

55 Manufacture of cellulose, paper and cardboard

- 55a Grinding and other methods for preparation of raw materials for paper production**
- 55b Processes for the production of pulp, digesters, recovery of waste liquors and gases**
- 55c Bleaching, sizing, dyeing, filling, loading stuff and pulp, beaters, hollanders, pulp disintegrators**
- 55d Separators and strainers; paper making machines; drying installations; waste liquors; miscellaneous**
- 55e Calendering rolls, calenders, longitudinal and transverse cutters, winding devices, moisteners and reeling machines for unprinted paper webs**
- 55f Processing of paper into cardboard, miscellaneous papers**
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- 55a Grinding [pulping] and other methods for preparation of raw materials for paper production: wood and straw grinding, processing of peat; removal of dust, washing, cutting, sorting of rags and waste paper**
- 55a-1/01 Pocket grinders
- 55a-1/10 Continuous grinders
- 55a-1/20 Wood grinder drives (electrical drives 21c-62)
- Grind stones (50b-3/01; 80b-16; 80b-17)
- 55a-1/30 Solid stones
- 55a-1/31 Segmented stones
- Production of wood pulp
- 55a-1/40 by grinding
- 55a-1/45 by other mechanical pulping methods
- 55a-1/50 Storage and preservation of wood pulp
- 55a-2 Wood rasps for paper production (38i-4)
- 55a-3/01 Wood comminuting machines and separators for use in paper making (38a; 38i-4)
- 55a-3/30 Decortication of pulp wood (38i-1)
- 55a-3/40 Chippers for the production of digester chips (38k-1; 38k-3)
- 55a-4 Peat comminuting machines and separators for use in paper making (10c-5; 29a-5)
- 55a-5/01 Miscellaneous fine-dividing machines, kneading and mixing machines for various raw materials for paper making, a part from wood, peat, rags, processing of waste paper, mechanical part (chemical part 55b-4)
- 55a-5/50 Destruction of documents by cutting into pieces
- 55a-6 Dusters and washers for rag cleaning for paper manufacture (50e; 76b-1)
- 55a-7 Rag cutters for paper making (76b-1)
- 55b Processes for the production of pulp, digesters, recovery of waste liquors and gases (12)**
- Chemical processes for the production of pulp (29b-2)
- 55b-1/01 General processes
- 55b-1/10 by use of alkali
- 55b-1/20 by use of sulphite, bisulphite, sulphurous acid

55b-1/30	by use of chlorine and chlorine compounds
55b-1/40	by use of nitric acid, nitric oxides, nitrates
55b-2/01	Digesters and digesting processes
55b-2/10	Continuous digesters
55b-2/20	Digester linings
55b-2/30	Digester heating
55b-2/40	Circulation of lye and gas
55b-2/50	Digester charging
55b-2/60	Digester discharging Rotary digesters
	Recovery and decontamination of cellulose waste liquors and gases
55b-3/01	Concentration, combustion, calcination
55b-3/10	Sulphite liquor recovery
55b-3/20	Alkaline waste liquor recovery
55b-3/30	Miscellaneous waste liquor recovery
55b-3/40	Utilisation of gases and heat
55b-3/50	Removal of offensively smelling gases
55b-4	Waste paper recovery, chemical part (mechanical part 55a-5/01)
55b-5/01	Pulp cleaning, removal of resin and grease from pulp (29b-3; 29b-5)
55b-5/10	Dehydration and removal of lye from digested stock

55c Bleaching, sizing, dyeing, filling, loading stuff and pulp, beaters, hollanders, pulp disintegrators

55c-1	Stuff and pulp bleaching (8i)
55c-2	Stuff and pulp sizing (22 i; 23e-3)
55c-3/01	Stuff and pulp dyeing (8m)
55c-3/10	Stuff and pulp filling and loading
55c-4/01	Stuff hollander bed plates
55c-4/10	Stuff hollander beater rolls
55c-5	Hollanders comprising devices for producing a rapid circulation of the pulp
55c-6/01	Elements of hollanders
55c-6/10	Regulation of grinding pressure
55c-6/20	Continuous material discharge
55c-6/30	Discharge
55c-7/01	Hollanders with vertical movement of the pulp
55c-7/10	Underground hollanders
55c-8/01	Miscellaneous hollanders
55c-8/10	Hollanders with several beater rolls
55c-8/20	Hollanders with beater rolls returning the pulp above the roll top
55c-8/30	Pendulum mills (50c-11)
	Other grinding devices and washers for pulp and stuff (50b; 50e)
55c-9/01	Beaters and refiners with vertical shaft
55c-9/10	Beaters and refiners with horizontal shaft
55c-9/20	Perfecting engines (50b; 50c)
55c-9/30	Tubular mills (50c-15)
55c-9/40	Bed plates and beater rolls for stuff mills
55c-10/01	Stamping mills (50c-10)
55c-10/10	Edge mills (1a-35; 50c-6; 53l-11; 80a-2; 80a-3)
55c-11/01	Centrifuges, pulp disintegrators
55c-11/10	Stock washers
55c-11/12	Stock breakers and disintegrators

55d Separators and strainers; paper making machines; drying installations; waste liquors; miscellaneous**Separators (1a-20 – 1a-32; 50d)**

- 55d-1 Rotary separators
 - Centrifugal separators
- 55d-2/01 with vertical shaft
- 55d-2/10 with horizontal shaft
- 55d-3 Flat screens
- 55d-4 Miscellaneous separators

Strainers

- Rotary strainers
- 55d-5/01 Miscellaneous
 - 55d-5/10 with shaking revolving screen
 - 55d-5/20 Shaking trough
- 55d-6 Flat screens
- 55d-7/01 Miscellaneous strainers
- 55d-7/50 Cylinders and plates for separators and strainers

Tube rolls and wet ends

- 55d-8/01 Miscellaneous
- 55d-8/10 Flow box
- 55d-8/20 Mould shaking
- 55d-8/30 Mould changing
- 55d-8/40 Mould inclination
- 55d-8/50 Mould protection, e.g., glazing moulds
- 55d-9/01 Mould and felt cleaning
- 55d-9/50 Spray tubes
- 55d-10/01 Papermaking machine moulds (7d-6; 86f)
- 55d-10/10 Connection of ends of paper making machine moulds
- 55d-10/20 Papermaking machine felts (41d)
- 55d-10/30 Connection of ends of papermaking machine felts
- 55d-11/01 Mould and felt guides
- 55d-11/10 Automatic rectilinear motion for moulds and felts
- 55d-11/11 Operated by means of stops in contact with the web
- 55d-11/12 Operated by rollers on which the web runs
- 55d-11/13 Operated by currents of water, gas, steam or air preliminarily controlled by the mold edge
- 55d-11/20 Mould and felt tensioning
- 55d-11/30 Alarm devices indicating the course of the mould or the felt
- 55d-11/40 Paper guides
- 55d-12/01 Magnetic grates for paper manufacture
- 55d-12/10 Sand catchers for paper production
- 55d-13/01 Miscellaneous stock catchers
- 55d-13/10 Funnel stock catchers
- 55d-13/20 Drum filters operating under vacuum
- 55d-13/30 Drum filters operating without vacuum
- 55d-14/01 Stock quantity regulators
- 55d-14/30 Stock density regulators
- 55d-14/50 Vats
- 55d-15/01 Gates

55d-15/10	Size scales
55d-15/20	Deckle straps
55d-16/01	Suction boxes without rolls
55d-16/05	Suction boxes with rolls
55d-16/10	Suction rolls
55d-16/20	Plate presses
55d-16/30	Miscellaneous devices for removing water
55d-17	Watermarks (75d-5/03; 15k-9/06)
55d-18	Screen cylinders
55d-19	Dandy rolls
55d-20/01	Couch and press rolls
55d-20/50	Roll elements
	Cardboard machines
55d-21/01	Miscellaneous
55d-21/10	[Size] press rolls
55d-21/15	Cutting devices on press rolls
55d-21/20	Thickness indicators, signalling devices
55d-22	Longitudinal paper machines
55d-23	Cylinder machines
55d-24	Stock stirrers for paper production
55d-25	Driving mechanism for papermaking machines (devices for the control of electric motors, also for papermaking machines 21c-62)
55d-26	Perforating the web in papermaking
55d-27/01	Production of hand-made paper
55d-27/20	Production of spinning paper and spinning paper strips on paper machines
	Drying devices for paper and cardboard
55d-28/01	Drying cylinders for paper and cardboard webs, and for coated and pasted paper and cardboard (82a)
55d-28/10	Vacuum cylinder dryers
55d-28/20	Automatic temperature regulation
55d-28/30	Stuffing boxes, packings, steam supply to drying cylinders
55d-28/40	Condensate from drying cylinders
55d-28/50	Electrically heated drying cylinders
55d-28/60	Water vapour removal, radiated heat recovery in the drying section of paper machines
55d-28/70	Drying cylinders in which air is simultaneously blown onto the web
55d-28/80	Felt dryers
55d-29/01	Dryers for paper webs without drying cylinders (82a)
55d-29/10	Suspended fold dryers
55d-30/01	Dryers for paper and cardboard sheets (82a)
55d-30/50	Sheet hangers, cardboard clips
55d-31/01	Miscellaneous drying devices for paper and cardboard
55d-31/10	Centrifugal dryers
55d-32	Recovery and re-use of waste liquor and cast-off edges of paper webs
55d-33/01	Miscellaneous relating to paper machines
55d-33/02	Doctors (55c-1/02)
55d-33/03	Devices for preventing the tearing of the web

55e **Calendaring rolls, calenders, longitudinal and transverse cutters, winding devices, moisteners and reeling machines for unprinted paper webs** (stack cutters 11b)

Calenders and supercalenders (8b-19; 8b-20)

- 55e-1/01 General
- 55e-1/02 Doctors
- 55e-1/03 Structure of rolls
- 55e-1/04 Protective devices
- 55e-1/05 Roll bearings

- 55e-2 Calenders in general (8b-19; 8b-20)
- 55e-3 Moisteners (8a-1; 8a-2; 15d-31)

Longitudinal cutters (8f-9)

- 55e-4/01 General
- 55e-4/02 Structure, bearings, blade drives
- 55e-4/03 Dust exhausters

Transverse cutters, sheet sorting machines and stacking devices (8f-8; 15d-29; 15e-1)

- 55e-5/01 General
- 55e-5/02 Control of the cutting device along the paper web
- 55e-5/03 Sheet conveying and delivering, marking strips
- 55e-5/04 Sheet sorting
- 55e-5/05 Discontinuous conveying
- 55e-5/06 Travelling blades
- 55e-5/07 Longitudinal registers (55e-7/03)
- 55e-5/08 Rotary blades
- 55e-5/09 Blade holders
- 55e-5/10 Air as conveying medium
- 55e-6 Diagonal cutters (8f-8)

Reeling and re-reeling, crease removers, lateral stretchers

- 55e-7/01 General
- 55e-7/02 without roll core
- 55e-7/03 Tension regulators (21c-62; 21g-10; 55e-5/07)
- 55e-7/04 Edge covering
- 55e-7/05 Roll cores
- 55e-7/06 Ejectors
- 55e-7/07 Roll bearings, roll inserting
- 55e-8 Combined longitudinal, diagonal and transverse cutters (8f-8; 8f-9; 11b; 70e-18)
- 55e-9 Miscellaneous

55f **Processing of paper into cardboard, miscellaneous papers**

- 55f-1 Cardboard and lined board production from finished paper (11c-3; 11c-5; 54d-6)
- 55f-2 Coloured paper production from finished paper
- 55f-3/01 Marbled paper production from finished paper
- 55f-3/10 Patterned paper production from finished paper (printing of paper 15k-9; wallpapers 8e, 8h; 8l-2)
- 55f-4 Coloured and patterned paper production on paper machines
- 55f-5 Conveying devices for wet paper webs
- 55f-6 Miscellaneous features in the manufacture of coloured paper
- 55f-7 Parchment paper production
- 55f-8 Making of paper with web, thread or wire inserts and facing

55f-9	Making of safety paper (75d-5/03)
55f-11/01	Making of water and fat-proof paper (8k-3)
55f-11/10	Making of non-inflammable paper (8k-4)
55f-12/01	Making of absorbent paper
55f-12/10	Making of filter paper
55f-12/20	Making of artificial cotton on the papermaking machine (76b-14/02)
	Making of foil paper
55f-13/01	by uniting paper and metal foil
55f-13/10	by coating with liquid or powdered metal
55f-13/20	by electrolytic metal plating
55f-14	Making of roofing paper (chemical part 8l; 37a-7; 37b-6)
55f-15/01	Making of drawing paper
55f-15/10	Making of tracing and copying paper
55f-15/20	Making of enamel or printing paper, and coating materials therefor
55f-15/30	Making of carbon paper (15i-4/01; 15k-7/02; 15l-7/02)
55f-16	Making of miscellaneous papers, such as tobacco and cigarette paper, gelatine paper, transparent paper, facsimile paper, multiply paper (55d-22; 55d-23), recording paper (42d-3/40)