



## SILVER PLATING ON WAVEGUIDES

Space Applications Centre (SAC) of Indian Space Research Organisation (ISRO) has developed a method to carry out silver plating from inside in Aluminum waveguides. While the complexity and shape of the component makes the plating task difficult, the process enables uniform deposition all through the inner and outer surfaces of the component. Silver plated Aluminum Waveguide provides good RF performance, as silver gives the best known electrical conductivity, and is also solderable.

Most commonly used space qualified paints are available normally in two colors - Black and White. The details of thermo-optical properties of Thermal Control Coatings usually carried out are given below:

The plated parts should be free of pits, nodules, blisters and roughness on the components, and pass environmental tests like heat resistance, humidity, thermal cycling, thermo vacuum, etc.

Silver plated waveguides are used in various communication payloads of Communication Satellites, Radar Imaging Satellites, etc.

### Plating Specifications

- Electro less Nickel-plating thickness: 6 to 8 microns
- Silver plating thickness: 5 to 8 microns

### Technology Transfer

SAC/ISRO, offers to transfer this technology of the **Silver Plating on Waveguides** developed by SAC to industries in India with adequate experience and facilities. Enterprises interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

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