



## PROJECT PROFILE

### PRODUCT DESIGN – OFFICE CHAIR DEVELOPMENT

#### CLIENT REQUIREMENTS

At the production launch of its newest product, a high end office furniture manufacturer required the assistance of outsourced engineering support to investigate and correct manufacturing quality problems encountered on the new chair line. The client experienced continuous failure at securing the structural mesh (the main product enhancing feature) to the seat back and seat base during production of its new high tech office chair. Current Palladium personnel were retained (prior to the incorporation of Palladium Product Development & Design) as the client required assistance to create an appropriate mechanical and chemical bonding of the seat mesh to the plastic frame.

#### PROJECT HIGHLIGHTS

- The outsourced team determined a path which would review the manufacturing and assembly processes, reverse engineer all existing parts, identify potential factors affecting the failures and figure out methods of overcoming the production issues
- The project required the development of inspection fixtures for chair components.
- Working with the injection mould manufacturers, tooling shops and the material manufacturer, a collaborative approach was employed to effectively develop a design and manufacturing process.
- Patented design and assembly technology was developed secure design and fabrication process.



#### ENGINEERING SUPPORT SERVICES

Palladium Product Development & Design provides engineering support for many products, industries and companies such as the case history described above. The same personnel involved with the Chair Mesh Investigation described above are working with Palladium today and providing services to past clients they have served, as well as taking on new clients with upgrades and product improvement programs. Design modifications related to manufacturing/machine design, modernization or researched product quality improvements and inclusion of client/user feedback are routinely implemented as a result of these analyses and design engineering services.