

Subject Index

A

aerospace bearing materials, 169-77
 austenitic stainless steel, 207-13

B

bearing, 140-52, 178-86
 bearing fatigue life, 198-206
 bearing steel, 3-15, 19-24, 34-41, 42-51,
 85-100, 227-33, 250-61
 bearing steel rings, 117-27

C

carbonitriding, 140-52
 carburize, 198-206, 207-13
 cleanliness, 42-51, 85-100
 competing risks, 107-14
 contaminated lubrication, 131-9
 contamination, 169-77
 corrosion resistance, 207-13

D

deoxidation, 19-24
 dimensional changes, 117-27
 dimensional variations, 117-27
 distortion, 117-27
 duplex hardening, 169-77, 178-86

E

electrochemical hydrogen permeation method,
 153-66
 endurance limit, 187-97
 extreme value, 107-14
 Extreme Value Analysis (EVA), 101-6
 extreme value statistics, 67-84

F

fatigue, 3-15
 fatigue life, 169-77, 207-13
 fatigue strength, 153-66
 FEM, 234-40

forging steel, 140-52

G

Gleeble test, 140-52

H

hardness profile, 178-86
 high speed steel, 198-206
 high strength steels, 153-66
 hydrogen embrittlement, 153-66
 hydrostatic stress, 234-40

I

inclusions, 42-51, 101-6, 107-14
 indent, 187-97
 initial stresses, 250-61

L

laser glazing, 198-206
 life, 178-86
 life prediction, 101-6

M

M50 NiL, 178-86
 measurement, 58-63
 micro-alloyed, 140-52
 micro-structure degradation, 140-52
 microcrack, 234-40
 microstructure, 178-86
 Mobil Jet II, 214-23
 multiaxial fatigue, 243-9
 multiple particles, 107-14

N

nitrided steel, 187-97
 nonmagnetic, 207-13
 nonmetallic inclusions, 3-15, 34-41, 67-84,
 85-100

P

phosphate, 214-23
 plasma carburizing, 178-86
 plasma nitriding, 178-86
 plasma process, 178-86
 processing, 117-27
 pulse plasma technology, 178-86
 purity, 19-24

Q

quality assurance, 3-15

R

radioactivity, 58-63
 reaction layer formation, 214-23
 reliability, 34-41, 178-86
 residual aluminum, 19-24
 residual stresses, 243-9, 250-61
 retained austenite, 131-9, 140-52, 250-61
 rolling contact, 250-61
 rolling contact bearing, 207-13
 rolling contact fatigue, 34-41, 85-100,
 187-97, 234-40, 243-9
 round-robin, 107-14

S

shakedown, 243-9
 SIMS, 214-23
 simulation, 42-51
 sliding wear, 214-23
 statistics of extreme value, 34-41, 85-100
 steel, 67-84
 steel cleanliness, 27-33

steel making, 3-15, 117-27
 steel quality, 85-100
 steelmaking, 58-63
 stress ratio, 243-9
 structure, 27-33
 surface, 27-33

T

TCP, 214-23
 tempering stability, 131-9
 test method, 42-51
 thermal desorption analysis of hydrogen,
 153-66
 three-dimensional elastic-plastic analysis,
 250-61

U

ultrasonic, 3-15
 ultrasonic fatigue, 153-66
 ultrasonic immersion testing, 27-33
 ultrasonic test, 34-41

V

vacuum, 19-24
 vanadium, 140-52

W

WEA, 234-40
 wear resistance, 207-13

X

X-ray diffraction, 227-33