

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](#) to [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 an other](#)}
- 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

[Material provisionally in 97DP27; 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 Lilienfeld 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}