# SECTION H — ELECTRICITY

## H05 ELECTRIC TECHNIQUES NOT OTHERWISE PROVIDED FOR

**H05G** **X-RAY TECHNIQUE** (apparatus for radiation diagnosis A61B 6/00; X-ray therapy A61N; testing by X-rays G01N; apparatus for X-ray photography G03B; filters, conversion screens, microscopes G21K; X-ray tubes H01J 35/00; TV systems having X-ray input H04N 5/321)

**1/00** **X-ray apparatus involving X-ray tubes; Circuits therefor**

1/02 • Constructional details

1/04 • • Mounting the X-ray tube within a closed housing

1/06 • • • X-ray tube and at least part of the power supply apparatus being mounted within the same housing

1/08 • Electrical details

1/10 • • Power supply arrangements for feeding the X-ray tube

1/12 • • • with dc or rectified single-phase ac

1/14 • • • with single-phase low-frequency ac

1/16 • • • • Reducing the peak-inverse voltage

1/18 • • • with polyphase ac of low frequency

1/20 • • • with high-frequency ac; with pulse trains

1/22 • • • with single pulses

1/24 • • • • Obtaining pulses by using energy storage devices (pulse generators H03K)

1/26 • • Measuring, controlling, protecting (measuring electric values G01R; measuring X-ray intensity G01T)

1/28 • • • Measuring or recording actual exposure time; Counting number of exposures; Measuring required exposure time

1/30 • • • Controlling

1/32 • • • • Supply voltage of the X-ray apparatus or tube (regulating supply without reference to operating characteristics of the apparatus G05F)

1/34 • • • • Anode current, heater current, heater voltage of X-ray tube (regulating supply without reference to operating characteristics of the apparatus G05F)

1/36 • • • • Temperature of anode; Brightness of image

1/38 • • • • Exposure time

1/40 • • • • • using adjustable time switch

1/42 • • • • • using arrangements for switching when a predetermined dose of radiation has been applied, e.g. in which the switching instant is determined by measuring the electrical energy supplied to the tube

1/44 • • • • • • in which the switching instant is determined by measuring the amount of radiation directly

1/46 • • • • Combined control of different quantities, e.g. exposure time as well as voltage or current

1/48 • • • • Compensating the voltage drop occurring at the instant of switching-on of the apparatus (regulating supply without reference to operating characteristics of the apparatus G05F)

1/50 • • • • Passing the tube current only during a restricted portion of the voltage waveform

1/52 • • • • Target size or shape; Direction of electron beam, e.g. in tubes with one anode and more than one cathode

1/54 • • • Protecting (overload protection combined with control H05G 1/46)

1/56 • • Switching-on; Switching-off

1/58 • • Switching arrangements for changing-over from one mode of operation to another, e.g. from radioscopy to radiography, from radioscopy to irradiation

1/60 • • Circuit arrangements for obtaining a series of X-ray photographs or for X-ray cinematography

1/61 • • • for obtaining stereoscopic photographs **[5]**

1/62 • • Circuit arrangements for obtaining X-ray photography at predetermined instants in the movement of an object, e.g. X-ray stroboscopy

1/64 • • Circuit arrangements for X-ray apparatus incorporating electronic image converters, e.g. image intensifiers **[5]**

1/66 • • Circuit arrangements for X-ray tubes with target movable relatively to the anode

1/68 • • Circuit arrangements for Lilienfeld tubes; Circuit arrangements for gas-filled X-ray tubes

1/70 • • Circuit arrangements for X-ray tubes with more than one anode; Circuit arrangements for apparatus comprising more than one X-ray tube

**2/00** **Apparatus or processes specially adapted for producing X-rays, not involving X-ray tubes, e.g. involving generation of a plasma** (X-ray lasers H01S 4/00; plasma technique in general H05H) **[5]**