Scheme has been introduced in Tirupati, Rayanapadu Workshops of this railway during the year 2000.
- In this scheme main group is formed from main production shop of the plant. A standard production unit (SPU) will be defined for each incentive production group.
- Support shops incentive group formed from various shops in the plant which directly support the activities of shops included under incentive production groups.

- The output performance from shops included under support shops can not be quantified in measurable terms.
- Support departments incentive group formed from different departments under plant management who directly but essentially support the production activities in the shops.
- The output performance can not be quantified in physical units.

Salient Features of the Group Incentive Scheme

- Management approved annual production plan for each incentive production group is defined before each financial year.
- For each despatchable product from the group the applicable SPU of product is defined by the IED.
- The manpower strength including LR of 12.5% for each production group is required to achieve annual production plan.
- Idle hours may be counted only when the power failure at a stretch for a period of 60 minutes.

Salient Features of the Group Incentive Scheme

- This scheme also does not permit plus cards on any account.
- Group attendance factor affects the group incentive.
- Excessive detention to the coaches in the plant, affect the incentive.
- Defects reported by the customer depots will affect the group incentive.
- While deciding the outage 70% weightage is given to the individual shop and 30% weightage is given to overall outage.

Salient Features of the Group Incentive Scheme

- Rework reduce the group incentive.
- Minimum bonus earning should be 20%.
- Maximum ceiling on bonus earning is 50%.

CLW Vs GIS

The CLW Pattern	Group Incentive Scheme
Introduced in CLW 1958 further extended to ICF and other workshops.	Introduced in Wheel and Axle Plant, Tirupati Workshop, Rayanapadu Workshop and Mancheshwar Workshops .

CLW

It is individual based incentive scheme.

Minimum bonus earning is at 33 1/3 %.

Maximum permissible bonus limit 50%.

Idle time can be booked on account of lack of tools, machine breakdown, non availability of raw materials.

GIS

It is group based incentive scheme.

Minimum bonus earning at 20%.

Maximum permissible bonus limit 50%

Idle time can be booked only on account of power failure that too for more than one hour.

CLW

Once the outturn is dispatched from the shop there is no provision for deduction of incentive for the bad workmanship.

Group attendance will not affect the incentive of individual.

Individual shop outturn is taken for bonus calculation.

GIS

Quality linkage factors are taken into consideration and they effect the outturn.

Group attendance will affect the individual incentive.

70% of individual shop and 30% of the overall outturn is taken for bonus calculation.

CLW

Additional no. of days stay of the coaches will not affect the bonus.

There are no equalising factor for each type of work.

No. of men work on the production control organisation ranges up to 200.

GIS

Coaches detained in the shops for more than 60 days effect the bonus.

All types of coaches are converted into standard sleeper coaches.

Only 4 to 5 men are required in the Industrial Engineering department.