ElectroForce® Testing News

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Your success. Our mission.™

Newsletter At-A-Glance:

- Introducing the DuraPulseTM Stent/Graft Test Instrument!
- Scientific Review - Fatigue of Metallic Stents
- Customer Research Highlight - Research to Prevent Limb Loss Resulting from Diabetes
- Webinar Archive Available! Introduction to Fatigue Testing

The New DuraPulse Stent/Graft Test (SGT) Instrument

Accelerating pulsatile fatigue testing into the future!

For more than 20 years, ElectroForce® Stent/Graft Test (SGT) instruments have been supporting the development of life-saving technologies such as stents, heart valve frames, and occluders. Many of the world's leading cardiovascular companies have utilized ElectroForce test instruments to accelerate fatigue tests and reduce time-to-market. With the launch of the New DuraPulse™ SGT, we are introducing a new standard of performance, reliability, and modularity!

A new modular manifold design, available in 12, 8, 6 and 4 tube configurations, allows you to change the manifold based upon the device geometry and optimize the performance of the test instrument. Refined fluid flow paths result in producing the highest strains at the highest frequencies. Each manifold set rests within a cradle assembly that facilitates 360-degree rotation of the manifolds, and tilts for ease of test preparation. A new software application simplifies test set-up and data acquisition, and incorporates an intuitive tube scanning feature as well as outer diameter and inside diameter strain calculations according to testing standard ISO 25539.

To learn more about the DuraPulse SGT, click here.

Scientific Review: Fatigue of Metallic Stents

A critical review explores computational and experimental analysis techniques

The February 2016 edition of the Annals of Biomedical Engineering includes a review article titled *Fatigue of Metallic Stents: From Clinical Evidence to Computational Analysis*, which explores the problem of metallic stent fatigue. The paper, written by Dr. Ferdinando Auricchio, Dr. Andrei Constantinescu, Dr. Michele Conti, and Dr. Giulia Scalet aims to open up a critical discussion regarding existing fatigue assessment technologies with the hope of facilitating dialogue that leads to future discussions regarding stent design optimization, materials, and clinical procedures. The article addresses clinical evidence of stent failure and fracture, the influence of regulatory agencies, and computational methods for fatigue life determination. In addition, the authors explore

CURRENT PROMOTIONS

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AMG Program

Add $20,000 to the value of your new laboratory equipment grant.

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UPCOMING CONFERENCES

The Composites and Advanced Materials Expo (CAMX)

CAMX
THE COMPOSITES AND ADVANCED MATERIALS EXPO

September 27 - 29
Anaheim, CA
Booth D75

Medtec Ireland

Ireland Medtec
Technology · Networking · Education

October 4 - 5
Galway, Ireland

Biomedical Engineering Society (BMES)

mechanical fatigue testing of whole stents and stented components, as might be conducted by the DuraPulse SGT and ElectroForce Multi-Specimen Fatigue test instrument, respectively.

To access the publication, click here.

Customer Research Highlight - Research to Prevent Limb Loss as the Result of Diabetes

Examining the correlation between mechanical and biochemical/histological properties of plantar soft tissues

Diabetes continues to be a significant health concern in the US and around the world, often leading to blindness, kidney failure, heart attacks, and lower limb amputation. As of 2014, more than 400 million people worldwide suffered from some form of diabetes. Dr. William Ledoux, Research Career Scientist at the VA Center for Excellence for Limb Loss Prevention and Prosthetic Engineering and Affiliate Professor at the University of Washington, devotes his time to research that aims to prevent functional or anatomical limb loss. In a recent publication in the Journal of Biomechanics, Dr. Ledoux, along with his co-authors, explores the association between mechanical, biochemical and histological properties of diabetic and non-diabetic soft plantar (foot) tissue.

To access the publication abstract, click here.

Click here to learn more about Dr. Ledoux's research and the VA Center of Excellence for Limb Loss Prevention and Prosthetic Engineering.

ElectroForce Webinar Archive! Introduction to Fatigue Testing

What is mechanical fatigue and why is it important?

If you missed the first TA ElectroForce webinar, which took place on September 7th, but would still like to see it, you can! A recorded version of the webinar is available on the TA Instruments website for you to watch at your leisure. In the webinar, Troy Nickel, Product Manager for ElectroForce, explores the role of mechanical fatigue when characterizing materials and structures that undergo repeated or cyclic stress conditions. He also identifies a few real world examples of how mechanical testing can help understand and predict fatigue behavior.

Access the archived webinar video here.

Keep up with the latest ElectroForce news everyday! Follow us:

BMES 2016
October 5 - 8
Minneapolis, MN
Booth 214

2016 International Elastomer Conference
October 10 - 13
Pittsburgh, PA
Booth 730

Biomaterials for Healthcare
October 17 - 20
Rome, Italy

27th Conference on Frontiers in Bioengineering
October 22 - 23
Hokkaido, Japan

MS&T16
October 24 - 27
Salt Lake City, UT
Booth 323

Medtec China
October 26 - 28
Shanghai, China
Booth P101