

2007-2008

Materials Council Seminar Series

Georgia Institute of Technology

Murali Rajagopalan

Fellow of Society of Plastic Engineers (SPE)

Adjunct Professor at University of Massachusetts –

Dartmouth and a Director of Materials Research at Acushnet

“ Advancement of Materials Science in Golf Ball Technologies ”

Tuesday, October 2, 2007

Classroom 299 – LOVE Bldg.

3:00-4:00PM

ABSTRACT

This lecture will give an overview of how developments in materials science played a significant role in golf ball technologies from an 1860's Guttie to the 21st century's novel thermoplastic and thermoset materials including ionomers, polyurethanes, rubbers, composites and compatible blends from reactive processing. The effect of micro-structure of polybutadiene rubber, nature and amount of cross-linking agents, peroxides and density modifying fillers on the golf ball core's resiliency and compression will be discussed. A role of ionomer chemistry including highly neutralized ionomers in golf ball components will be presented along with some brief mention of the thermoset castable polyurethane chemistry to provide a feel and control of the golf ball in the short game. Finally, a brief summary of various factors that may influence the performance of the golf ball due to the nature of materials in golf ball layers and constructions such as a single cover and a single core or a single cover and dual cores or dual covers and dual cores etc.

BIOGRAPHY

Murali Rajagopalan is a Fellow of Society of Plastic Engineers (SPE), an Adjunct Professor at University of Massachusetts – Dartmouth and a Director of Materials Research at Acushnet – Titleist's Golf Ball research and development. He is either a solo or co-inventor of over 175 U.S. Patents in the area of golf ball materials, processing and use of vinyl alloys in HVAC, computer housing and medical devices. He is an active board member of National Textile Committee, SPE' Engineering Properties and Structure Division and New England's Rubber & Plastics Group.

He received his B.Sc. Chemistry and M.Sc. in Organic Chemistry from the University of Madras, India. After earning his first Masters, he enrolled at the Indian Institute of Technology-New Delhi, India where he awarded the M.Tech. in Fiber Science and Technology. He continued his doctoral degree at McGill University in Montreal.

Host: Prof. Rina Tannenbaum, 404-385-1235; rina.tannenbaum@mse.gatech.edu

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