

ENDOSCOPIC LENS HOLDERS

Karl Storz Imaging, Inc. trusts Dicronite® for emerging medical technology



BACKGROUND

An endoscopy is a procedure used to look inside body cavities, diagnose problems, and enable a surgeon's manipulation of surgical instruments. It requires an endoscope - a long tube with a small video camera attached to one end. Doctors use this tool to view inside a patient's body without the need for more invasive measures.

Lens holders play a critical role in the performance of endoscopic video cameras as they allow for optimization of the images transmitted by the endoscope. These small, complex components house the optical lenses of the camera while also interacting with the focusing mechanism that adjusts the lenses to provide clear images.

DESIGN

Karl Storz Imaging, Inc. set out to improve the precision and overall quality of lens holders by re-designing the

component and manufacturing methods. The new manufacturing process and design changes required a highly effective, ultra-thin biocompatible lubrication that would allow smooth, responsive, and precise user control.

RESULTS

By using metal injection molding (MIM), they manufactured the small, complex lens holders with greater precision and repeatability than by machining (the previously used method). This, coupled with adjustments to part geometry and the use of Dicronite® on lens holders enabled the precision and consistent quality needed. Dicronite® provided effective biocompatible lubrication on lens holders without compromising precision tolerances.

Karl Storz Imaging, Inc. used Dicronite® to enable the precision control of endoscope lenses inside the human body.

