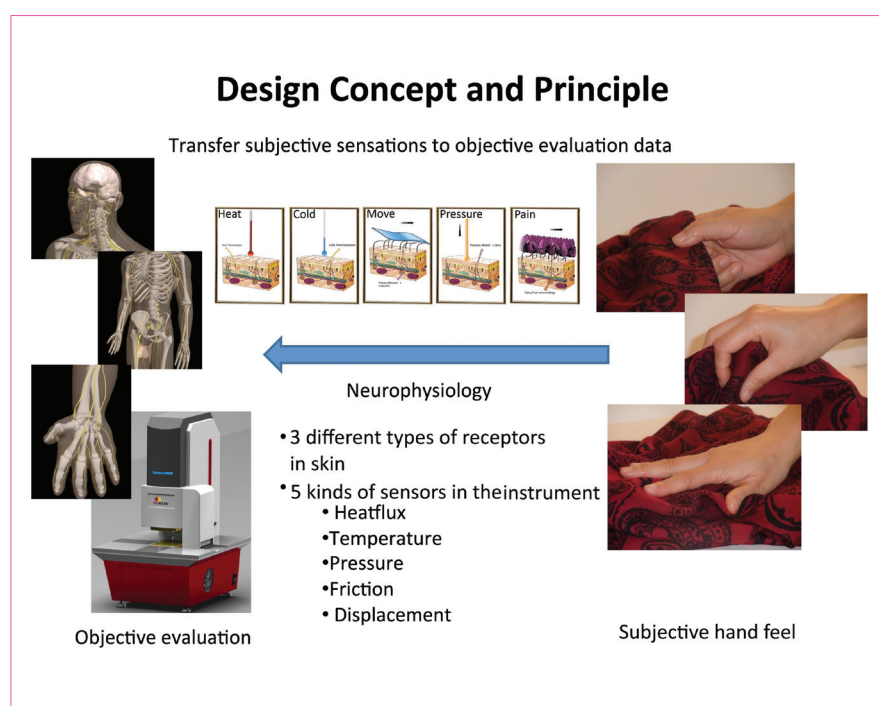


織物觸感測試儀 Fabric Touch Tester

用於測量並模擬人體和手部接觸布料時的舒適感覺(包括柔軟, 光滑, 涼爽等)的神經信號以及感受機理的快速仿生測量技術
Fast bionic technology to measure and simulate hand touch sensations of "soft-stiff", "smooth-rough" and "warm-cold"

布料-皮膚接觸感覺影響著我們在睡覺、行走、工作、運動時的舒適和情緒感受。在設計出令消費者滿意並最終購買的服裝以及紡織品過程中, 如何對布料的觸感進行快速的測量從而選定為產品合適的原料是非常重要的。此新型仿生測試儀器根據人體感知系統神經生理學機理設計, 能夠用於模擬從布料刺激皮膚的感知神經元, 發射神經信號, 以及傳遞神經信號至大腦, 最終形成具體感受如柔軟感, 光滑感, 以及冷暖感和最終綜合感受。



神經生理機制
Neurophysiological mechanisms

Fabric-skin touch sensations influence our feelings and happiness in sleeping, walking, running, working, sporting and shopping. How to measure fabric tactile properties quickly is an important issue for selecting appropriate fabrics for a specific purpose in designing apparel and textile products so that consumers can make good decisions and enjoy the products they purchase. According to the neurophysiological mechanisms of human sensory perceptions, a novel bionic instrument has been designed and developed to simulate how fabrics stimulate human skin sensory receptors, generate signals, transmit them to brain and formulate sensations like "soft-stiff", "smooth-rough" and "warm-cold" and final preferences.

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專利編號及國家: 2012102754856 (中國) · 2012102756480 (中國) · 201210278839.2 (中國)

特色與優點

- 仿真多種皮膚感覺性能測量技術
- 模擬人體接觸面料與紡織品時的神經反應、感官知覺和手感舒適度, 並制定相關定量測量方式
- 以神經生理學理論為基礎的電腦模擬模型和相關軟件
- 快速、經濟

應用

- 研發新型布料
- 設計服裝紡織產品時測試選擇布料原料
- 在面料生產時的質量控制
- 在貿易、採購過程中的質量控制
- 在服裝生產時的質量控制
- 服裝以及紡織產品的布料接觸舒適度進行認證

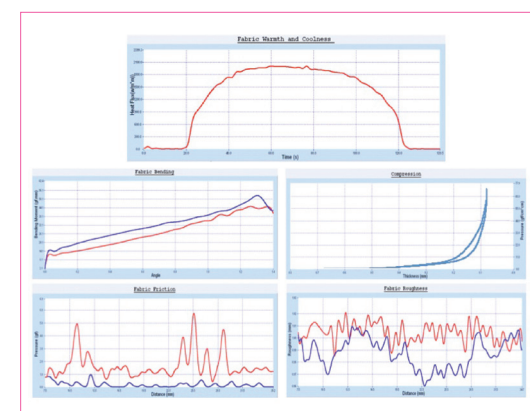
獎項

第41屆瑞士日內瓦國際發明展 - 評判特別嘉許金獎 (2013年4月)



織物觸感儀
Fabric Touch Tester

Patent No: 2012102754856 (China); 2012102756480 (China); 201210278839.2 (China)



測試結果
Typical test results

Special Features and Advantages

- Bionic multisensory measurement technology
- Simulation and quantitative measurement of the neural responses and sensory perception of body and hand touch comfort sensations on fabrics and textiles
- Computer simulation models and software on the basis of neurophysiological mechanisms
- Fast and low cost

Applications

- Research and development of new fabrics
- Evaluating and selecting fabrics when designing apparel and textile products
- Quality control in fabric manufacturing
- Quality control in trading, merchandising
- Quality control in garment manufacturing
- Certification for fabric touch comfort performance for apparel and textile products

Award

Gold Medal with the Congratulations of Jury - 41st International Exhibition of Inventions of Geneva, Switzerland (April 2013)

A research project of HKRITA



THE HONG KONG 香港紡織及服裝研發中心
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