the six big losses
COUNTERMEASURES CHEAT SHEET

AVAILABILITY

$$\frac{\text{Operating Time}}{\text{Planned Production Time}}$$

PERFORMANCE

$$\frac{\text{Net Operating Time}}{\text{Operating Time}}$$

QUALITY

$$\frac{\text{Fully Productive Time}}{\text{Net Operating Time}}$$

PLANNED DOWNTIME / EXTERNAL UNPLANNED

Reason for Loss
- Changeovers
- Planned maintenance
- Material shortages
- Labour shortages

Countermeasures
> Planned Downtime Management

> 5S Workplace Organisation

> ABC Planning

$$\frac{\text{Planned Downtime}}{\text{Total Production Time}}$$

MINOR STOP LOSS
< 5MINS

Reason for Loss
- Fallen product
- Obstruction
- Blockages
- Misalignment

Countermeasures
> IFA Opportunity Analysis

> 5S Workplace Organisation

> Management Routines (SIC)

> Line Minor stop audits

$$\frac{\text{Minor Fault Time}}{\text{Total Production Time}}$$

PRODUCTION REJECTS

Reason for Loss
- Product out of specification
- Damaged product
- Scrap

Countermeasures
> IFA Opportunity Analysis

> Six Sigma

> Error proofing

$$\frac{\text{Rejects in Production}}{\text{(Good Output/Total Rejects)}}$$

BREAKDOWN LOSS
> 5MINS

Reason for Loss
- Equipment failure
- Major component failure
- Unplanned maintenance

Countermeasures
> Kaizen Blitz

> ProACT

> Root cause analysis

> Asset Care

$$\frac{\text{Major Fault Time}}{\text{Total Production Time}}$$

SPEED LOSS

Reason for Loss
- Running lower than rated speed
- Untrained operator not able to run at nominal speed
- Misalignment

Countermeasures
> IFA Opportunity Analysis

> Line Balance Optimisation

> Management Routines (SIC)

$$\left(\frac{\text{Output}}{\text{Ave Speed}} - \frac{\text{Output}}{\text{Rated Speed}} \right) \Big/ \text{Total Prod. Time}$$

REJECTS ON STARTUP

Reason for Loss
- Product out of spec. at start of run
- Scrap created before nominal running after changeover
- Damaged product after planned maintenance activity

Countermeasures
> Planned Downtime Mgmt.

> 5S Workplace Organisation

> Standard Op.Procedures

> Precision settings

$$\frac{\text{Rejects on Startup}}{\text{(Good Output/Total Rejects)}}$$

LineView SOLUTIONS