

H05G

X-RAY TECHNIQUE (investigating or analysing materials by the use of X-rays [G01N 23/00](#); apparatus for X-ray photography [G03B 42/02](#); X-ray tubes [H01J 35/00](#); TV systems having X-ray input [H04N 5/321](#))

References

Limiting references

This place does not cover:

Investigating or analysing materials by the use of X-rays	G01N 23/00
Apparatus for X-ray photography	G03B 42/02
X-ray tubes	H01J 35/00
TV systems having X-ray input	H04N 5/321

Informative references

Attention is drawn to the following places, which may be of interest for search:

Apparatus for radiation diagnosis	A61B 6/00
X-ray therapy	A61N
Filters, conversion screens or microscopes	G21K

H05G 1/00

X-ray apparatus involving X-ray tubes; Circuits therefor

Definition statement

This place covers:

Devices intended to be used in conjunction with X-ray tubes and containing technical features relating to the operation of the X-ray tube, such as providing power, controlling the operation of the tube itself, cooling the tube.

References

Limiting references

This place does not cover:

Computed tomography	A61B 6/03
Positioning of patients; Tiltable beds or the like	A61B 6/04

Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring x-ray intensity	G01T
Regulating supply in general	G05F
Measuring electric values	H01R

H05G 1/04**Mounting the X-ray tube within a closed housing****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

X-ray windows	H01J 5/18
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H05G 1/24**Obtaining pulses by using energy storage devices****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Pulse generators	H03K
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H05G 1/26**Measuring, controlling or protecting (measuring X-ray radiation [G01T](#))****References****Limiting references**

This place does not cover:

Measuring X-ray radiation	G01T
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring electric values	G01R
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H05G 1/32**Supply voltage of the X-ray apparatus or tube****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Regulating supply without reference to operating characteristics of the apparatus	G05F
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H05G 1/34**Anode current, heater current or heater voltage of X-ray tube****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Regulating supply without reference to operating characteristics of the apparatus	G05F
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H05G 1/48**Compensating the voltage drop occurring at the instant of switching-on of the apparatus****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Regulating supply without reference to operating characteristics of the apparatus	G05F
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H05G 1/54**Protecting {or lifetime prediction} (overload protection combined with control [H05G 1/46](#))****References****Limiting references***This place does not cover:*

Overload protection combined with control	H05G 1/46
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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](#))****References****Limiting references***This place does not cover:*

X-ray lasers	H01S 4/00
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Informative references*Attention is drawn to the following places, which may be of interest for search:*

Plasma technique in general	H05H
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H05G 2/001**{Production of X-ray radiation generated from plasma}****Definition statement**

This place covers:

Generation of recombination radiation in hot plasma, interaction of laser radiation with highly charged ions for harmonics generation.

Devices in which a plasma is used for generation of electrons to be accelerated towards an anode	H01J 35/00
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References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Plasma for generation of electrons to be accelerated towards an anode	H01J 35/00
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H05G 2/002**{Supply of the plasma generating material}****Synonyms and Keywords**

In patent documents, the word/expression in the first column is often used instead of the word/expression in the second column, which is used in the classification scheme of this place:

target	Plasma-generating material
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H05G 2/0023**{Constructional details of the ejection system}****Definition statement**

This place covers:

Details of the system for introducing the plasma-generating material into the source.

H05G 2/0025**{Systems for collecting the plasma generating material after the plasma generation}****Definition statement**

This place covers:

Apparatus for the collection of unused plasma-generating material, for exiting the plasma-generating material from the source.

H05G 2/0027**{Arrangements for controlling the supply; Arrangements for measurements}****Definition statement***This place covers:*

Apparatus and processes for controlling the supply of the plasma-generating material and arrangements for measuring "per se" or in relation with controlling the supply.

Special rules of classification

If in combination with the control of a laser beam that is involved in the process of generating the plasma, [H05G 2/0084](#) should be also allocated.

H05G 2/003**{the plasma being generated from a material in a liquid or gas state}****Definition statement***This place covers:*

Generation of radiation from plasma being produced from material which is provided in a non-bulk state, including liquids which solidify (e.g. in clusters or frozen droplets) in the vacuum chamber, e.g. after passing the liquid through a nozzle; discharge plasma sources; including Sn or Li sources where the material to be excited is evaporated or molten before excitation to plasma.

H05G 2/0082**{the energy-carrying beam being a laser beam}****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Lasers	H01S 3/00
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H05G 2/0086**{Optical arrangements for conveying the laser beam to the plasma generation location}****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Optical systems in general	G02B
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H05G 2/0088**{for preconditioning the plasma generating material}****Definition statement***This place covers:*

Lasers used for preconditioning the plasma generating material, i.e. not yet resulting in the desired X-ray emission.

H05G 2/009**{Auxiliary arrangements not involved in the plasma generation}****Definition statement***This place covers:*

Aspects of the apparatus specially adapted for producing X-rays that are not directed to the generation of the plasma.

H05G 2/0092**{Housing of the apparatus for producing X-rays; Environment inside the housing}****Definition statement***This place covers:*

Details of the source vessel construction and internal environment, e.g. gas-filling.

H05G 2/0094**{Reduction, prevention or protection from contamination; Cleaning}****Definition statement***This place covers:*

Apparatus and processes for preventing and/or reducing contamination, e.g. debris generating from the plasma material, and for protecting and cleaning elements of the X-ray apparatus, e.g. the collector.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Lamphouse reflector arrangements	G03F 7/70175
Pollution mitigation	G03F 7/70916
Cleaning	G03F 7/70925
Devices having a multilayer structure	G21K 1/062