

Keywords index

Abrasive blasting	440	Deformations	577
Acceleration of charged particles	412	Degenerated model	305
Aeration	243	Dental engineering	514
AFM microscopy	224	Development trends	121
Al-Si coat	421	Dilatometry	331
Alumina fibres	180	Dry sliding	180
Analysis and modelling	233-375	Dynamic flexibility	275
ANFIS	477		
Applied mechanics	233, 269, 338		
Approximate methods	338	Education and research trends	514-550
Archaeological metal	166	Electrical discharge machining (EDM)	150
Artificial intelligence	299	End-milling	477
Automation engineering processes	383	Environmental management	499
Auxetic	585	Environmental risk	499
Bainitic steel	391	Evaluation methodology	121
Biomaterials	193, 514	Exact and approximate methods	233
CAD/CAM	350	Experimental design	150
Calorimetry	204		
Calves	566	Feeding systems	566
Carbides	142	Finite element method	375
Casting	166, 421	Flank wear	460
Causes of hazardous events	507	Foresight of the surface treatment	514
CCT diagram	188	Forging dies	215
Changeability and stability of process	487	Functional materials	550
Chaotic algorithms	285		
Characteristic functions	269	Geo-technical borehole	573
Charpy-V notch toughness	369	Geothermic power plants	573
Cleaner production	499	Gradient coatings	259
Coal-Mining	507	Graphite fibres	180
CoCrMo alloys	193	Graphs	360
Composite layers	215		
Composite magnetic materials	514	Hardfacing	400
Composite materials	180, 204, 305, 514, 550, 577	Harmony search algorithm	299
Computational material science	251, 514	Hazardous events	507
Computational material science and mechanics	369	Heat and thermo-mechanical treatment	514
Computational mechanics	305	Heat exchanger	573
Computer simulation	375	High power diode laser	400
Computer tomography	285	High-manganese steels	514
Constructional design	269, 275	Hopper	440
Continuous system	233	Hot-temperature deformation	391
Control charts	487	Hybrid surface treatment technology	215
Copper alloys	166	Hydroxyapatite	204
Corrosion	193		
Critical temperatures	331	Impact load	305
Cryogenic treatment	460	Impedance	269

Impedance spectroscopy	200	Numerical modelling	323
Improvement of process	499	Numerical simulation	313
Industrial management and organisation	487-507	Numerical techniques	285, 299, 375
Intensity of discharge	150		
Intercalation	200		
Intermetallic phases	142	Organic polymer	224
Internal stresses	259	Osteoporosis	313
Inverse heat conduction problem	299		
Iron based alloy	188		
Kinetic energy of a particle	412	Parallel algorithms	285
Kinetics of phase transformations of undercooled austenite	188	Pearlite dissolution finish temperature	331
 		Pelvic bone	313
Laser	412	Photovoltaic materials	514
Laser micro-treatment	514	Piezoelectric transducers	388
Laser surface treatment	514	PN-N-18001 Standard	507
Layered item	421	Porous materials	550
Light metals matrix composites and alloys	514	Properties	193-224
Linear regression	331	Prosthodontia	193
 		PVD and CVD coatings	514
Machining	460	PVD coatings	259, 476
Magnetic properties	210	 	
Manufacturing and processing	383-477	Quality control	487
Material parameters	313	Quenching and tempering	369
Materials	142-188	 	
Materials and engineering databases	350	Rayleigh's model	269
Materials design	467	Relativistic dynamics	412
Materials science and engineering	514, 550	Retained austenite	391
Materials science virtual laboratory	251	Rheological Voigt's-Kelvin's model	269
Mechanical properties	577	Rietveld method	391
Mechanical systems	275	Risky state	313
Mechatronics	383	Robotics	383
Meshing	323	 	
Metallic alloys	166, 391	Safety and Health Management	507
Microalloying	391	Safety culture	507
Microchannels	467	Sheet forming	323
Microstructure	204, 210	Shock absorber	243
Milk replacer	566	Shot-peening	440
Model alloy	188	Sintered tool materials	514
Molecular-lattice structures	200	Six Sigma	243
MoS ₂ solid lubricant	467	Spherical tungsten carbide	400
 		Spin-coating method	224
Nanofiber	550	Statistic methods	243
Nano-materials	585	Statistical Process Control	487
Nanostructural materials	550	Steel and cast steel	369
Nanotechnology	514, 550	Strengthening	440
Nanotubes	514	Stresses	375
Nd-Fe-B magnets	210	Stretching forming	323
Negative Poisson'a ratio	585	Structural steel	251
Neural network	477	Supramolecular compounds	200
Ni-based alloys	142	Surface engineering	121
Nodular and gray cast iron	421	Surface roughness	150, 460
Non-bound blast particles	440	Surface treatment	158, 440
Nozzle	440	 	
		Technological design	350
		Technological devices and equipment	566

Technology foresight	121	Type of electrode	150
The state of the art	121		
Thermomechanical processing	391	Vibrating beams	233
Thin and thick coatings	158	Vibrating mechanical systems	360
Thin coatings	215	Vibrating mechatronic systems	338
Titanium	400	Vibration reduction	275
Tool condition monitoring (TCM)	477	Virtual investigations	251
Tool deflection	477		
Tool materials	142, 158		
TRIP steel	391	Wear	477
True strain	323	Wear resistance	158, 467
Turbine blade	400	Working properties of materials and products	577