

- ✓ Replace Traditional Markers
- ✓ Reduce Material & Labor Costs
- ✓ Potential Lower Profile
- ✓ Improve Distal Tip Flexibility
- ✓ Eliminate Dislodgement
- ✓ Atomically Bonded Coating

Medical – Catheter Marker Bands

Marker bands help with the placement and guidance of catheters during medical procedures due to their radio-opaque properties. A traditional marker band is a short, thin-walled tube machined from gold or platinum that is mechanically crimped or swaged at specific locations on a catheter to provide high levels of visibility under an x-ray fluoroscope. This allows surgeons to precisely locate the catheter placement deep within the body to deploy stents, balloons, and other devices.

The Challenge

Medical device manufacturing requires highly controlled processes that meet stringent criteria. In order to provide consistent radiopacity, ProPlate[®] had to determine the optimum process solution. The other challenge for this project was the precise placement at specific locations along the catheter or similar components. The marker bands had to be selectively placed at exact locations, with consistent and repeatable results.

The Engineered Solution

ProPlate[®] worked in order to achieve comparable radiopacity to traditional markers. A set of studies were conducted until ProPlate[®] was satisfied with the results. Through these trials, ProPlate[®] developed Vizi-Band[®], a highly radiopaque and biocompatible metal coating that can be selectively applied to any area of the desired component, with endless options for design and brightness customization. Custom tooling and masking were developed to ensure consistent and accurate positioning of the Vizi-Band[®] marker coating along the catheter, guidewire, hypotube, stent, or similar components. Vizi-Band[®] allows a manufacturer to reduce the labor component of handling and attaching the traditional marker bands, reduce the cost of machining them from solid gold, and improve distal tip flexibility. Vizi-Band[®] not only improved application performance by reducing the catheter profile but also eliminated the risk of traditional marker band dislodgement due to it being atomically bonded to the component.

