Schematic diagram of the process “Brush Plating”
Power pack for applying coatings
With “Brush Plating” equipment, following pure metals and alloys can be applied:

- Cadmium
- Chrome
- Cobalt
- Copper
- Nickel
- Tin
- Zinc
- Gold
- Indium
- Palladium
- Platinum
- Rhenium
- Rhodium
- Silver
- Babbit
- Cobalt_Tungsten
- Nickel-Cobalt
- Nickel_Tungsten
- Tin-Indium
- Tin-Cadmium
- Tin-Lead
- Zinc-Nickel
- Tin-Zink
Deposited coatings are characterized by:

- INCREASED HARDNESS
- VERY GOOD WEAR RESISTANCE
- EXCELLENT CORROSION RESISTANCE
- LOW ELECTRIC RESISTANCE
- GOOD ANTI-CAVITATION AND FRICTION PROPERTIES
Structure of NICKEL deposit

Nickel plating on steel shows a balustered microstructure typical for soft coatings, obtained by application of acidic solutions.
VICKERS hardness of the deposits

SIFCO Deposit Characteristics

Vickers Hardness [MPa]

- Rhodium
- Chromium
- Nickel
- Platinum
- Copper
- Cobalt
- Indium
- Tin
- Cadmium
- Zinc
- Silver
- Gold
- Copper
- Cobalt
- Platinum
- Nickel
- Chromium
- Rhodium
Adhesion of the deposits

The bond between the two layers is carried out at an atomic level. The magnitude of the adhesion force varies from 200 to 400 N/mm² according to the composition of the parent metal (alloy) and plated coating.
“Brush Plating” plating technology is certified and authorized for using in different fields by:

MIL STD 865 & 2197 (SH)  GE
MIL-C-14550  Boeing BAC 5849
AMS 2451  Airbus
MIL-A-8625  Sikorsky SS8494-02
ISO-9001-1994  P&W SPOP 321
AS-9000  FAA Repair Stations
FAA Repair Stations  American Bureau Shipping
American Assoc Railroads  Lloyds Register of Shipping
Siemens Westinghouse  Korean Bureau of Shipping
APPLICATIONS:

Rocketry and aircraft

Coating on hatches
Cadmium plating of aircraft parts
Deposition of 2.5 μm Rhodium and then 1.3 μm Gold improves electric resistance and prolongs the life of the rotor.
Reconditioning of aircraft parts

Helicopter Transmission Gear
Aircraft turbine parts

Nickel deposit
Restoration of parts of printing machines
Gold and silver plating contact system
Anodizing using “Brush Plating”

HARD COATING OBTAINED ON A DEFINED AREA ON ALUMINUM PARTS BY ANODIC OXIDATION

- TSAME TECHNOLOGY AND EQUIPMENT USED FOR “Brush Plating” BUT WITH REVERSE CURRENT

TYPES OF ANODIZING

- CHROMIUM ACID
- PHOSPHORIC ACID
- SULFURIC ACID
- BORIC AND SULPHURIC ACID