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
bathtub 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
intermittent stops, 103
internal setup, 126, 128, 129
intrinsic reliability, 117
island layout, 42
isolation, 74
Jidoka, 9, 166, 177, 180
Just-in-time, 1, 4, 6, 9, 172
just-in-time methodologies, 4
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
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