



SURGICAL GOWN REQUIREMENTS CAPTURE: *A Design Analysis Case Study*

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ABSTRACT

Design is a process best undertaken through an organized effort and a problem solving approach. Understanding the complex set of requirements that must be addressed by a successful new product, be they end user, legal, financial or other requirements, demands extensive research. Design analysis is a major thrust of the research. This paper presents a method for the existing product design analysis component of the functional design process utilizing a case study of surgical gowns.

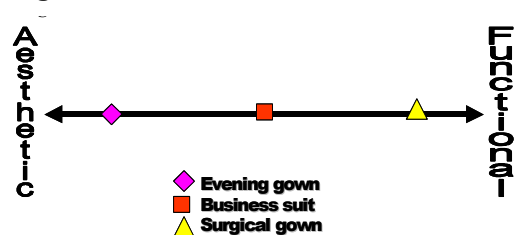
KEYWORDS: Surgical gown, functional design, design process, medical textile

INTRODUCTION

Successful creation of functional apparel products requires a disciplined, structured approach to design and development. An effective, integrated approach progresses through investigation of the design problem, delineation of design requirements and critical analysis of those requirements before arriving at a design solution. This is best accomplished through four major thrusts. The first two, materials analysis and design analysis, initiate the process in a manner consistent with that described by Watkins (1995). The latter two thrusts, design development and evaluation, move in the direction of the design solution. This paper will focus on the design analysis component of the functional design process using a surgical gown case study to illustrate.

design analysis with a clarification of the term “functional apparel”. All apparel items must meet minimal functional requirements including being supported by the body and allowing some degree of body movement. Likewise, all apparel products meet at least a minimal range of aesthetic requirements such as color and texture. Therefore, it is helpful to envision apparel products as existing at some point along an aesthetic to functional continuum (Figure 1) where the location along the continuum reflects the balance of requirements. Examples of three

Figure 1: Aesthetic - Functional Continuum



It seems appropriate to preface discussion of