.. by welding together the fibres, e.g. by partially melting or dissolving (in combination with needling D04H

3-Punkt Untergruppe ... in association with fibre formation, e.g. immediately following extrusion of staple fibres

D04H 1/54

D04H 1/56

2-Punkt Untergruppe

D04H

Symbol	Тур	Titel
D04H 1/58	2-Punkt Untergruppe	by applying, incorporating, or activating chemical or thermoplastic bonding agents, e.g. adhesives (in combination with needling D04H 1/48)
D04H 1/60	3-Punkt Untergruppe	the bonding agent being applied in dry state, e.g. thermo-activatable agents in solid or molten state, and heat being applied subsequently
D04H 1/62	4-Punkt Untergruppe	at spaced points or locations
D04H 1/64	3-Punkt Untergruppe	the bonding agent being applied in wet state, e.g. chemical agents in dispersions or solutions
D04H 1/66	4-Punkt Untergruppe	at spaced points or locations (D04H 1/68 takes precedence)
D04H 1/68	4-Punkt Untergruppe	the bonding agent being applied in the form of foam
D04H 1/70	1-Punkt Untergruppe	. characterised by the method of forming fleeces or layers, e.g. reorientation of fibres (lap-forming devices D01G 25/00; paper web-making by wet methods D21F, D21H) [4]
D04H 1/72	2-Punkt Untergruppe	the fibres being randomly arranged
D04H 1/74	2-Punkt Untergruppe	the fibres being orientated, e.g. in parallel
D04H 3/00	Hauptgruppe	Non-woven fabrics formed wholly or mainly of yarns or like filamentary material of substantial length
D04H 3/02	1-Punkt Untergruppe	. characterised by the method of forming fleeces or layers, e.g. reorientation of yarns or filaments (lap- forming devices D01G 25/00; paper web-making by wet methods D21F, D21H) [4]
D04H 3/03	2-Punkt Untergruppe	at random
D04H 3/04	2-Punkt Untergruppe	in rectilinear paths, e.g. crossing at right angles
D04H 3/05	2-Punkt Untergruppe	in another pattern, e.g. zig-zag, sinusoidal
D04H 3/07	2-Punkt Untergruppe	otherwise than in a plane, e.g. in a tubular way
D04H 3/08	1-Punkt Untergruppe	. characterised by the method of strengthening or consolidating
D04H 3/10	2-Punkt Untergruppe	with bonds between yarns or filaments made mechanically (needling machines D04H 18/00; knitting D04B; sewing D05B)
D04H 3/12	2-Punkt Untergruppe	with filaments or yarns secured together by chemical or thermo-activatable bonding agents, e.g. adhesives, applied or incorporated in liquid or solid form
D04H 3/14	2-Punkt Untergruppe	with bonds between thermoplastic yarns or filaments produced by welding
D04H 3/16	3-Punkt Untergruppe	with bonds between thermoplastic filaments produced in association with filament formation, e.g. immediately following extrusion [4]
D04H 5/00	Hauptgruppe	Non-woven fabrics formed of mixtures of relatively-short fibres and yarns or like filamentary material of substantial length
D04H 5/02	1-Punkt Untergruppe	. strengthened or consolidated by mechanical methods, e.g. needling (needling machines D04H 18/00; knitting D04B; sewing D05B)
D04H 5/04	1-Punkt Untergruppe	. strengthened or consolidated by applying or incorporating chemical or thermo-activatable bonding agents in solid or liquid form
D04H 5/06	1-Punkt Untergruppe	. strengthened or consolidated by welding-together thermoplastic fibres, filaments, or yarns
D04H 5/08	1-Punkt Untergruppe	. characterised by the method of forming fleeces or layers, e.g. reorientation of fibres or yarns (lap-forming devices D01G 25/00; paper web-making by wet methods D21F, D21H) [4]
D04H 11/00	Hauptgruppe	Non-woven pile fabrics (layered products forming non-woven pile fabrics B32B; woven pile fabrics D03D; tufting D05C)

D04H

Symbol	Тур	Titel
D04H 11/04	1-Punkt Untergruppe	. formed by zig-zag folding of a fleece or layer of staple fibres, filaments, or yarns, strengthened or consolidated at the folds
D04H 11/08	1-Punkt Untergruppe	. formed by creation of a pile on at least one surface of a non-woven fabric without addition of pile-forming material, e.g. by needling, by differential shrinking (needling machines D04H 18/00)
D04H 13/00	Hauptgruppe	Other non-woven fabrics
D04H 13/02	1-Punkt Untergruppe	. Production of non-woven fabrics by partial defibrillating of oriented thermoplastics films [4]
D04H 17/00	Hauptgruppe	Felting apparatus
D04H 17/10	1-Punkt Untergruppe	. for felting between rollers, e.g. heated rollers
D04H 17/12	2-Punkt Untergruppe	Multi-roller apparatus
D04H 18/00	Hauptgruppe	Needling machines