CONSERVATION OF RESOURCES

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.

INDUSTRIES

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.

Hydraulic Press Section	Without ASP	With ASP	Savings
Oil Changes	Every 1 Year	Every 5 Years	+ 4 Years
Total Gallons / Press	3,302 gal. / press	660 gal. / press	+2,642 gal.
Total Gallons / Year	39,624 gal. / year	7,920 gal. / year	+31,704 gal.

- 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..

ROI

Oil Life Expectancy

+4 Years

Gallons Saved Per Press

+2.6K gal.

Gallons Saved Per Year

+31.7K gal.

Underlying values:
Oil Changes = extended from 1 year change intervals to 5 year change intervals = 5 - 1 = an additional 4 year period

Total Gallons Saved Per Year = 39,624 gallons w/o ASP - 7,920 gallons w/ ASP. 39,624 - 7,920 = 31,704 gallons of oil saved per year

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

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