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Lessons Learned from the End-of-Life Vehicle (ELV) Directive and Applicability to WEEE and RoHS

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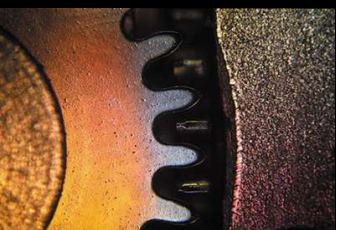
Producer Responsibility and Product Stewardship Services for Industry



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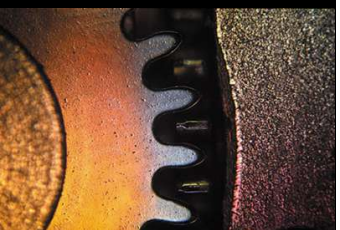
ELV Background

- Came into force in 2000
- Required member states to enact into law by 2002
- Required that as of July 1, 2003, new vehicles placed on the market be free of lead, mercury, cadmium and hexavalent chromium (exemption allowed in Annex II)
- Requires end-of-life vehicles to be recycled to minimum of 85 percent by 2005 and 95 percent by 2015



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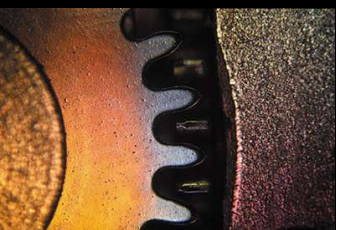
Scope of Problem Faced by Vehicle Manufacturers (VM)

- Collecting on chemical content of each vehicle manufactured
- Estimated 50,000 parts per vehicle
- Hundreds of vehicle models each with several variations
- Thousands of materials used to manufacture parts
- Industry highly dynamic; parts



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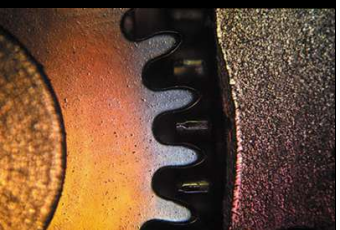
Prior to ELV

- Some auto manufacturers collected chemical content data against their own internal restricted substance lists (GM: GMW3059 and Ford: Restricted Substance Management Standard) resulting in the following drawbacks:
  - Suppliers were only required to report on parts containing restricted substances
  - Suppliers did not effectively analyze the chemical makeup of supplied parts and materials
  - Much of the data was low quality, if given at all



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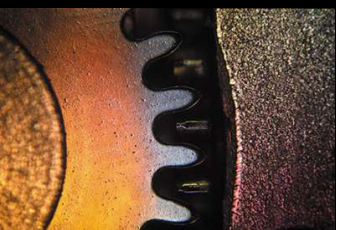
VMs Response to ELV

- VMs realized need to know about materials and substances are in their automobiles
- VMs began collecting data regarding the material and chemical make up of the parts in their vehicles
- Several VMs formed the IMDS Steering Committee to standardize a method for collecting data regarding parts' material and chemical makeup
- Committee hires EDS to create an internet-based data collection system named the International Material Data System (IMDS)



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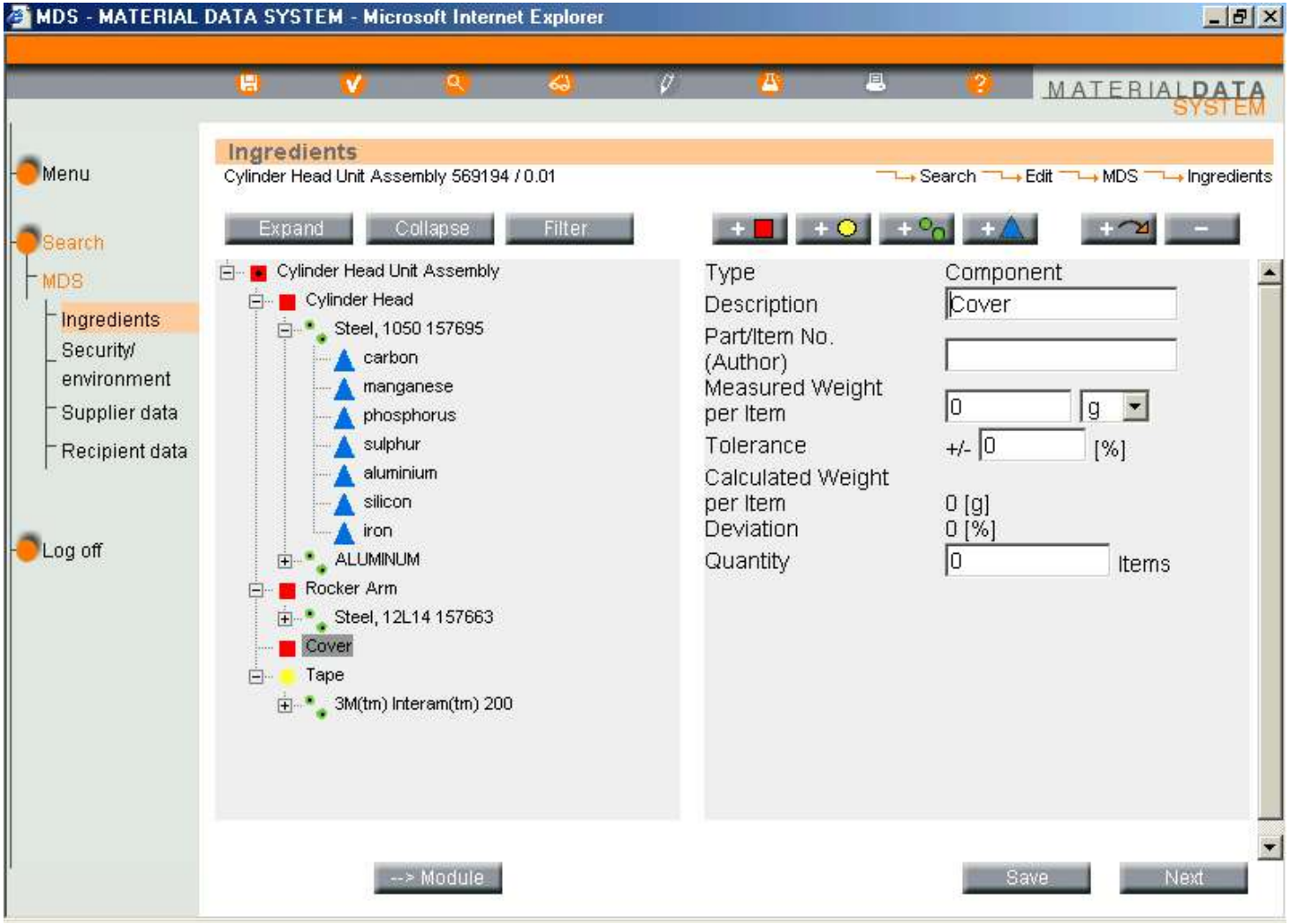
Sample MDS Screen



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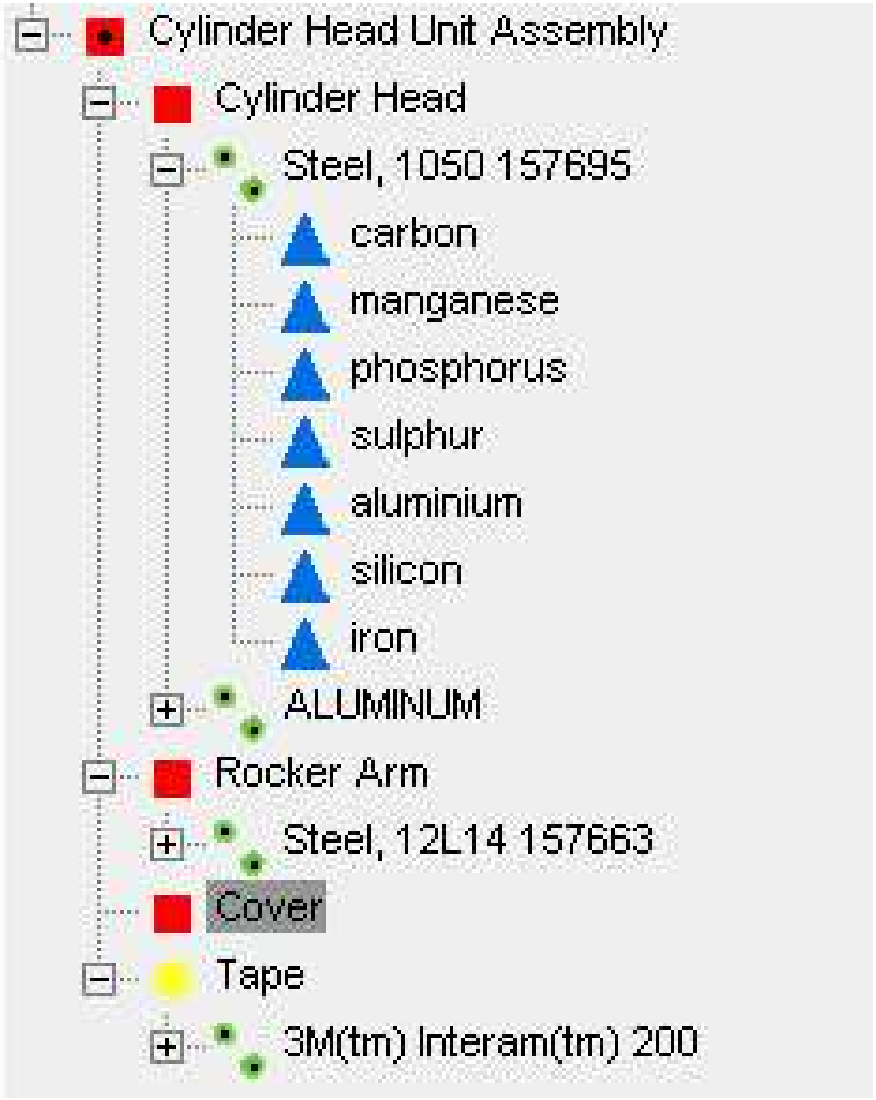
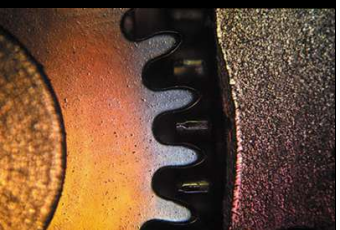
Ingredients





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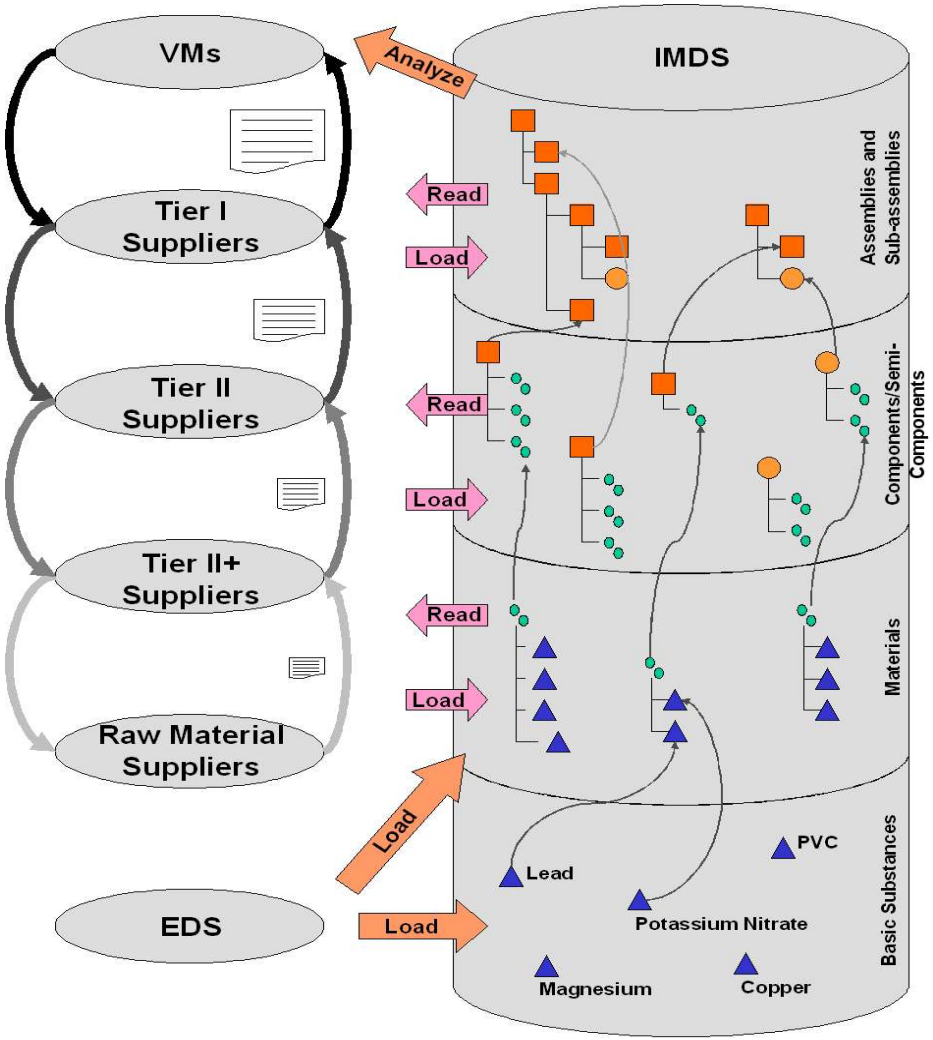
IMDS Data Collection/Flow Concept



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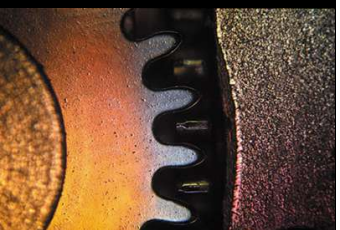
Advantages of IMDS

- **Standardized Report Method and Format -** suppliers learned one system could be used to report to many clients
- **Worldwide Accessibility -** internet availability allowed access to all suppliers regardless of location (Pac-Rim, Europe, etc.)
- **Complete Reporting and Accountability -** requiring suppliers to account for every part and material (as well as most chemicals) forced them to fully investigate the material and chemical make up of parts
- **Library Building -** information input for one customer can be utilized for reporting to another



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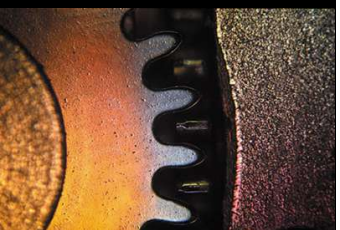
Disadvantages of IMDS

- **Time Consuming -** Data for complex parts or companies producing numerous products may be too slow to be practical
- **Difficult -** IMDS is not an intuitive system requiring some training by most users
- **Limited Functionality -** no drag and drop ability, limited copy functionality
- **Automation Function Not Available –** initially, only the interface for the information upload was available - required users to buy or build another database



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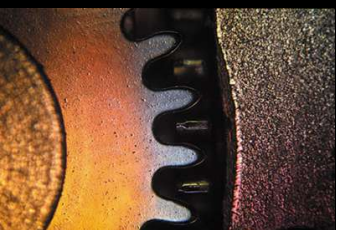
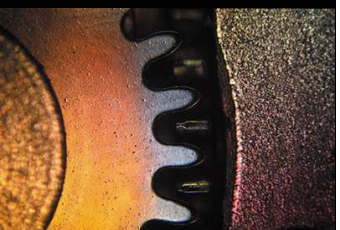
Other Problems Encountered

- Multiple reporting requirements
- No standardized List of Reportable Substances
- Little consideration given to proprietary concerns
- Communication of requirements not consistent throughout organizations (e.g., purchasing, engineering, and environmental)



Other Problems Encountered

- Reporting format developed by OEMs with little input from suppliers
- ELV / IMDS reporting was not incorporated into quality / parts approval process initially
- Reporting requirements varied widely year to year



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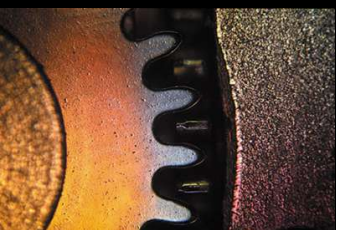
Current Status of ELV Data Collection

- Ongoing for over three years
- Most companies still find only 60 to 80 percent of supply base is responsive (after extreme pressure is applied)
- Tier Is forced to create hybrid reporting requirements meeting all OEMs individual requirements
- Auto industry moving towards common list of reportable substances (ILRS)
- Problems still encountered with accounting for entire assemblies (part weights, finished materials, etc.)



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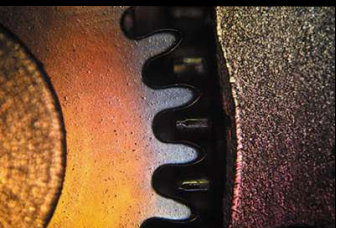
Recommendations from ELV World

- Identify an industry standardized format for collection and exchange of data
- Communicate the need, requirements, and potential risks up and down the supply chain
- Identify a common list of reportable substances
- Implement a phased approach
- Be cautious of self declaration



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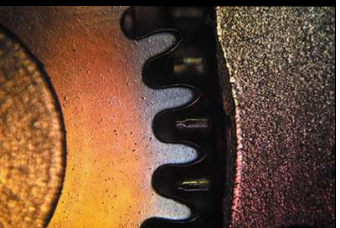
Further Information Available

- ***EPR Matters*** newsletter - to subscribe please email info@mdsmap.com
- MDS*Map* Website: www.mdsmap.com
- IMDS Website: www.mdsystem.com



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Questions or Comments

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