CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING
(NOTES omitted)

SHAPING

B23 MACHINE TOOLS; METAL-WORKING NOT OTHERWISE PROVIDED FOR
(NOTES omitted)

B23H WORKING OF METAL BY THE ACTION OF A HIGH CONCENTRATION OF ELECTRIC CURRENT ON A WORKPIECE USING AN ELECTRODE WHICH TAKES THE PLACE OF A TOOL; SUCH WORKING COMBINED WITH OTHER FORMS OF WORKING OF METAL (processes for the electrolytic or electrophoretic production of coatings, electroforming, or apparatus therefor C25D; processes for the electrolytic removal of material from objects C25F; manufacturing printed circuits using precipitation techniques to apply the conductive material to form the desired conductive pattern H05K 3/18)

NOTE
This subclass covers the working of metal described as "electroerosion"

WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Electrical discharge machining, i.e. removing metal with a series of rapidly recurring electrical discharges between an electrode and a workpiece in the presence of a fluid dielectric

1/02 Electric circuits specially adapted therefor, e.g. power supply, control, preventing short circuits or other abnormal discharges

1/022 {for shaping the discharge pulse train (B23H 1/024 takes precedence)}

1/024 {Detection of, and response to, abnormal gap conditions, e.g. short circuits (preventing short circuits or other abnormal discharges by altering machining parameters using adaptive control B23H 7/16)}

1/026 {Power supply protection, e.g. detection of power switch breakdown}

1/028 {for multiple gap machining}

1/04 Electrodes specially adapted therefor or their manufacture (B23H 9/00 takes precedence)

1/06 Electrode material

1/08 Working media

1/10 Supply or regeneration of working media

3/00 Electrochemical machining, i.e. removing metal by passing current between an electrode and a workpiece in the presence of an electrolyte

3/02 Electric circuits specially adapted therefor, e.g. power supply, control, preventing short circuits

3/04 Electrodes specially adapted therefor or their manufacture (B23H 9/00 takes precedence)

3/06 Electrode material

3/08 Working media

3/10 Supply or regeneration of working media

5/00 Combined machining

5/02 Electrical discharge machining combined with electrochemical machining

5/04 Electrical discharge machining combined with mechanical working

5/06 Electrochemical machining combined with mechanical working, e.g. grinding or honing

5/08 Electrolytic grinding

5/10 Electrodes specially adapted therefor or their manufacture (B23H 1/04, B23H 3/04 take precedence)

5/12 Working media

5/14 Supply or regeneration of working media

7/00 Processes or apparatus applicable to both electrical discharge machining and electrochemical machining

7/02 Wire-cutting

7/04 Apparatus for supplying current to working gap: Electric circuits specially adapted therefor

7/06 Control of the travel curve of the relative movement between electrode and workpiece

7/065 Electric circuits specially adapted therefor

7/08 Wire electrodes

7/10 Supporting, winding or electrical connection of wire-electrode

7/101 Supply of working media

7/102 Automatic wire threading

7/104 Wire tension control

7/105 Wire guides

7/107 Current pickups

7/108 Used wire disposal devices

7/12 Rotating-disc electrodes

7/14 Electric circuits specially adapted therefor, e.g. power supply (B23H 3/02 takes precedence)
for preventing short circuits or other abnormal discharges (by altering machining parameters using adaptive control)

for maintaining or controlling the desired spacing between electrode and workpiece

for programme-control, e.g. adaptive (programme-control systems in general G05B 19/00)

Electrodes specially adapted therefor or their manufacture (B23H 7/08, B23H 7/12, B23H 9/00 take precedence)

Electrode material

Apparatus for moving or positioning electrode relatively to workpiece; Mounting of electrode

(Mounting of one or more thin electrodes)

Moving electrode in a plane normal to the feed direction, e.g. orbiting

Moving electrode in the feed direction (B23H 7/32 takes precedence)

Maintaining desired spacing between electrode and workpiece (e.g. by means of particulate material)

Working media

Supply or regeneration of working media

Influencing metal working by using specially adapted means not directly involved in the removal of metal, e.g. ultrasonic waves, magnetic fields or laser irradiation

Machining specially adapted for treating particular metal objects or for obtaining special effects or results on metal objects (heat treatment by cathodic discharge C21D 1/38)

(Disintegrating)

(Making screw-threads or gears)

(Machining elongated bodies, e.g. rods)

(Cavity sinking (B23H 9/14 takes precedence))

(Surface roughening or texturing)

Trimming or deburring (B23H 9/003 takes precedence)

Treating surfaces of rolls

Marking or engraving

Sharpening

Working turbine blades or nozzles

Forming parts of complementary shape, e.g. punch-and-die

Making holes

using an electrolytic jet

Producing external conical surfaces or spikes (B23H 9/008 takes precedence)

Auxiliary apparatus or details, not otherwise provided for

(Mounting of workpieces, e.g. working-tables)

(Electrical contacts or wires (B23H 7/10 takes precedence))

Specific machining processes or workpieces

for making bearings

for making conical bores

for making honeycomb structures

Power source circuits or energization

Pulsed electrochemical machining