Symbol	Typ	Titel
H	**Sektion**	**SECTION H — ELECTRICITY**
H05	**Klasse**	**ELECTRIC TECHNIQUES NOT OTHERWISE PROVIDED FOR**
H05B	**Unterklasse**	**ELECTRIC HEATING; ELECTRIC LIGHTING NOT OTHERWISE PROVIDED FOR (apparatus for special application, see the relevant places, e.g. A47J, B21J, B21K, C21, C22, C23, F21, F24, F27)**
		Heating
H05B 1/00	**Hauptgruppe**	**Details of electric heating devices**
H05B 1/02	1-Punkt Untergruppe	. Automatic switching arrangements specially adapted to heating apparatus (control of temperature in general G05D 23/00; thermally-actuated switches H01H 37/00)
H05B 3/00	**Hauptgruppe**	**Ohmic-resistance heating**
H05B 3/02	1-Punkt Untergruppe	. Details
H05B 3/03	2-Punkt Untergruppe	. . Electrodes (electrothermic treatment of ores C22B 4/00) [2]
H05B 3/04	2-Punkt Untergruppe	. . Waterproof or air-tight seals for heaters
H05B 3/06	2-Punkt Untergruppe	. . Heater elements structurally combined with coupling elements or with holders
H05B 3/08	3-Punkt Untergruppe	. . . having electric connections specially adapted for high temperatures
H05B 3/10	1-Punkt Untergruppe	. Heating elements characterised by the composition or nature of the materials or by the arrangement of the conductor (compositions per se, see the relevant subclasses)
H05B 3/12	2-Punkt Untergruppe	. . characterised by the composition or nature of the conductive material
H05B 3/14	3-Punkt Untergruppe	. . . the material being non-metallic
H05B 3/16	2-Punkt Untergruppe	. . the conductor being mounted on an insulating base
H05B 3/18	2-Punkt Untergruppe	. . the conductor being embedded in an insulating material
H05B 3/20	1-Punkt Untergruppe	. Heating elements having extended surface area substantially in a two-dimensional plane, e.g. plate-heater (H05B 3/62, H05B 3/68, H05B 3/78, H05B 3/84 take precedence) [5]
H05B 3/22	2-Punkt Untergruppe	. . non-flexible
H05B 3/24	3-Punkt Untergruppe	. . . heating conductor being self-supporting
H05B 3/26	3-Punkt Untergruppe	. . . heating conductor mounted on insulating base
H05B 3/28	3-Punkt Untergruppe	. . . heating conductor embedded in insulating material
H05B 3/30	4-Punkt Untergruppe	. . . . on or between metallic plates
H05B 3/32	3-Punkt Untergruppe	. . . heating conductor mounted on insulators on a metallic frame
H05B 3/34	2-Punkt Untergruppe	. . flexible, e.g. heating nets or webs
H05B 3/36	3-Punkt Untergruppe	. . . heating conductor embedded in insulating material
H05B 3/38	4-Punkt Untergruppe	. . . . Powder conductors
H05B 3/40	1-Punkt Untergruppe	. Heating elements having the shape of rods or tubes (H05B 3/62, H05B 3/68, H05B 3/78 take precedence)
H05B 3/42	2-Punkt Untergruppe	. . non-flexible

Symbol	Typ	Titel
H05B 3/44	3-Punkt Untergruppe	. . . heating conductor arranged within rods or tubes of insulating material
H05B 3/46	3-Punkt Untergruppe	. . . heating conductor mounted on insulating base
H05B 3/48	3-Punkt Untergruppe	. . . heating conductor embedded in insulating material
H05B 3/50	4-Punkt Untergruppe	. . . . heating conductor arranged in metal tubes, the radiating surface having heat-conducting fins
H05B 3/52	4-Punkt Untergruppe	. . . . Apparatus or processes for filling or compressing insulating material in tubes
H05B 3/54	2-Punkt Untergruppe	. . flexible
H05B 3/56	3-Punkt Untergruppe	. . . Heating cables
H05B 3/58	3-Punkt Untergruppe	. . . Heating hoses; Heating collars
H05B 3/60	1-Punkt Untergruppe	. Heating arrangements wherein the heating current flows through granular, powdered or fluid material, e.g. for salt-bath furnace, electrolytic heating (H05B 3/38 takes precedence)
H05B 3/62	1-Punkt Untergruppe	. Heating elements specially adapted for furnaces (H05B 3/60 takes precedence; arrangements of such elements in furnaces F27, e.g. F27D 11/00)
H05B 3/64	2-Punkt Untergruppe	. . using ribbon, rod, or wire heater
H05B 3/66	2-Punkt Untergruppe	. . Supports or mountings for heaters on or in the wall or roof
H05B 3/68	1-Punkt Untergruppe	. Heating arrangements specially adapted for cooking plates or analogous hot-plates
H05B 3/70	2-Punkt Untergruppe	. . Plates of cast metal
H05B 3/72	2-Punkt Untergruppe	. . Plates of sheet metal
H05B 3/74	2-Punkt Untergruppe	. . Non-metallic plates
H05B 3/76	2-Punkt Untergruppe	. . Plates with spirally-wound heating tubes
H05B 3/78	1-Punkt Untergruppe	. Heating arrangements specially adapted for immersion heating
H05B 3/80	2-Punkt Untergruppe	. . Portable immersion heaters
H05B 3/82	2-Punkt Untergruppe	. . Fixedly-mounted immersion heaters
H05B 3/84	1-Punkt Untergruppe	. Heating arrangements specially adapted for transparent or reflecting areas, e.g. for demisting or de-icing windows, mirrors or vehicle windshields [5]
H05B 3/86	2-Punkt Untergruppe	. . the heating conductors being embedded in the transparent or reflecting material [5]
H05B 6/00	**Hauptgruppe**	**Heating by electric, magnetic, or electromagnetic fields (for therapeutic purposes A61N 5/00; joining of preformed parts by heating of plastics or substances in a plastic state B29C 65/02) [3]**
H05B 6/02	1-Punkt Untergruppe	. Induction heating [3]
H05B 6/04	2-Punkt Untergruppe	. . Sources of current [3]
H05B 6/06	2-Punkt Untergruppe	. . Control, e.g. of temperature, of power [3]
H05B 6/08	3-Punkt Untergruppe	. . . using compensating or balancing arrangements [3]
H05B 6/10	2-Punkt Untergruppe	. . Induction heating apparatus, other than furnaces, for specific applications [3]
H05B 6/12	3-Punkt Untergruppe	. . . Cooking devices [3]
H05B 6/14	3-Punkt Untergruppe	. . . Tools, e.g. nozzles, rollers, calenders [3]

Symbol	Typ	Titel
H05B 6/16	2-Punkt Untergruppe	. . Furnaces having endless cores (H05B 6/34 takes precedence) [3]
H05B 6/18	3-Punkt Untergruppe	. . . having melting basin [3]
H05B 6/20	3-Punkt Untergruppe	. . . having melting channel only [3]
H05B 6/22	2-Punkt Untergruppe	. . Furnaces without an endless core (H05B 6/34 takes precedence) [3]
H05B 6/24	3-Punkt Untergruppe	. . . Crucible furnaces (H05B 6/30 takes precedence) [3]
H05B 6/26	4-Punkt Untergruppe	. . . . using vacuum or particular gas atmosphere [3]
H05B 6/28	4-Punkt Untergruppe	. . . . Protective systems [3]
H05B 6/30	3-Punkt Untergruppe	. . . Arrangements for remelting or zone melting [3]
H05B 6/32	3-Punkt Untergruppe	. . . Arrangements for simultaneous levitation and heating [3]
H05B 6/34	2-Punkt Untergruppe	. . Arrangements for circulation of melts [3]
H05B 6/36	2-Punkt Untergruppe	. . Coil arrangements [3]
H05B 6/38	3-Punkt Untergruppe	. . . specially adapted for fitting into hollow spaces of workpieces [3]
H05B 6/40	3-Punkt Untergruppe	. . . Establishing desired heat distribution, e.g. to heat particular parts of workpieces [3]
H05B 6/42	3-Punkt Untergruppe	. . . Cooling of coils [3]
H05B 6/44	3-Punkt Untergruppe	. . . having more than one coil or coil segment [3]
H05B 6/46	1-Punkt Untergruppe	. Dielectric heating (H05B 6/64 take precedence) [3]
H05B 6/48	2-Punkt Untergruppe	. . Circuits [3]
H05B 6/50	3-Punkt Untergruppe	. . . for monitoring or control [3]
H05B 6/52	2-Punkt Untergruppe	. . Feed lines [3]
H05B 6/54	2-Punkt Untergruppe	. . Electrodes [3]
H05B 6/56	3-Punkt Untergruppe	. . . Rolling electrodes [3]
H05B 6/58	3-Punkt Untergruppe	. . . "sewing machine" type [3]
H05B 6/60	2-Punkt Untergruppe	. . Arrangements for continuous movement of material [3]
H05B 6/62	2-Punkt Untergruppe	. . Apparatus for specific applications [3]
H05B 6/64	1-Punkt Untergruppe	. Heating using microwaves [3]
H05B 6/66	2-Punkt Untergruppe	. . Circuits [3]
H05B 6/68	3-Punkt Untergruppe	. . . for monitoring or control [3]
H05B 6/70	2-Punkt Untergruppe	. . Feed lines [3]
H05B 6/72	2-Punkt Untergruppe	. . Radiators or aerials [3]
H05B 6/74	2-Punkt Untergruppe	. . Mode transformers or mode stirrers [3]
H05B 6/76	2-Punkt Untergruppe	. . Prevention of microwave leakage, e.g. door sealings [3]
H05B 6/78	2-Punkt Untergruppe	. . Arrangements for continuous movement of material [3]

Symbol	Typ	Titel
H05B 6/80	2-Punkt Untergruppe	. . Apparatus for specific applications (stoves or ranges F24C 7/02) [3]
H05B 7/00	**Hauptgruppe**	**Heating by electric discharge (electron beam or ion beam tubes for localised treatment of objects H01J 37/30; plasma torches H05H 1/26)**
H05B 7/02	1-Punkt Untergruppe	. Details
H05B 7/06	2-Punkt Untergruppe	. . Electrodes
H05B 7/07	3-Punkt Untergruppe	. . . designed to melt in use [2]
H05B 7/08	3-Punkt Untergruppe	. . . non-consumable [2]
H05B 7/085	4-Punkt Untergruppe	. . . . mainly consisting of carbon [2]
H05B 7/09	5-Punkt Untergruppe	. . . . . Self-baking electrodes [2]
H05B 7/10	2-Punkt Untergruppe	. . Mountings, supports, terminals, or arrangements for feeding or guiding electrodes [2]
H05B 7/101	3-Punkt Untergruppe	. . . Mountings, supports, or terminals at head of electrode, i.e. at the end remote from the arc [2]
H05B 7/102	4-Punkt Untergruppe	. . . . specially adapted for consumable electrodes [2]
H05B 7/103	3-Punkt Untergruppe	. . . Mountings, supports, or terminals with jaws (H05B 7/101 takes precedence) [2]
H05B 7/105	4-Punkt Untergruppe	. . . . comprising more than two jaws equally spaced along circumference, e.g. ring holders [2]
H05B 7/107	3-Punkt Untergruppe	. . . specially adapted for self-baking electrodes [2]
H05B 7/109	3-Punkt Untergruppe	. . . Feeding arrangements (H05B 7/107 takes precedence; where the electrode movement is a part of a closed loop for automatic control of power H05B 7/148) [2]
H05B 7/11	2-Punkt Untergruppe	. . Arrangements for conducting current to the electrode terminals (non-insulated conductors or conductive bodies in general H01B 5/00; insulated conductors or cables in general H01B 7/00) [2]
H05B 7/12	2-Punkt Untergruppe	. . Arrangements for cooling, sealing, or protecting electrodes [2]
H05B 7/14	2-Punkt Untergruppe	. . Arrangements or methods for connecting successive electrode sections [2]
H05B 7/144	2-Punkt Untergruppe	. . Power supplies specially adapted for heating by electric discharge; Automatic control of power, e.g. by positioning of electrodes (circuit arrangements for supplying electric power in general H02J) [2]
H05B 7/148	3-Punkt Untergruppe	. . . Automatic control of power (electrode feeding arrangements H05B 7/109; automatic feeding or moving of electrodes for spot or seam welding or cutting B23K 9/12; disposition of electrodes in or on furnaces F27D 11/10; control of position in general G05D 3/00; regulating electric characteristics of arcs in general G05F 1/02; regulating electric power in general G05F 1/66) [2]
H05B 7/152	4-Punkt Untergruppe	. . . . by electromechanical means for positioning of electrodes [2]
H05B 7/156	4-Punkt Untergruppe	. . . . by hydraulic or pneumatic means for positioning of electrodes [2]
H05B 7/16	1-Punkt Untergruppe	. Heating by glow discharge
H05B 7/18	1-Punkt Untergruppe	. Heating by arc discharge
H05B 7/20	2-Punkt Untergruppe	. . Direct heating by arc discharge, i.e. where at least one end of the arc directly acts on the material to be heated, including additional resistance heating by arc current flowing through the material to be heated [2]
H05B 7/22	2-Punkt Untergruppe	. . Indirect heating by arc discharge [2]
H05B 11/00	**Hauptgruppe**	**Heating by combined application of processes covered by two or more of groups H05B 3/00-H05B 7/00 (H05B 7/20 takes precedence)**
		<u>Lighting</u>
H05B 31/00	**Hauptgruppe**	**Electric arc lamps (regulating electric characteristics of arcs G05F 1/02; with non-consumable**

Symbol	Typ	Titel
		electrodes H01J 61/00)
H05B 31/02	1-Punkt Untergruppe	. Details
H05B 31/04	2-Punkt Untergruppe	. . Housings
H05B 31/06	2-Punkt Untergruppe	. . Electrodes
H05B 31/08	3-Punkt Untergruppe	. . . Carbon electrodes
H05B 31/10	4-Punkt Untergruppe	. . . . Cored carbon electrodes
H05B 31/12	4-Punkt Untergruppe	. . . . Beck-effect electrodes
H05B 31/14	3-Punkt Untergruppe	. . . Metal electrodes
H05B 31/16	3-Punkt Untergruppe	. . . Apparatus or processes specially adapted for manufacturing electrodes
H05B 31/18	2-Punkt Untergruppe	. . Mountings for electrodes; Electrode feeding devices
H05B 31/20	3-Punkt Untergruppe	. . . Mechanical arrangements for feeding electrodes
H05B 31/22	3-Punkt Untergruppe	. . . Electromagnetic arrangements for feeding electrodes
H05B 31/24	2-Punkt Untergruppe	. . Cooling arrangements
H05B 31/26	2-Punkt Untergruppe	. . Influencing the shape of arc discharge by gas blowing devices
H05B 31/28	2-Punkt Untergruppe	. . Influencing the shape of arc discharge by magnetic means
H05B 31/30	2-Punkt Untergruppe	. . Starting; Igniting
H05B 31/32	2-Punkt Untergruppe	. . Switching-off
H05B 31/34	2-Punkt Untergruppe	. . Indicating consumption of electrodes
H05B 31/36	1-Punkt Untergruppe	. having two electrodes in line
H05B 31/38	2-Punkt Untergruppe	. . specially adapted for ac
H05B 31/40	1-Punkt Untergruppe	. having two electrodes at an angle
H05B 31/42	2-Punkt Untergruppe	. . specially adapted for ac
H05B 31/44	1-Punkt Untergruppe	. having two parallel electrodes
H05B 31/46	2-Punkt Untergruppe	. . specially adapted for ac
H05B 31/48	1-Punkt Untergruppe	. having more than two electrodes
H05B 31/50	2-Punkt Untergruppe	. . specially adapted for ac
H05B 31/52	3-Punkt Untergruppe	. . . electrodes energised from different phases of the supply
H05B 33/00	***Hauptgruppe***	***Electroluminescent light sources (discharge lamps H01J 61/00-H01J 65/00 ; semi-conductor devices with at least one particular jump barrier or surface barrier specially adapted for light emission H01L 27/15 , H01L 33/00 ; organic light emitting devices H01L 27/32 , H01L 51/50 ; lasers H01S 3/00 , H01S 5/00 ; compositions per se , see the relevant subclasses) [1, 2006.01]***
H05B 33/02	1-Punkt Untergruppe	. Details
H05B 33/04	2-Punkt Untergruppe	. . Sealing arrangements
H05B 33/06	2-Punkt Untergruppe	. . Electrode terminals

Symbol	Typ	Titel
H05B 33/08	2-Punkt Untergruppe	. . Circuit arrangements not adapted to a particular application
H05B 33/10	1-Punkt Untergruppe	. Apparatus or processes specially adapted to the manufacture of electroluminescent light sources
H05B 33/12	1-Punkt Untergruppe	. Light sources with substantially two-dimensional radiating surfaces
H05B 33/14	2-Punkt Untergruppe	. . characterised by the chemical or physical composition or the arrangement of the electroluminescent material
H05B 33/18	2-Punkt Untergruppe	. . characterised by the nature or concentration of the activator
H05B 33/20	2-Punkt Untergruppe	. . characterised by the chemical or physical composition or the arrangement of the material in which the electroluminescent material is embedded
H05B 33/22	2-Punkt Untergruppe	. . characterised by the chemical or physical composition or the arrangement of auxiliary dielectric or reflective layers
H05B 33/24	3-Punkt Untergruppe	. . . of metallic reflective layers (H05B 33/26 takes precedence)
H05B 33/26	2-Punkt Untergruppe	. . characterised by the composition or arrangement of the conductive material used as an electrode
H05B 33/28	3-Punkt Untergruppe	. . . of translucent electrodes
H05B 35/00	**Hauptgruppe**	**Electric light sources using a combination of different types of light generation**
H05B 37/00	**Hauptgruppe**	**Circuit arrangements for electric light sources in general**
H05B 37/02	1-Punkt Untergruppe	. Controlling
H05B 37/03	1-Punkt Untergruppe	. Detecting lamp failure
H05B 37/04	2-Punkt Untergruppe	. . Circuits providing for substitution of the light source in case of its failure
H05B 39/00	**Hauptgruppe**	**Circuit arrangements or apparatus for operating incandescent light sources and not adapted to a particular application**
H05B 39/02	1-Punkt Untergruppe	. Switching-on, e.g. with predetermined rate of increase of lighting current
H05B 39/04	1-Punkt Untergruppe	. Controlling
H05B 39/06	2-Punkt Untergruppe	. . Switching arrangements, e.g. from series operation to parallel operation
H05B 39/08	2-Punkt Untergruppe	. . by shifting phase of trigger voltage applied to gas-filled controlling tubes
H05B 39/09	1-Punkt Untergruppe	. in which the lamp is fed by pulses
H05B 39/10	1-Punkt Untergruppe	. Circuits providing for substitution of the light source in case of its failure
H05B 41/00	**Hauptgruppe**	**Circuit arrangements or apparatus for igniting or operating discharge lamps**
H05B 41/02	1-Punkt Untergruppe	. Details
H05B 41/04	2-Punkt Untergruppe	. . Starting switches
H05B 41/06	3-Punkt Untergruppe	. . . thermal only
H05B 41/08	4-Punkt Untergruppe	. . . . heated by glow discharge
H05B 41/10	3-Punkt Untergruppe	. . . magnetic only
H05B 41/12	3-Punkt Untergruppe	. . . combined thermal and magnetic
H05B 41/14	1-Punkt Untergruppe	. Circuit arrangements
H05B 41/16	2-Punkt Untergruppe	. . in which the lamp is fed by dc or by low-frequency ac, e.g. by 50 cycles/sec ac (H05B 41/26 takes precedence)

Symbol	Typ	Titel
H05B 41/18	3-Punkt Untergruppe	. . . having a starting switch
H05B 41/19	4-Punkt Untergruppe	. . . . for lamps having an auxiliary starting electrode
H05B 41/20	3-Punkt Untergruppe	. . . having no starting switch
H05B 41/22	4-Punkt Untergruppe	. . . . for lamps having an auxiliary starting electrode
H05B 41/23	4-Punkt Untergruppe	. . . . for lamps not having an auxiliary starting electrode
H05B 41/231	5-Punkt Untergruppe	. . . . . for high-pressure lamps
H05B 41/232	5-Punkt Untergruppe	. . . . . for low-pressure lamps
H05B 41/233	6-Punkt Untergruppe	. . . . . using resonance circuitry
H05B 41/234	6-Punkt Untergruppe	. . . . . to eliminate stroboscopic effects, e.g. feeding two lamps with different phases
H05B 41/24	2-Punkt Untergruppe	. . in which the lamp is fed by high-frequency ac (H05B 41/26 takes precedence)
H05B 41/26	2-Punkt Untergruppe	. . in which the lamp is fed by power derived from dc by means of a converter, e.g. by high-voltage dc
H05B 41/28	3-Punkt Untergruppe	. . . using static converters
H05B 41/282	4-Punkt Untergruppe	. . . . with semiconductor devices (H05B 41/288, H05B 41/295 take precedence) [7]
H05B 41/285	5-Punkt Untergruppe	. . . . . Arrangements for protecting lamps or circuits against abnormal operating conditions [7]
H05B 41/288	4-Punkt Untergruppe	. . . . with semiconductor devices and specially adapted for lamps without preheating electrodes, e.g. for high-intensity discharge lamps, high-pressure mercury or sodium lamps or low-pressure sodium lamps [7]
H05B 41/292	5-Punkt Untergruppe	. . . . . Arrangements for protecting lamps or circuits against abnormal operating conditions [7]
H05B 41/295	4-Punkt Untergruppe	. . . . with semiconductor devices and specially adapted for lamps with preheating electrodes, e.g. for fluorescent lamps [7]
H05B 41/298	5-Punkt Untergruppe	. . . . . Arrangements for protecting lamps or circuits against abnormal operating conditions [7]
H05B 41/30	2-Punkt Untergruppe	. . in which the lamp is fed by pulses, e.g. flash lamp
H05B 41/32	3-Punkt Untergruppe	. . . for single flash operation
H05B 41/34	3-Punkt Untergruppe	. . . to provide a sequence of flashes
H05B 41/36	2-Punkt Untergruppe	. . Controlling
H05B 41/38	3-Punkt Untergruppe	. . . Controlling the intensity of light
H05B 41/39	4-Punkt Untergruppe	. . . . continuously
H05B 41/391	5-Punkt Untergruppe	. . . . . using saturable magnetic devices
H05B 41/392	5-Punkt Untergruppe	. . . . . using semiconductor devices, e.g. thyristor
H05B 41/40	4-Punkt Untergruppe	. . . . discontinuously
H05B 41/42	5-Punkt Untergruppe	. . . . . in two steps only
H05B 41/44	3-Punkt Untergruppe	. . . for providing special optical effects, e.g. progressive motion of light
H05B 41/46	2-Punkt Untergruppe	. . Circuits providing for substitution in case of failure of the lamp
H05B 43/00	**Hauptgruppe**	**Circuit arrangements for light sources, not otherwise provided for (H05B 37/00 takes precedence)**

Symbol	Typ	Titel
H05B 43/02	1-Punkt Untergruppe	. for light sources using a charge of combustible material