Table of Contents

Fall 2011
Vol. 14, No. 4

Feature Articles
18 WFTI Technical Achievement Awards – Class of 2011
Wire Forming Technology International (WFTI) Technical Achievement Awards are given out to industry individuals for major technical developments related to equipment, materials or accessories for making springs, wire formed parts, wire mesh or rebar products.

22 Accurate Spring Testing
Chris Wilson/Michael Boyd/Patty Hartzell - The features of an accurate spring testing machine all have an impact on accuracy, convenience and efficiency. And all ensure product quality.

28 Alternative to Zinc Plating Offers Environmental Protection & Enhanced Properties
Phil Dhake - New chromium-free, water-based finish provides cost-effectiveness and significantly better corrosion protection.

30 Velocity Manufacturing
“Dr. Lisa” Lang - Stop focusing on efficiency and focus on velocity to reduce lead and queue times, and to increase lead-time predictability, on-time deliveries, quality and cash flow.

34 Advanced Nanotechnology Material
Ulrika Porath - Company’s pioneering material is the result of a Nobel Prize-Winning discovery.

36 Automotive Suspension Springs Cold Formed Using Pre-Hardened Wire — Part 1: The Industrial Case
Guido Berti/Manuel Monti - When reducing spring wire diameter via cold forming for automotive applications, it is necessary to use high-strength spring material to maintain mechanical properties.

40 Heat Treatment Roundup
Editorial Staff - Suppliers have responded to our call for the state-of-the-art in heat treatment technology.

44 Importance of Material Certification Sheets
Daniel H. Herrig - By using materials certification sheets, recipes and cycles can be optimized to take into account the factors surrounding how the steel was specified and produced.

48 Spotlight On Spring Grinding
Michael McNulty - Efficient spring grinding requires optimized grinding time and long wheel life.

50 Hounds, Ham Bones & the National Labor Relations Board
Woodruff Imberman - It is better to avoid a union election entirely, rather than merely winning it.

53 Company Profiles
Information of value to the international spring and wire formed parts industry.

Columns

14 Bright Ideas: Marketing Strategies for the Wire Forming Industry
Joe Cappello - SNAIL MAIL: “Drop Your Customers a Line”.

16 All Things Springs
Randy DeFord - Spring Rate — The Boss & Spring Fundamentals.

29 Technically Speaking
Mark Hayes - Spring Design Stresses.

47 The Strength of Steel
Dr. Roger N. Wright - Working the Metal – Part 1: Basic Concepts.

Industry Events

52 Straight From The Show

Departments

<table>
<thead>
<tr>
<th>Department</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Forming Events</td>
<td>4</td>
</tr>
<tr>
<td>Editorial</td>
<td>6</td>
</tr>
<tr>
<td>News Wire</td>
<td>8</td>
</tr>
<tr>
<td>Product Showcase</td>
<td>55</td>
</tr>
<tr>
<td>Advertisers' Index</td>
<td>71</td>
</tr>
<tr>
<td>Classified Advertising</td>
<td>71</td>
</tr>
<tr>
<td>Editorial Index</td>
<td>72</td>
</tr>
</tbody>
</table>

Next Issue: Winter 2012

Top Products of 2011
wire 2012 Preview
Roundup: Wire, Strip, Bar & Coatings
Spotlight: Mesh Welding