

Index

- activity factor, 61
- actual controls, 112
- allowances, 62
- andon, 172, 173
- apparent small defects, 103
- assembly line, 27, 39–41
- asynchronous flow, 42
- Autonomation, 9
- autonomous maintenance, 109

- batch, production, 20, 21
- batch, transfer, 20, 21
- bathub curved, 115
- below the green line, 176
- between green and red lines, 176

- cellular layout, 18, 28
- check panel, 132
- checklist, 131
- chronic losses, 116
- continuous improvement, 1, 168
- continuous timing, 60
- corrective maintenance, 99
- current exchange study, 126
- cycle time, 42, 44–46

- didactic material, 149

- economic lot size strategy, 125
- element sign, 159
- emblems and buttons, 163

- endless-material method, 133
- equipment functions, 112
- equipment history files, 104
- execution under expectations, 103
- external setup, 126, 128, 129

- facility inventory, 104
- failure causes, 112
- failure effects, 112
- failure modes, 112
- Family formation, 55
- 5S audits, 155
- 5S competition, 163
- 5S methodology, 147
- 5S news bulletins, 163
- 5-why method, 89
- flow process chart, 35
- Frank Gilberth, 57
- Frederick Taylor, 57
- function checks, 132
- function standardization, 135
- functional clamps, 140

- Group technology, 54, 56

- Henry Ford, 2, 5, 27
- hidden small defects, 103
- Hirano, Hiroyuki, 5, 150

- idle time, 46
- improvement tools, 1

- incorporation, 162
- Individual-Durations heuristic, 49
- inefficient, 178
- infant period, 116
- initial equipment management, 109
- inspections, 106
- intermittent stops, 103
- internal setup, 126, 128, 129
- intrinsic reliability, 117
- island layout, 42
- isolated defects, 74

- Jidoka, 9, 166, 177, 180
- Just-in-time, 1, 4, 6, 9, 172
- just-in-time methodologies, 4

- kaikaku, 2
- kaizen, 1–3, 9, 168
- kaizen blitzes, 3
- kaizen teian, 168, 169
- kaizen tools, 1
- kanban, 172–176
- kanban in practice, 176
- know-how philosophy, 180
- Kobayashi, 181
- Kobayashi, Iwao, 2–4

- large-batch-based strategies, 124
- Largest-Positional-Weight heuristic, 49
- layout, types, 25–29
- Layout Design Methodology, 29–33
- layouts, traditional, 29
- lead time, 18
- leading technology, 180
- lean manufacturing, 1, 8
- leveling production, 64
- Lillian Gilberth, 57
- line-balancing, 48, 50
- Load time, 12

- machine factors, 114
- machine-worker ratio, 91
- maintenance costs, 118
- maintenance improvements, 109
- manufacturing cells, 28
- mass production, 40, 41
- materials flow, 19
- mean time between failures, 114
- Method-Time Measurement, 63, 64
- Model T, 40
- motion study, 83
- Muther's Eight Factors, 33–38

- Nakajima, 108

- ninben no tsuita jidoka, 178
- nonmaintenance costs, 118
- normal speed, 61

- Ohno, 178
- Ohno, Taiichi, 5
- one-motion method, 138
- One-Piece Flow, 20, 21
- one-touch exchange of die, 141
- operative factors, 115
- operative reliability, 117
- organizational factors, 115
- over the red line, 177
- overall equipment efficiency, 109

- parallel operations, 137
- Pareto analysis, 41
- part and tool transportation improvements, 132
- picture panels, 163
- pilot area, 149
- planned maintenance, 100
- plant layout, 18
- PM orders, 106
- pocket manuals, 163
- poka-yoke, 73, 77
- precedence diagram, 46
- predictive maintenance, 102
- press-die preheat, 134
- preventive engineering, 109
- process automation, 142
- process industry, 22–24
- product-quantity analysis, 41
- pull system, 174
- push system, 174

- reliability, 113
- revisions, 106
- Richard Muther, 30, 38
- risk priority number, 112

- scheduled corrective, 100
- sector, 22
- seiketsu, 149
- seiri, 148
- seiso, 149
- seiton, 148
- Sekine and Arai, 142
- self-check, 77, 78
- self-erasing, 156
- sequence defects, 74
- setup process, 120
- Seven types of waste, 7–8
- Shigeo Shingo, 5, 73, 84, 120

- shitsuke, 149
- sign strategy, 172
- single-minute exchange of dies, 120
- six sigma, 117
- skill based strategies, 123
- slogans, 163
- snapback method, 60
- sporadic losses, 116
- standard time establishment, 61
- statistical process control, 76
- statistical quality control, 76
- stops and breakdowns, 103
- successive-check, 77, 78
- suspension, 162
- synchronized flow, 42
- systematic preventive maintenance, 100

- Takt Time, 44–46, 52, 85
- task, 44
- Tasks Assignment Rules, 49
- temporary containers, 134
- therbligs, 86
- Thinking Revolution, 6
- throughput, 18
- Time Study, 56, 58–59

- time-measurement unit, 64
- Tomo Sugiyama, 65
- tools duplication, 136
- total productive maintenance, 108
- Total-Number-of-Following Tasks heuristic, 49
- Toyoda, Kiichiro, 5
- transfer matrix, 35
- 20 Keys to Workplace Improvement, 4, 10–15, 166

- use elimination, 162
- useful period, 116
- user maintenance orders, 107

- visual control, 155

- waste period, 116
- work standard, 57
- workforce optimization, 70
- Work-in-Process, 20
- workstations, 44

- zero breakdowns, 109
- zero changeover, 142

