Electrostatic Charging In The Press Section Of An Automotive Plant

Technical Application Bulletin

PROJECT BACKGROUND

DISCOVER

- An automotive plant changed the hydraulic oil in the press section to a new zinc and ash-free oil.
- This lead to a reduction in oil lifetime from 4-5 years to 1 year in various presses.
- The customer did not understand why the oil lifetime had decreased.

DIAGNOSE

- Extension of oil lifetime in order to reduce annual oil consumption.
- Cost savings.
- Prevention of machine breakdowns and downtimes.
- The customer agreed to examine various filter elements of the hydraulic circuit in the press section.
- It was discovered that all the elements had black burn marks and traces of varnish, resembling clear signs of electrostatic charge.

DESIGN

What We Did: Schroeder recommended our line of ASP® AntiStat Pleat Elements to solve the customers’ issues with electrostatic charge.

AntiStatPleat Elements (ASP®):

1. Prevent spark discharge.
2. Eliminate damage to elements to extend fluid and component life.
3. Prevent fire.
DELIVER

• Extended lifetime of the new hydraulic oil from one (1) year to approximately five (5) years.
• Environmental protection thanks to decreased oil consumption.
• No varnish residues in the system, on pumps or valves.
• Oil Saving.
• Prolonged filter element lifetime.
• No more destroyed components and no more machine breakdowns caused by electrostatic charging.
• Reduced work load for oil changes, element changes, repairs and replacements of broken components.

<table>
<thead>
<tr>
<th>Hydraulic Press Section</th>
<th>Without ASP</th>
<th>With ASP</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil Changes</td>
<td>Every 1 Year</td>
<td>Every 5 Years</td>
<td>+ 4 Years</td>
</tr>
<tr>
<td>Total Gallons / Year</td>
<td>39,624 gal. / year</td>
<td>7,920 gal. / year</td>
<td>+31,704 gal.</td>
</tr>
</tbody>
</table>

CUSTOMER BENEFITS

• Eliminates damage to element
• Greatly reduces oil deterioration
• Decreases evidence of sludge and formation of oil sediment
• Extends system component life

FURTHER APPLICATION AREAS

PRODUCT SPECS

ASP® | Anti-Stat Pleat Elements

Collapse Rating: 150 psid
Media: ASP® - 3, 5, and 10 µm
Operating Temp.: -20°F to 225°F
Flow Direction: Outside In
Fluid Compatibility: Hydraulic and Lubrication Oils

For internal use only. In case of questions please contact the ELEMENT TECHNOLOGY group.