

# RubberWorld

THE TECHNICAL SERVICE MAGAZINE FOR THE RUBBER INDUSTRY VOLUME 243, No. 4

**Measuring rubber friction forces**

**State-of-the-art gel detection and quality reporting for EPDM products**

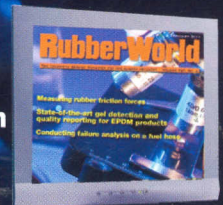
**Conducting failure analysis on a fuel hose**



#BXNVSDB \*\*\*\*\*CAR-RT LOT\*\*B-083  
#RUB0909324 8# QP111Z 1101UG  
KUNGLIGA TEKNISKA HOGSKOLA  
PO BOX 830470  
BIRMINGHAM AL 35283-0470  
718572  
P272/122  
9026

**Rubber World  
Digital Edition**

[www.rubberworld.com](http://www.rubberworld.com)



## FEATURES

### 14 **Process Machinery: Characterization of splits in rubber parts**

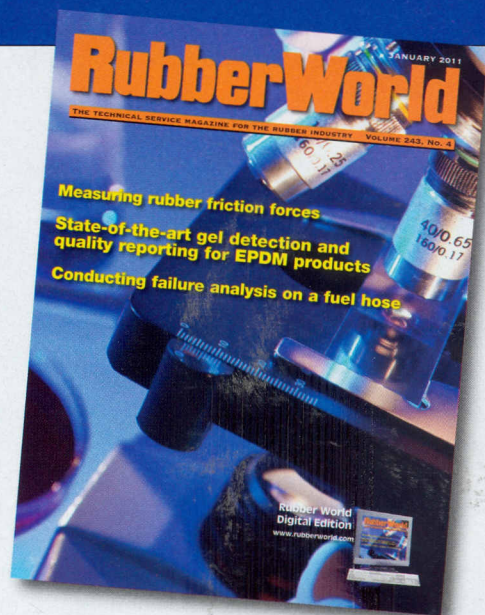
by Donald Madda, Airgas Merchant Gases, and Van T. Walworth, Research & Design Specialties. Physical characteristics of splits caused by typical cryogenic processing compared to the physical characteristics of other typical split-related defects, such as poor melt flow knitting, cut splits and torn-type splits, are examined.

### 20 **Measuring individual rubber friction forces**

by Robert H. Smith, rubber friction consultant. Recent developments in the understanding of elastomeric friction mechanisms have indicated the existence of a fourth basic rubber friction force, surface deformation hysteresis, or microhysteresis.

### 24 **Gel detection, quality reporting for EPDM**

by Arnis Paeglis, Larry Meiske, Ray Mangold, Pam Kenny, Brian Walther and Tim Clayfield, Dow Chemical. Optical gel testing enables a consistent determination of product quality to best enable users and compounders to achieve improved efficiencies and reduced costs by minimizing scrap with a consistent and high quality EPDM polymer.



### 32 **Conducting failure analysis on fuel hose**

by Niles Stenmark, Stork Technimet. An incompatible chemical agent came into contact with a rubber hose, causing it to swell, distort and fold while constrained inside the wire jacket.

### 37 **Instrumentation and test labs directories**

## DEPARTMENTS

- 4 **Editorial**
- 6 **Business Briefs**
- 8 **Market Focus**
- 10 **Patent News**
- 11 **Silicone/Medical Update**
- 59 **Meetings**
- 66 **Suppliers Showcase**
- 70 **People in the News**
- 71 **Literature**

## Digital Edition Content

See the January digital edition of Rubber World for additional content not found in the print edition

- More U.S. patents
- Expanded business news
- Expanded equipment information
- Expanded instrumentation information
- Expanded materials information
- Expanded literature selection

Visit: [rubberworld.com](http://rubberworld.com)