

**CPC****COOPERATIVE PATENT CLASSIFICATION****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](#))

**WARNING**

The following IPC group is not used in the CPC scheme. [H05G 1/61](#) covered by [H05G 1/60](#)

**H05G 1/00****X-ray apparatus involving X-ray tubes; circuits therefor**[H05G 1/02](#)

- Constructional details

[H05G 1/025](#)

- • {Means for cooling the X-ray tube or the generator}

[H05G 1/04](#)

- • Mounting the X-ray tube within a closed housing

[H05G 1/06](#)

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

[H05G 1/08](#)

- Electrical details

[H05G 1/085](#)

- • {Circuit arrangements particularly adapted for X-ray tubes having a control grid}

[H05G 1/10](#)

- • Power supply arrangements for feeding the X-ray tube {(supply circuits with converters in general [H02M](#); supply circuits for emitters and amplifiers [H04B 1/16](#) - [H04B 1/1623](#))}

[H05G 1/12](#)

- • • with dc or rectified single-phase ac {or double-phase}

[H05G 1/14](#)

- • • with single-phase low-frequency ac {also when a rectifier element is in series with the X-ray tube}

[H05G 1/16](#)

- • • • Reducing the peak-inverse voltage

[H05G 1/18](#)

- • • with polyphase ac of low frequency {rectified}

[H05G 1/20](#)

- • • with high-frequency ac; with pulse trains {(pulse generators in general [H03K 3/00](#), [H03K 4/00](#))}

[H05G 1/22](#)

- • • with single pulses

[H05G 1/24](#)

- • • • Obtaining pulses by using energy storage devices (pulse generators [H03K](#) {current and voltage pulse generators [H03K 3/53](#))}

[H05G 1/26](#)

- • Measuring, controlling, protecting (measuring electric values [G01R](#); measuring X-ray intensity [G01T](#))

[H05G 1/265](#)

- • • {Measurements of current, voltage or power}

[H05G 1/28](#)

- • • Measuring or recording actual exposure time; Counting number of exposures; Measuring required exposure time

[H05G 1/30](#)

- • • Controlling

[H05G 1/32](#)

- • • • supply voltage of the X-ray apparatus or tube (regulating supply without reference to operating characteristics of the apparatus [G05F](#) {voltage regulation in general [G05F](#)})

[H05G 1/34](#)

- • • • anode current, heater current, heater voltage of X-ray tube (regulating supply without reference to operating characteristics of the apparatus [G05F](#) {current regulation in general [G05F](#)})

- H05G 1/36 . . . . temperature of anode; brightness of image {power (electrical temperature regulating in general [G05D 23/19](#))}
- H05G 1/38 . . . . exposure time {(time switches in general [H01H 43/00](#) and subgroups)}
- H05G 1/40 . . . . . using adjustable time-switch
- H05G 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
- H05G 1/44 . . . . . in which the switching instant is determined by measuring the amount of radiation directly {(dosimetry in general [G01T 1/02](#))}
- H05G 1/46 . . . . Combined control of different quantities, e.g. exposure time as well as voltage or current
- H05G 1/48 . . . . Compensating the voltage drop occurring at the instant of switching-on of the apparatus (regulating supply without reference to the operating characteristics of the apparatus [G05F](#) {voltage regulation in general [G05F](#)})
- H05G 1/50 . . . . Passing the tube current only during a restricted portion of the voltage waveform
- H05G 1/52 . . . . target size or shape; direction of electron beam, e.g. in tubes with one anode and more than one cathode
- H05G 1/54 . . . . Protecting {or lifetime prediction} (overload protection combined with control [H05G 1/46](#))
- H05G 1/56 . . . Switching-on; Switching-off
- H05G 1/58 . . . Switching arrangements for changing-over from one mode of operation to another, e.g. from radioscopy to radiography, from radioscopy to irradiation {or from one tube voltage to another}
- H05G 1/60 . . . Circuit arrangements for obtaining a series of X-ray photographs or for X-ray cinematography
- H05G 1/62 . . . Circuit arrangements for obtaining X-ray photography at predetermined instants in the movement of an object, e.g. X-ray stroboscopy
- H05G 1/64 . . . Circuit arrangements for X-ray apparatus incorporating image intensifiers
- WARNING**
- image intensifiers [H01J 31/00](#)
- H05G 1/66 . . . Circuit arrangement for X-ray tubes with target movable relatively to the anode
- H05G 1/68 . . . Circuit arrangements for Lillienfeld tubes; Circuit arrangements for gas-filled X-ray tubes
- H05G 1/70 . . . Circuit arrangements for X-ray tubes with more than one anode; Circuit arrangements for apparatus comprising more than one X ray tube {or more than one cathode ([H05G 1/58](#) takes precedence)}
- H05G 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](#))**
- H05G 2/001 . . {X-ray radiation generated from plasma (plasma for generation of electrons to be accelerated towards an anode [H01J 35/00](#))}
- H05G 2/003 . . {being produced from a liquid or gas}

- H05G 2/005
  - • • {containing a metal as principal radiation generating component}
- H05G 2/006
  - • • {details of the ejection system, e.g. constructional details of the nozzle}
- H05G 2/008
  - • {involving a beam of energy, e.g. laser or electron beam in the process of exciting the plasma}