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University of Leeds Classification of Books
Metallurgy

Stack only; see Materials *for main collection*

Sections A to T of the classification are for processes, properties etc. in general. For particular processes applied to a particular metal, properties of a particular metal, etc. see sections W and X.

Examples:
Extractive metallurgy – section B
Extractive metallurgy of aluminium – section X-3.1
Fracture of metals and alloys – section E-3
Fracture of steel – section W-3.3

see Materials

[A General]

A-0.01	Periodicals	*A-0.01*
A-0.02	Series	*D-0.02*
A-0.03	General symposia, collections etc. covering more than one aspect of metallurgy	*D-0.03*
A-0.04	Bibliography	*D-0.04*
A-0.06	History and local treatment. Biography	*D-0.07*
A-0.07	Study, teaching and research	*D-0.06*
A-0.09	Handbooks, tables etc.	*A-0.19*
A-0.1	Miscellaneous	*D-0.1*
	Equipment, techniques etc. applicable to more than one aspect of metallurgy e.g. applications of computers in metallurgy.	
A-0.19	Dictionaries and encyclopaedias	
A-1	General textbooks	*D-1*

B-0 Extractive metallurgy

Extraction and refining of metals. Including general works on furnaces, fuels, refractories, vacuum metallurgy. *D-8*

[C Physical metallurgy]

C-1	General works, textbooks etc. Including practical or experimental metallurgy	*D-2*
C-2	Constitution and structure of metals and alloys	*D-2.4*
	Including phase diagrams, atomic and electronic structure, crystal structure and imperfections, dislocations and defects, impurities, solid solutions, texture, grain boundaries and interfaces etc.	
C-3	Transformations and resulting structures	*D-2.6*
	Including diffusion, nucleation, grain growth, recovery, recrystallisation, precipitation (including precipitation hardening), solidification (theory), austenite formation and decomposition etc.	

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D-0 **Metallography**
Microscopy, diffraction etc. Including electron microprobe *D-2.2*

[E **Properties of metals & alloys]**

E-1 General
Including properties of liquid metals

E-2 Physical and chemical properties *D-3*
Including optical and thermal properties, density, surface properties, thermodynamics and kinetics, thermochemistry, chemical kinetics etc.

E-3 Mechanical properties and tests *D-4*
Including strength, stresses, creep, fatigue, fracture, wear, elasticity, damping, plasticity, plastic deformation, hardness, high and low temperature behaviour etc.

E-4 Electrical and magnetic properties *B-3.4, B-3.6*
Including conductivity, radiation and nuclear properties, electrochemistry etc.

F-0 **Analysis, testing (general) & control**
Chemical and physical analysis, flaw detection, temperature measurement and control, etc. *D-5*

H-0 **Heat treatment**
Annealing, re-heating, soaking, cooling, quenching, case and flame-hardening, tempering, protective atmospheres etc. *D-9.1*

J-0 **Foundry practice**
Melting, casting, moulding, sand practice etc. *D-9.2*

K-0 **Electrochemical machining (ECM)** *D-9.3*

L-0 **Mechanical working**
Forging, forming, stamping, rolling, drawing, extrusion etc. *D-9.4*

N-0 **Joining**
Welding, soldering, brazing, adhesive and diffusion bonding etc. *D-9.5*

P-0 **Powder metallurgy**
Production and properties of powders. Including fibre metallurgy *D-11*

R-0 **Cleaning, coating & polishing**
Cleaning, polishing, coating, anodizing, plating, spraying etc. *D-9.6*

T-0 **Corrosion**
Mechanism, behaviour and resistance, prevention (other than by coating), oxidation, stress-corrosion, corrosion testing etc. *D-10*

[W **Ferrous metallurgy]**

W-0.06 History and local treatment *D-12*

W-1 General works, textbooks etc.

W-2 Iron *D-12.1*
Production, properties, uses etc.

W-3 Steel

W-3.1	General	*D-12.2*
W-3.2	Steelmaking	*D-12.3*
W-3.3	Physical metallurgy of steel	*D-12.4*
	Including structure, properties, corrosion etc.	
W-3.4	Steelworking	*D-9 etc.*
	Including foundry practice, casting, mechanical working, heat treatment etc.	
W-4	Iron and steel alloys	*D-12.6*
	Production, properties, uses etc.	

[X Non-ferrous metallurgy]

X-1	General	*D-13*
X-2	Heavy non-ferrous metals and their alloys	*D-13.1*
X-2.1	Copper	
X-2.2	Lead	
X-2.3	Nickel and cobalt	
X-2.4	Tin	
X-2.5	Zinc and cadmium	
X-3	Light metals and their alloys	*D-13.3*
X-3.1	Aluminium	
X-3.2	Beryllium, titanium	
X-3.3	Magnesium, alkali earth	
X-4	Refractory metals and their alloys	*D-13.5*
	Chromium, columbium (niobium), hafnium, molybdenum, rhenium, tantalum, tungsten, vanadium, zirconium.	
	Including general works on high temperature metals and technology.	
X-5	Radioactive metals	*D-13.6*
	Plutonium, radium, thorium, uranium.	
	Including applications of metallurgy in nuclear engineering.	
X-6	Noble metals	*D-13.7*
	Gold, silver, platinum group.	
X-7	Rare earths	
X-8	Other metals	*D-13.8*