



2nd
INTERNATIONAL WORKSHOP
ADVANCES IN CLEANER PRODUCTION

**Cleaner Production Applied in Sealer
Process of Paint Shop from an Automotive
Company**



**WIEMES, Leandro
PAWLOWSKY, Urivald**





Presentation

- **Company - Automotive located in Curitiba**
- **Sector – Painting Shop**
- **Product Analyzed – Sealer**
- **Proposed Work – Waste and Thickness Reduction**
- **Duration: Jan – Feb 2009.**
- **Engineering and Production Development**



Actual Scenarios

- **Environmental degradation occurring day-by-day;**
- **Increase of production facilities;**
- **Exploration of raw materials in the nature;**
- **Exchanges to realize a broke environmental paradigms;**
- **Turn efforts to determine the origin of their problems;**



Actual Scenarios

- **Some measures - possible to be implemented:**
 - New laws exigencies;
 - Reduce environmental impacts;
 - Attention to / focus in the process operations;
 - Process optimization;
 - Materials and energy recycling in the productive process
 - Reduce residues disposed/discharged/emitted



Methodology

- **Study of Case – Exploratory analyses**
- **Sector to apply the concepts: PVC Sealer;**
- **Creation of a Work Group;**
- **Mapping possible regions and identify the possible gains – concurrence benchmark;**
- **Propose modifications and measure them;**
- **Implement the defined actions.**

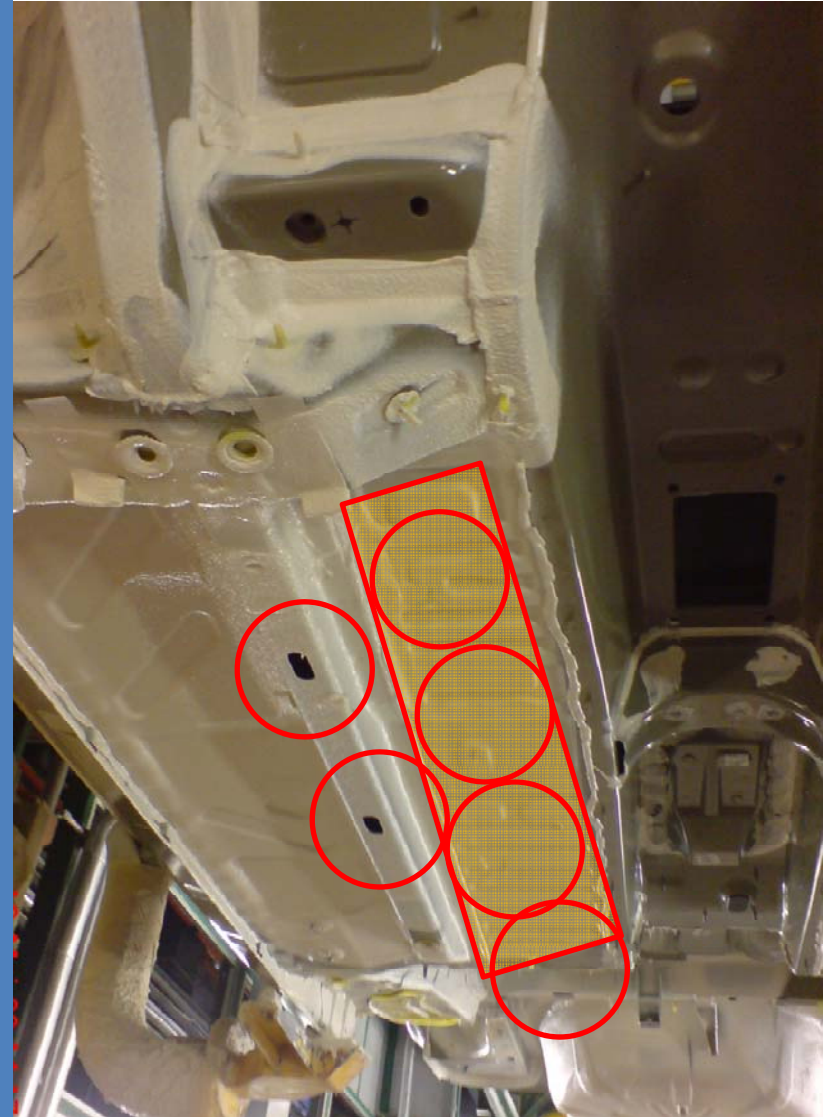
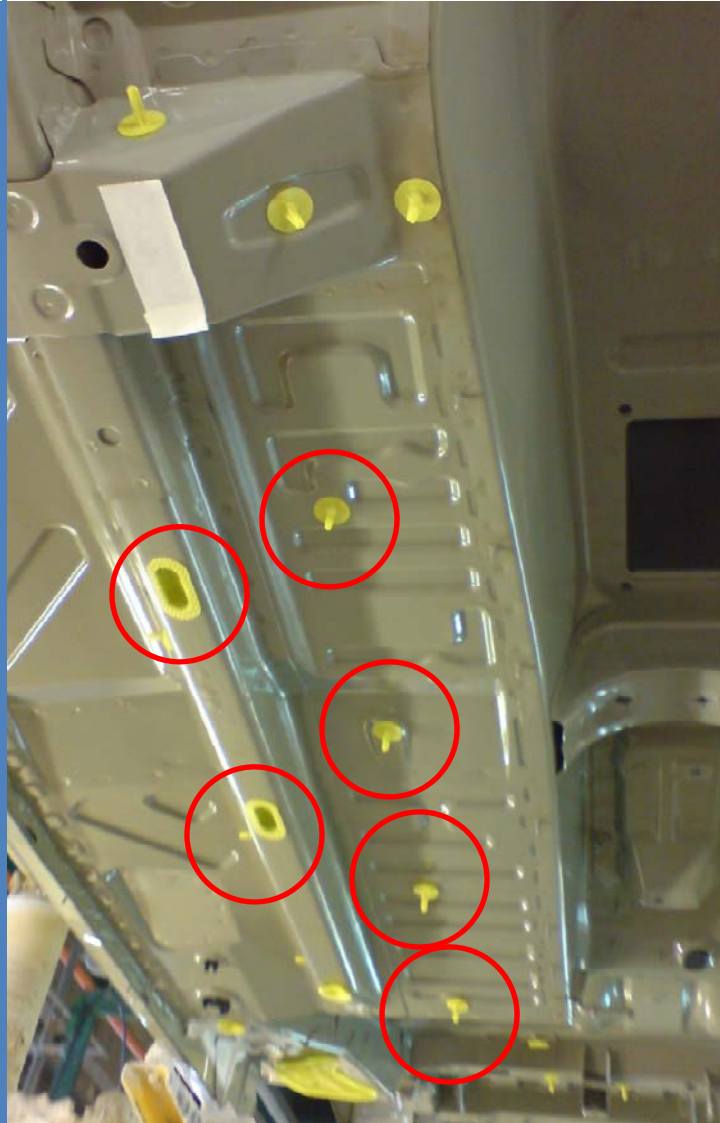


Action Plan

	What	Who	When	Where	Status
1	Analyze covered areas	Engineering	W 06/09	Assembly Line	OK
2	Check parts not necessary to protect	Engineering	W 06/09	Paint Shop	OK
3	Measure the time necessary to realize operations	Engineering + Production	W 06/09	Paint Shop	OK
4	Analyze possible areas to work	Engineering	W 06/09	Paint Shop	OK
5	Evaluate the possible gains	Engineering	W 06/09	Paint Shop	OK
6	Implement the defined actions	Production	W 06/09	Paint Shop Assembly Line	OK



Results





Results

		Initial Situation	Obtained Gains
Process	Screws	10	Reduction of 20 operations
	Holes	4	Reduction of 8 operations
Time	Time Needed	Put = 42 Remove = 42	30% Reduction + displacement
Residues	Waste Generated	0,125 kg/car	660 kg/month 7.260kg/year
Materials	Sealer	0,3 kg/car	1.584 kg/month 17.424 kg/year
Annual Gains		R\$ 1,2/car	R\$ 6.732/month R\$69.696/year



Final Considerations

- **Planning actions – people involvement**
- **Waste reduction – Costs saving**
- **Better ergonomic conditions – safety**
- **Paradigms broken – 1st plant to introduce**
- **Development of sustainable actions**
- **Systemic View in Cleaner Production**
 - **3 new projects were implemented since mars/09**



References

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Acknowledgements

Thank you,

Leandro Wiemes

leandro.wiemes@terra.com.br



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"KEY ELEMENTS FOR A SUSTAINABLE WORLD: ENERGY, WATER AND CLIMATE CHANGE"

