

LABOUR

L-1

Labour Wage Plans -

Time Rate Scheme (TR) based on hours worked.	Piece rate * Scheme (PR) based on production.	Combination of TR & PR	Premium Bonus Plan.
1) Simple TR 2) Differential TR 3) High wage Plan 4) Measured day work.	1) Simple PR * 2) Differential PR - Taylor DPR - Merrick DPR.	1) Gantt's task & Bonus system 2) Emerson's efficiency plan. 3) Points system - Hayne's point sys $\left\langle \begin{matrix} R \\ NR \end{matrix} \right.$ - Bedeaux point sys.	* 1) Halsey system 2) Halsey-Weir sys 3) Rowan plan * 4) Barth system.

(i) High Wage Plan :- higher performance (quality & quantity) - higher wages.

(ii) Measured day work :- Rate p.h = Fixed + variable.
 (same for all) (depends on person & p)

labour cost = labour rate p.h x no. of hrs worked.

(iii) Differential PR :- EFFICIENCY BASED.

Time Based

$$E = \frac{\text{Std time}}{\text{Actual time}} \times 100$$

for same 'n' units.
 here output is fixed

Output based.

$$E = \frac{\text{actual output}}{\text{Std. output}} \times 100.$$

for same n days/hrs.
 here time is fixed.

Effective hourly rate = $\frac{\text{Total actual wages}}{\text{actual hours}}$

" Always compare present plan with new plans to be implemented "

(iv) Taylor DPRS :- efficiency
below 100%.

100% or more.

$$P.R = \text{Std time p.v} \times \text{rate p.h}$$

(v) Meerick :-

0 - 83%.

83 - 100%.

100% & more.

PR.

83% of NPR (normal piece rate)

125% of NPR

Normal P.R.

110% of NPR ¹⁰

120% of NPR ²⁰

(vi) Combination of PR & TR :-

Gantt's Task & Bonus system.

Efficiency

Normal
0 - 100%
(↓ 100%)

100%.

↑ 100%.

Rate applicable.

Normal T.R (Time Rate)

Normal T.R + 20% Bonus

High PR (piece rate)
with atleast 20% Bonus (TR)

(vii) Baith System

$$\text{Wages} = \sqrt{SH \times AH} \times \text{Rate/hr}$$

$$\text{OR} \sqrt{ST \times AT} \times \text{Rate/hr}$$

suitable for unskilled workers, trainees & beginners. due to low efficiency.

(viii) Points System

Wages = Basic + Bonus

Basic = Actual time \times rate/hr.

Bonus

Bedeaux

Bonus = 75% \times pts saved \times rate/min.

points saved = min. saved
 1 pt = 1 min saved.

Haynes

Repetitive work

labour : Foremen
 = 5 : 1

Bonus = $\frac{5}{6} \times$ pts saved \times rate/min.

Non repetitive work

labour : Foremen : Co-ae
 = 5 : 1 : 4

Bonus = $\frac{5}{10}$ (50%) \times pts saved \times rate/min

(ix) Premium Bonus Plan = Basic + Bonus

Basic = A \cdot T \times rate/hr.

- Halsey system :-

Bonus = 50% of cost saving [ST - AT] \times rate/hr.
 = 50% \times (ST - AT) \times rate/hr.

- Halsey weir :- $\frac{1}{3}$

Bonus = $\frac{1}{3}$ of cost saving
 = $\frac{1}{3} \times$ (ST - AT) \times rate/hr.

- Rowan plan :-

Bonus = $\frac{AT}{ST} \times$ (ST - AT) \times rate/hr.

Rowan is better option than Halsey

(X) Emerson's efficiency plan: CTR

Efficiency
 0 - 66.67%
 66.67% - 100%
 \uparrow 100%

Wages
 NTR

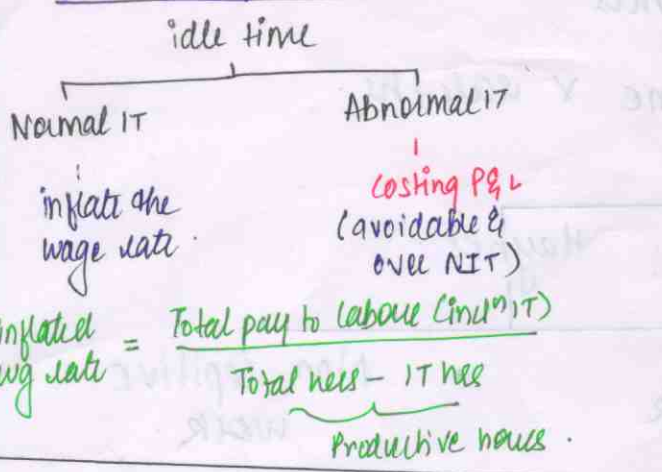
NTR + Bonus (0.01% - 20%)

120% TR
 NTR + Bonus (1% for every \uparrow beyond 100%)
 Bonus = $\uparrow \times$ normal TR

120% TR = Basic

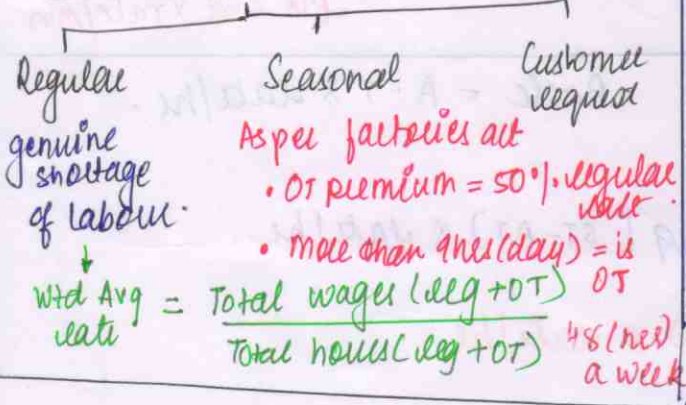
Treatment of idle time:-

anything abnormal → costing PL



- leave with pay
- same as normal idle time

Overtime premium



labour turnover cost = LT ratio

LTR without expansion

with expansion

Separation (S) = $\frac{\text{lab displaced (S)}}{\text{Avg L}} \times 100$

Replacement (R) = $\frac{\text{lab displaced (R)}}{\text{Avg L}} \times 100$

Mined = $\frac{S + R}{\text{Avg L}} \times 100$

Avg = $\frac{\text{Op}^n + \text{Closing L}}{2}$

Eqn. LT = $\frac{T \cdot 10}{\text{no of days}} \times 365$

Accession = $\frac{R + N}{\text{Avg L}} \times 100$

N = new joiners
R = replacement

Mined Flux = $\frac{S + A}{\text{Avg L}} \times 100$

labour turnover cost = profit foregone

= Settlement cost
 (+) Recruitment cost
 (+) selection cost
 (+) training cost
 (+) contribution lost due to lab Ho
 = Total LTC

Total hrs worked

- Prod'n = Prod'ness
- Training = Prod'n + Waste

sales x — productive hrs

y — waste hrs

y x PV = contribution lost