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1	Glass production/Production Technology	1.7	Equipment for glass tube production
1.1	Raw material for glass production	1.8	Equipment for glass fibre production
1.2	Auxiliary and operating materials	1.8.1	Glass wool technology
1.2.1	Refractories	1.8.2	Rock wool technology
1.2.2	Industrial gases	1.8.3	Textile glass fibre technology
1.2.3	Lubricants and coolants	1.9	Kiln technology
1.2.4	Laboratory equipment	1.9.1	Transport systems
1.3	Preparation of raw materials and batches	1.9.2	Stacker systems
1.3.1	Crushing and grading	1.9.3	Annealing lehrs, continuous/intermittent operation
1.3.2	Drying technology	1.9.4	Decorating lehrs
1.3.3	Metering and weighing technology	1.9.5	Pre-heating furnaces
1.3.4	Mixing technology	1.9.6	Fusing Kilns
1.3.5	Pelletising technology	1.10	Cold end technology for float glass, laminated glass, wired glass and other types of flat glass
1.3.6	Cullet preparation	1.10.1	Optimization of glass cutting and glass production yield
1.3.7	Raw material technology and prewarming cullet technology	1.10.2	Cullet transportation
1.3.8	Colour sorting (cullet)	1.10.3	Inspection systems
1.3.9	Ventilation systems	1.10.4	Paper applying machines
1.3.10	Batch calculation and assessment of glass properties	1.10.5	Separator applying machines
1.4	Glass melting technology	1.10.6	Stacking machines
1.4.1	Batch charging technology	1.11	Suppliers for the glass machinery industry
1.4.2	Forehearth technology	1.11.1	Components and accessories
1.4.3	Melting technology for tank furnaces	(suppliers to the glass machinery industry)	
1.4.4	Melting technology for pot furnaces	1.11.2	Software
1.4.5	Gas equipment and supply systems	1.12	Coating technology for hollow glass
1.4.6	Regenerative systems	1.12.1	Hot end coating
1.4.7	Recuperative systems	1.12.2	Cold end coating
1.4.8	Electrically heated systems	1.12.3	Strengthening coating
1.4.9	Combustion technology	1.13	Conveying, transport, packing and warehouse technology
1.4.9.1	Combustion technology for oil and gas fired melting furnaces	1.13.1	Feeding and stacking systems
1.4.9.2	Combustion technology for oxy-fired systems	1.13.2	Transport and handling systems
1.4.10	Feeder colouring	1.13.3	Conveying, sorting and storage facilities
1.5	Forming for flat glass	1.13.4	Packing lines - boxes, shrinking, hoop-casing machinery
1.5.1	Float glass technique	1.13.5	Warehouse technology
1.5.2	Glass drawing technique	1.13.6	Glass racks for transport and warehouse
1.5.3	Casting and rolling technology	1.13.7	Vehicles for glass transport
1.6	Forming for hollow glass	1.13.8	Construction and glazing equipment
1.6.1	Gob feeder	1.13.9	Parts for conveying, transport, packing and warehouse technology
1.6.2	Ball gatherer	1.14	Photovoltaic production/Production Technologies
1.6.3	Suction feeder	1.14.1	Wafer production
1.6.4	Platinum feeder	1.14.1.1	Etching (wet/dry)
1.6.5	Shear blades	1.14.1.2	Edge isolation (wet/laser)
1.6.6	Blowing machines	1.14.1.3	Coating systems
1.6.7	Press machines	1.14.1.4	Metallisation
1.6.8	Press-blow-machines	1.14.1.5	Printing machines
1.6.9	Spinning machines	1.14.1.6	Other technologies for cell production
1.6.10	Injection machines	1.14.2	Panel production
1.6.11	Ampoule and laboratory glass machines	1.14.2.1	Laminators
1.6.12	Bottle and glass container machines	1.14.2.2	Coating/sputtering systems
1.6.13	Moulds for glass production	1.14.2.3	Structuring
1.6.14	Flash welding and fire polishing machines	1.14.2.4	Tempering furnaces
1.6.15	Dosing systems	1.14.2.5	Edge deletion
1.6.16	Glass mould spray systems	1.14.2.6	Contacting
1.6.17	Gob control software		
1.6.18	Aids for the forming of hollow glass		

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- 1.14.2.7 Foil handling
- 1.14.2.8 Laminating
- 1.14.2.9 Butyl edge application and other encapsulation methods
- 1.14.2.10 Panel sorting and packaging
- 1.14.2.11 Other technologies for panel production (thin-film)
- 1.14.2.12 Coating material, sputtering targets
- 1.14.2.13 Distribution bars and soldering material
- 1.14.3 Sealants and foils (PVB)
- 1.14.4 Other materials

2

Glass processing and finishing

2.1 Cutting, breaking and snapping technology

- 2.1.1 Cutting technology
 - 2.1.1.1 Cutting technology for float glass
 - 2.1.1.2 Cutting technology for laminated safety glass (LSG)
 - 2.1.1.3 Cutting technology for technical glass
- 2.1.2 Glass saws
- 2.1.3 Devices for coating removal
- 2.1.4 Snapping technology flat glass
 - 2.1.4.1 Mechanical snapping devices
 - 2.1.4.2 Thermal snapping devices
- 2.1.5 Crack-off technology hollow glass
 - 2.1.5.1 Mechanical crack-off devices
 - 2.1.5.2 Thermal crack-off devices
- 2.1.6 Rim polishing machines

2.2 Drilling technology

2.3 Edge and surface finishing technology

- 2.3.1 Grinding techniques for flat glass
 - 2.3.1.1 Grinding techniques for straight edges
 - 2.3.1.2 Grinding techniques for shaped glass
 - 2.3.1.3 Grinding techniques for moulded glass
- 2.3.2 Grinding techniques for hollow glass/moulded glass
 - 2.3.2.1 Decorative grinding technology
 - 2.3.2.2 Surface grinding technology
- 2.3.3 Matting/Supercalendering/etching/sand blasting technologies
- 2.3.4 Glass frosting
- 2.3.5 Polishing technology
- 2.3.6 UV edge taping technology
- 2.3.7 Printing technology
 - 2.3.7.1 Screen printing techniques
 - 2.3.7.2 Digital printing technology
 - 2.3.7.3 Pad printing technology
 - 2.3.7.4 Spraying technology
 - 2.3.7.5 Inkjet, 3D printing technology
 - 2.3.7.6 Other printing / coating technology
- 2.3.8 Environmental Technologies Glass Processing
 - 2.3.8.1 Water treatment for grinding technology
 - 2.3.8.2 Screen washing machine
 - 2.3.8.3 Plants for screen de-laminating

2.4 Forming and bending technology

2.5 Laser technology

- 2.5.1 Laser cutting technology
- 2.5.2 Laser marking technology
- 2.5.3 Laser drilling technology
- 2.5.4 Laser removing technology
- 2.5.5 Laser fusing technology
- 2.5.6 Components and accessories (Laser technology)

2.6

Coating technology

- 2.6.1 Vacuum coating equipment
- 2.6.2 Enameling machines, thermal printing equipment
- 2.6.3 Mirror coating equipment
- 2.6.4 Metallizing machines
- 2.6.5 Dryers and enameling furnaces
- 2.6.6 UV-Absorption - Coating (pyrolytic)
- 2.6.7 IR-Reflective Coating (pyrolytic)
- 2.6.8 Sputtering targets for flat glass coating
- 2.6.9 Mirror coating products
- 2.6.10 Highly opaque special colours and conductive silver pastes for automotive glasses
- 2.6.11 Highly opaque special colours and conductive silver pastes for PV glasses

2.7

Electronic display glass technology

- 2.7.1 Machines and equipment for the production of display glass
- 2.7.2 Components and accessories for display glass technology

2.8

Insulation glass technology

- 2.8.1 Plants for insulating glass production
 - 2.8.1.1 Plants for triple glazing
 - 2.8.1.2 Plants for quadruple glazing
- 2.8.2 Production equipment for spacers
- 2.8.3 Production equipment for insulating glass frames
- 2.8.4 Edge deletion equipment
- 2.8.5 Gas filling machines and gas devices
- 2.8.6 Sealing techniques
- 2.8.7 Production equipment for vacuum insulating glass

2.9

Safety glass technology

- 2.9.1 Pre-tempering technology
 - 2.9.1.1 Furnaces for thermal pre-tempering of glass
 - 2.9.1.2 Furnaces for chemical pre-tempering of glass
- 2.9.2 Laminated glass technology
 - 2.9.2.1 Laminated glass technology with foil for architectural glass
 - 2.9.2.2 Laminated glass technology with foil for automotive glass
 - 2.9.2.3 Laminated glass technology with adhesives, casting resin and laminate film
- 2.9.3 Foil treating technology (storing, climate control, uncoiling)
- 2.9.4 Autoclaves

2.10

Cleaning technology

- 2.10.1 Washing machines and equipment
- 2.10.2 Brushing, high-pressure and ultrasonic systems

2.11

Auxiliary products

- 2.11.1 Tools
- 2.11.2 Spare parts and consumables
- 2.11.3 Insulating materials
- 2.11.4 Sealants
- 2.11.5 Spacers
- 2.11.6 Compressors
- 2.11.7 Vacuum pumps
- 2.11.8 Chemicals
 - 2.11.8.1 Chemical drying - dessiccants
 - 2.11.8.2 Chemical grinding and polishing materials
 - 2.11.8.3 Chemical coolants

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- 2.11.8.4 Chemical rust prevention agents
- 2.11.8.5 Chemical protection material for glass
- 2.11.8.6 Chemical cleaning agents
- 2.11.8.7 Other chemicals

- 2.12** Environmental protection/Recycling
- 2.12.1 Recycling/treatment of waste glass
- 2.12.1.1 Recording and collection
- 2.12.1.2 Transport
- 2.12.1.3 Crushing
- 2.12.1.4 Sorting
- 2.12.2 Glass Melting / Waste gas technologies
- 2.12.2.1 Filter technologies (flue gas and electrostatic)
- 2.12.2.2 NOx reduction technology, emission reduction technology
- 2.12.3 Heat recovery installations
- 2.12.4 Waste water treatment
- 2.12.4.1 Processing of water cooling for cullet treatment
- 2.12.4.2 Wastewater treatment and cleaning lines
- 2.12.5 Treatment of auxiliary materials
- 2.12.6 Special glass recycling
- 2.12.6.1 Lamps/Lights
- 2.12.6.2 Electrical and optical glass
- 2.12.6.3 Technical glass
- 2.12.6.4 Solar glass and modules
- 2.12.6.5 Window disposal

- 2.13** Nanotechnology

3 Glass products and applications

- 3.1** Flat glass
- 3.1.1 Float and mirror glass
- 3.1.2 Drawing glass
- 3.1.3 Blown glass
- 3.1.4 Cast glass, ornamental glass
- 3.1.5 Thin glass
- 3.1.6 Horticultural glass
- 3.1.7 Wired glass
- 3.1.8 Figured glass/Profiled architectural glass
- 3.1.9 Antique and coloured glass
- 3.1.10 Flashed glass
- 3.1.11 Tiffany glass
- 3.1.12 Decorative colored glass
- 3.1.13 Glass jewellery
- 3.1.14 Glass facets
- 3.1.15 Cross out glass for melting/Fusing glass
- 3.1.16 Glass for restoration work
- 3.1.17 X-ray protection glass
- 3.1.18 Window pictures

- 3.2** Processed glass
- 3.2.1 Tempered glass
- 3.2.2 Laminated glass
- 3.2.2.1 Laminated safety glass (LSG)
- 3.2.2.2 Laminated glass, synthetic-coated
- 3.2.2.3 Casting resin combinations
- 3.2.2.4 Laminated glass (other)
- 3.2.3 Insulating glass
- 3.2.4 Function glasses
- 3.2.4.1 Fireproof glass
- 3.2.4.2 Noise absorbing glass
- 3.2.4.3 Heat insulation glass
- 3.2.4.4 Sun protection glass

- 3.2.5 Alarm glass
- 3.2.6 Display glass
- 3.2.6.1 LED/OLED technology
- 3.2.6.2 LCD glass technology
- 3.2.6.3 Touch screen display glass
- 3.2.7 Other coated types of glass
- 3.2.8 Antireflective glass/frosted glass
- 3.2.9 Curved glass
- 3.2.10 Printed glass
- 3.2.11 Optical glass
- 3.2.12 Self-cleaning glass
- 3.2.13 Solar glass
- 3.2.13.1 Solar Float glass
- 3.2.13.2 Solar Rolled glass
- 3.2.14 Vacuum insulating glass
- 3.2.15 Aluminium silicate glass
- 3.2.16 Processed flat glass (general)

- 3.3** Automotive glass
- 3.3.1 Vehicle glass
- 3.3.1.1 Sealants and adhesives
- 3.3.1.2 Stone-chip repair
- 3.3.1.3 Foils (PVB)
- 3.3.1.3.1 Polymer foils for smart glass
- 3.3.1.3.2 Other foils
- 3.3.1.4 Nano coating technology
- 3.3.2 Materials
- 3.3.3 Bonding technology
- 3.3.4 Tools
- 3.3.5 Trade

- 3.4** Solar technology
- 3.4.1 Photovoltaics
- 3.4.1.1 Solar panels
- 3.4.1.1.1 Crystalline PV panels
- 3.4.1.1.2 Thin film PV panels
- 3.4.1.1.3 Organic Photovoltaics
- 3.4.1.1.4 Multi functional PV panels and elements
- 3.4.1.2 PV system components
- 3.4.2 Solar thermal energy
- 3.4.2.1 Solar mirrors / CSP
- 3.4.2.2 Solar thermal system components
- 3.4.3 Solar architecture and building integrated photovoltaics (BIPV)
- 3.4.4 Other accessories and services

- 3.5** Other glasses
- 3.5.1 Paving blocks, roof tiles
- 3.5.2 Glass spheres and stones
- 3.5.3 Quartz glass
- 3.5.4 Pellets
- 3.5.5 Foam glass
- 3.5.6 Laboratory glass
- 3.5.7 Glass bricks
- 3.5.8 Other types of special glass

- 3.6** Glass and mineral fibres
- 3.6.1 Glass and mineral fibres (general)
- 3.6.2 Glass fibres made of optical glass

- 3.7** Processed flat glass
- 3.7.1 Balustrade panels
- 3.7.1.1 Balcony glazing

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3.7.1.2	Spandrel panels (general)
3.7.2	Transparent glass facade systems
3.7.2.1	Mullion-transom systems
3.7.2.1.1	Mullion-transom constructions made of metal
3.7.2.1.2	Mullion-transom constructions made of plastic
3.7.2.1.3	Mullion-transom constructions made of other materials
3.7.2.2	Element facades made of glass
3.7.2.3	Structural-sealant-glazing facades
3.7.2.4	Double facades
3.7.2.5	Other transparent facade systems
3.7.2.6	Transparent insulation
3.7.3	Ventilated curtain walls
3.7.4	Technologies for multifunctional facades
3.7.4.1	Photovoltaic systems
3.7.4.2	Solar thermal system
3.7.4.3	Systems for sun and glare protection
3.7.4.4	Heat insulation
3.7.4.5	Fire protection
3.7.4.6	Soundproofing
3.7.4.7	Other facade technologies
3.7.5	Exterior wall cladding
3.7.6	Glass roofs and porches
3.7.6.1	Aluminium glass roofs
3.7.6.2	Glass roofs and porches (general)
3.7.7	Elevator glazings
3.7.8	Window constructions
3.7.8.1	Windows and window systems with aluminium/metal frames
3.7.8.2	Windows and window systems with concrete frames
3.7.8.3	Windows and window systems with wooden frames
3.7.8.4	Windows and window systems with plastic frames
3.7.8.5	Windows made from figured glass
3.7.8.6	Windows and window systems with steel frames
3.7.9	Muntin bar windows
3.8	Structural use of glass
3.8.1	Structural use of glass
3.8.2	Tempered glass doors
3.8.3	Safety Doors
3.9	Extrusions
3.10	Technical processing, treatment, finishing design.
3.10.1	Glazing, glass building
3.10.1.1	Construction with glass, specialist glazing systems
3.10.1.1.1	Specialist construction (shower partition walls)
3.10.1.1.2	Glass door systems
3.10.1.1.3	Railings and balustrades
3.10.1.1.4	Walk-on glazing
3.10.1.1.5	Fire protection
3.10.1.1.6	Brackets and glass fittings
3.10.1.1.7	Machinery/tools
3.10.1.2	Glass systems for energy generation
3.10.1.3	Glass picture frames
3.10.1.4	Glass products (museum glass and anti-reflective glass)
3.10.2	Windows and glass façades
3.10.2.1	Glass façade elements
3.10.2.2	Windows/window systems (wood, plastic, metal)
3.10.2.3	Conservatories/Winter gardens
3.10.2.4	Functional fittings and brackets
3.10.3	Glass finishing
3.10.3.1	Edge and surface finishing technology/grinding, engraving, printing

3.10.3.1.1	Grinding technology
3.10.3.1.2	Grinding, polishing and blasting materials
3.10.3.1.3	Etching lubricants and cover materials
3.10.3.2	Surface Finishing Technology/Print
3.10.3.2.1	Paints for Injket, digital printing
3.10.3.2.2	Screenprinting, framing, painting and texturing tools
3.10.3.2.3	Pad printing
3.10.3.2.4	Printing techniques
3.10.3.2.5	Spray tools, equipment and spray paints
3.10.3.2.6	Other surface coating materials
3.10.3.3	Glass painting/glass art
3.10.3.3.1	Glass products/compounds
3.10.3.3.2	Bonding technology
3.10.3.3.3	Decorative foils
3.10.3.3.4	Metallic tapes
3.10.3.3.5	Glass smelting/fusion technology
3.10.3.3.6	Glass paints
3.10.3.3.7	Precious metal preparations
3.10.3.3.8	Lustre, painting materials and adhesive agents
3.10.3.3.9	Creative glass products (glass art)
3.11	locking systems (for windows/doors/gates)
3.11.1	Mechanical locking systems
3.11.1.1	Security fixtures and fittings
3.11.1.2	Security locks
3.11.1.3	Panic fitting and locks
3.11.2	Electrical and electronic safety and security technology
3.11.3	Integration into building technology
3.12	Interior design and decoration
3.12.1	Glass furniture
3.12.2	Parting walls in glass
3.12.3	Panelling and countertops
3.12.4	Glass stairs
3.12.5	Showers and bathrooms
3.12.6	Glass sinks
3.12.7	Mirrors
3.13	LED technology
3.13.1	LED fixture technology
3.13.2	LED display technology
3.14	Lamps
3.14.1	Energy saving lamps
3.14.2	Tube lamp technology
4	Tools, replacement and spare parts, auxiliary equipment and fittings
4.1	Glazing tools
4.1.1	Mechanical tools
4.1.2	Electromechanical tools
4.1.3	Tools and smelting equipment for glass makers
4.1.4	Turning aids and lifting tools for glass makers
4.2	Cutting, grinding and drilling tools
4.3	Handling tools, hand-guided
4.4	Spare and wearing parts
4.5	Protection devices

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4.6 Working clothing

4.7 Cable and hose drag chains

4.8 Lifting and working platforms

4.9 Brackets for glass applications

4.10 Adhesive technology

5 Measurement, testing, control technology and software

5.1 Measurement and control technology, sensing

5.1.1 Measurement and control

5.1.1.1 Measurement and control of glass level

5.1.1.2 Measurement and control of viscosity

5.1.1.3 Measurement and control of radiation in the melt

5.1.1.4 Measurement and control of glass thickness

5.1.1.5 Measurement and control of glass temperature

5.1.1.6 Measurement and control of glass tension

5.1.1.7 Measurement and control of glass colour

5.1.2 Inspection technology

5.1.2.1 Inspection of surface, contour and imperfection

5.1.2.2 Measurement, control and inspection of gas mixture

5.1.2.3 Measurement, control and inspection of gas-filling levels

5.1.2.4 Video inspection glass furnace

5.1.3 Measuring devices to be used on site

5.1.4 Detectors for laminated glass

5.1.5 Control and automation technology

5.2 Regulation technology

5.2.1 MRP machine and transport adjustment

5.2.2 CNC control for handling machines

5.2.3 Electronically controlled machine cooling

5.2.4 Controls for glass inspection machines

5.3 Host computer systems, IT, Communication and Security Technology

5.3.1 MRP/CAD/CIM systems

5.3.2 Inspection, protocolling and diagnostic systems

5.3.3 Process control systems

5.3.4 Other control systems

5.4 Software and applications for architects and planners

5.5 Measuring and testing technology/Software

5.5.1 Single cell and string testers, module testers, test chambers

5.5.2 Visual inspection systems

5.5.3 Process control

5.5.4 Software

5.6 Motorized Technology

5.7 Hydraulics / Pneumatics

6 Contracting, consulting, engineering, services

7

Research and teaching, trade literature, trade associations and organisations

7.1 Universities and colleges

7.2 Specialised Publishers

7.3 Trade associations/Organisations

7.4 Test institutes

7.5 Research institutes and projects