

STANLEY

Stanley Discharge Deposition Equipment

DEPOSITRON 720/820

Extends die life 2—3 times!
Prevents scum risers!
Cutters life 2—5 times longer!
Extends life of sliding
and wearing surfaces 2—3 times!



Patent No.477611
Utility Model No.636778
Utility Model No.932815

Stanley Discharge Deposition Equipment DEPOSITRON 720/820

The Stanley discharge deposition equipment, Depositron 720/820, is a commercial application of the principle of discharge deposition, a process in which an intermittent spark discharge in the air causes electrode material to be deposited in diffused layers on the metal surface of the work. Beginning with the wear resistant layers from tungsten carbide electrodes (HV1100), a variety of coatings can be applied easily to provide resistance to heat, corrosion, etc. With a wide range of applications, this is truly an unparalleled epoch-making product.

Features, Applications

As shown below, Depositron 720/820 can deposit hard metal such as tungsten carbide quickly and simply to all kinds of dies and cutters, machine parts, etc. to improve surface hardness up to HV1100. The 720 Model is for general use, while the 820 Model is for heavy duty applications.

1) Wearing parts of various metal dies

The advantages are shown not only in the greatly extended life of trimming dies, bending dies, deep drawing dies, etc. but also in preventing heat cracking in die-cast dies, improved separation, preventing wear of gates, etc. It can also be used to prevent wear and repair build-up in plastics dies, forging dies, glass dies, etc.

2) Prevents scum risers

Scum risers can be easily prevented in the case of precision punch dies by coating the inside of the female die, SK, SKD, SKH, carbide, etc., the die material is irrelevant.

3) For drills, end mills and all types of cutters

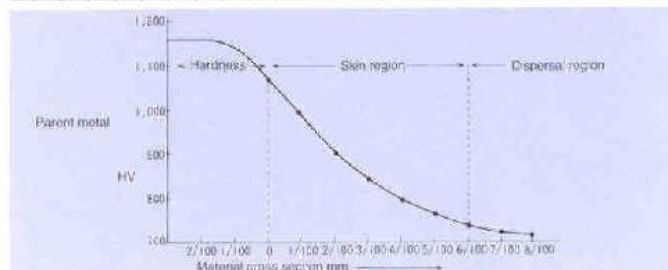
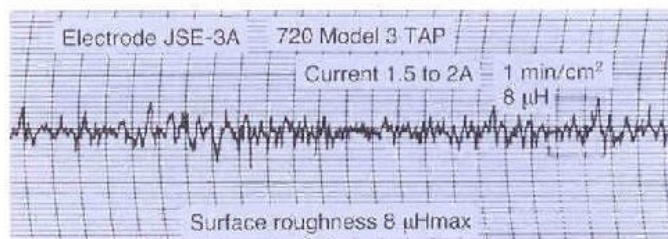
By coating the cutting edges of tools such as drills, taps, end mills, hob cutters, reamer, broaches, etc. tool life is extended and cutting speed can be doubled.

4) For wearing parts of machines

The service life of devices and facilities is greatly prolonged by discharge deposition to the wearing parts of all sorts of machines used in various industries and parts subject to abrasion where wear resistance is vital.

Concerning the Nature of Discharge Deposition Equipment

An unusual high temperature is generated locally by the spark discharge and the electrode deposits a dispersed coating which adheres intimately to the surface of the work. Because of its dispersed nature, the deposited layer is bonded strongly and will not peel off. The thickness and roughness of the deposited layer depends on the process level of the equipment, which can be selected, but in the case of hard metal, thickness ranges from 0.01 to 0.03 mm and hardness from 4 to 15 μHmax . If necessary, the coating can be lightly lapped before use.



Specifications

DEPOSITRON 720 (General Purpose Model)



Input Power	Single phase, 100 V, 110 V, 200 V, 210 V, 220 V, 230 V, 240 V 50/60 Hz
Power Capacity	63 VA
Cabinet Dimensions	375 (W) × 220 (D) × 170 (H) mm
Weight of Equipment	Power unit 8.5 kg, vibrator 0.3 kg
Deposition Speed	30 to 50 sec/cm ²
Deposition Thickness	0.01–0.02 mm (Hard metal)
Process Vibrator	Electric synchronised drive type
Process Selection Switch	3-stage switched discharge power

DEPOSITRON 820 (High Power Model)



Input Power	Single phase, 100 V, 110 V, 200 V, 210 V, 220 V, 230 V, 240 V 50/60 Hz
Power Capacity	155 VA
Cabinet Dimensions	270 (W) × 330 (D) × 165 (H) mm
Weight of Equipment	Power unit 12 kg, vibrator 0.3 kg
Deposition Speed	20 to 40 sec/cm ²
Deposition Thickness	0.01–0.03 mm (Hard metal)
Process Vibrator	Electric synchronised drive type
Process Selection Switch	5-stage switched discharge power 3-stage switched vibrator power