CPC COOPERATIVE PATENT CLASSIFICATION

H01T SPARK GAPS; OVERVOLTAGE ARRESTERS USING SPARK GAPS; SPARKING PLUGS; CORONA DEVICES; GENERATING IONS TO BE INTRODUCED INTO NON-ENCLOSED GASES (working of metal by the action of a high concentration of electric current B23H; welding, e.g. arc welding, electron beam welding or electrolytic welding B23K; gas-filled discharge tubes with solid cathode H01J 17/00; electric arc lamps H05B 31/00)

NOTE

In this subclass, the term "spark gaps" is used with the following meaning:

- enclosed or non-enclosed discharge device having cold electrodes and used exclusively to discharge a quantity of electrical energy in a small time duration.

H01T 1/00 **Details of spark gaps**

H01T 1/02 . Means for extinguishing arc

H01T 1/04 . . using magnetic blow-out

H01T 1/06 . . . with permanent magnet

H01T 1/08 . . using flow of arc-extinguishing fluid

H01T 1/10 . . . with extinguishing fluid evolved from solid material by heat of arc

H01T 1/12 . Means structurally associated with spark gap for recording operation thereof

H01T 1/14 . Means structurally associated with spark gap for protecting it against overload or for disconnecting it in case of failure (H01T 1/15, H01T 1/16, H01T 1/18 take precedence)

H01T 1/15 . for protection against excessive pressure

H01T 1/16 . Series resistor structurally associated with spark gap

H01T 1/18 . Electrolytic device structurally associated with spark gap

H01T 1/20 . Means for starting arc or facilitating ignition of spark gap

H01T 1/22 . . by the shape or the composition of the electrodes

H01T 1/24 . Selection of materials for electrodes (H01T 1/22 takes precedence)

H01T 2/00 **Spark gaps comprising auxiliary triggering means** (triggering circuits H01T 15/00)

H01T 2/02 . comprising a trigger electrode or an auxiliary spark gap

H01T 4/00 **Overvoltage arresters using spark gaps** (H01T 2/00 takes precedence; overvoltage protection circuits using spark gaps H02H 9/06)

H01T 4/02 . Details (of spark gaps H01T 1/00)

H01T 4/04 . Housings (H01T 4/06 takes precedence)

H01T 4/06 . Mounting arrangements for a plurality of overvoltage arresters

H01T 4/08 . structurally associated with protected apparatus (with switches H01H 9/14; with fuses H01H 85/44)

H01T 4/10 . having a single gap or a plurality of gaps in parallel
H01T 4/12 . . hermetically sealed
H01T 4/14 . . Arcing horns (associated with insulators H01B 17/46)
H01T 4/16 . having a plurality of gaps arranged in series
H01T 4/18 . . Arrangements for reducing height of stocked spark gaps
H01T 4/20 . . Arrangements for improving potential distribution

H01T 7/00 Rotary spark gaps, i.e. devices having one or more rotating electrodes

H01T 9/00 Spark gaps specially adapted for generating oscillations

H01T 11/00 Spark gaps specially adapted as rectifiers

H01T 13/00 Sparking plugs
H01T 13/02 . Details
H01T 13/04 . . Means providing electrical connection to sparking plug (electric connections in general H01R)
H01T 13/05 . . . combined with interference suppressing or shielding means
H01T 13/06 . . Covers forming a part of the plug and protecting it against adverse environment
H01T 13/08 . . Mounting, fixing or sealing of sparking plugs, e.g. in combustion chamber
H01T 13/10 . . . by bayonet-type connection
H01T 13/12 . . Means on sparking plugs for facilitating engagement by tool or by hand
H01T 13/14 . . Means for self-cleaning
H01T 13/16 . . Means for dissipating heat
H01T 13/18 . . Means for heating, e.g. for drying
H01T 13/20 . characterised by features of the electrodes or insulation
H01T 13/22 . . having two or more electrodes embedded in insulation (for two or more sparks H01T 13/46)
H01T 13/24 . . having movable electrodes (H01T 13/28 takes precedence)
H01T 13/26 . . . for adjusting spark gap otherwise than by bending of electrode
H01T 13/28 . . having spherically shaped electrodes, e.g. ball-shaped
H01T 13/30 . . . mounted so as to permit free movement
H01T 13/32 . . characterised by features of the earthed electrode
H01T 13/34 . . characterised by the mounting of electrodes in insulation, e.g. by embedding
H01T 13/36 . . characterised by the joint between insulation and body, e.g. using cement
H01T 13/38 . . Selection of materials for insulation (in general H01B 3/00)
H01T 13/39 . . Selection of materials for electrodes
H01T 13/40 . structurally combined with other devices (combined or associated with fuel injectors F02M 57/06; structurally combined with other parts of internal-combustion engines F02P 13/00)
H01T 13/41 . . with interference suppressing or shielding means
H01T 13/42 . . with magnetic spark generators
H01T 13/44 . . with transformers, e.g. for high-frequency ignition

H01T 13/46 . having two or more spark gaps

H01T 13/462 . . {in series connection}

H01T 13/465 . . . {one spark gap being incorporated in the sparking plug}

H01T 13/467 . . {in parallel connection}

H01T 13/48 . having means for rendering sparks visible

H01T 13/50 . having means for ionisation of gap (H01T 13/52 takes precedence)

H01T 13/52 . characterised by a discharge along a surface

H01T 13/54 . having electrodes arranged in a partly-enclosed ignition chamber

H01T 13/56 . characterised by having component parts which are easily assembled or disassembled

H01T 13/58 . Testing (testing characteristics of the spark in internal-combustion engine ignition F02P 17/12)

H01T 13/60 . . of electrical properties

H01T 14/00 **Spark gaps not provided for in groups H01T 2/00 to H01T 13/00** (devices providing for corona discharge H01T 19/00)

H01T 15/00 **Circuits specially adapted for spark gaps, e.g. ignition circuits** (ignition circuits for internal-combustion engines F02P; electric spark ignition for combustion apparatus F23Q; protection circuits using spark gaps H02H 9/06)

H01T 19/00 **Devices providing for corona discharge** (for charging electrographic elements G03G 15/02)

H01T 19/02 . Corona rings

H01T 19/04 . having pointed electrodes

H01T 21/00 **Apparatus or processes specially adapted for the manufacture or maintenance of spark gaps or sparking plugs**

H01T 21/02 . of sparking plugs

H01T 21/04 . . Cleaning (abrasive blasting devices for cleaning sparking-plugs B24C 3/34)

H01T 21/06 . Adjustment of spark gaps (sparking-plugs having movable electrodes for adjusting the gap H01T 13/26)

H01T 23/00 **Apparatus for generating ions to be introduced into non-enclosed gases, e.g. into the atmosphere** (discharge tubes with provision for emergence of ions from the vessel H01J 33/00; generating plasma H05H)