

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 04/02/2008

Experimenters: Jason Marshall, Heidi Wilcox

ClientType: Machining Company

ProjectNumber: Project #1

Substrates: Stainless Steel, Steel

PartType: Coupon

Contaminants: Greases, Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual

Purpose: To evaluate selected nPB alternatives for drop-in replacement to TCE for removing oil and grease from various metals.

Experimental Procedure: Two products were selected from the lab's on-line database, [www.cleansolutions.org](http://www.cleansolutions.org), based on client supplied information for a drop-in solvent replacement to TCE. Each product was used at room temperature.

Six dirty parts, coated with various oils were cleaned using immersion cleaning with no agitation. Larger parts were cleaned for less than 1 minute and the small gear pieces were cleaned in under 20 seconds. Two parts were cleaned in one solvent and four in the second.

Results: Cleaning observations were made to determine the amount of cleaning that took place.

| Cleaner   | Part       | Observation                            |
|-----------|------------|--|
| M6960     | Large gear | Outside surface was clean as needed    |
|           |            | Some grease still in the interior hole |
|           |            | Dried quickly                          |
|           | Small gear | Cleaned quickly and effectively        |
| Lenium CP | Large gear | Outside surface was clean as needed    |
|           |            | Some grease still in the interior hole |
|           |            | Dried quickly                          |
|           | Small gear | Cleaned quickly and effectively        |

|          |                      |                                 |               |                    |                                     |                      |
|----------|----------------------|---------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| Summary: | <b>Substrates:</b>   | Stainless Steel, Steel          |               |                    |                                     |                      |
|          | <b>Contaminants:</b> | Greases, Oil                    |               |                    |                                     |                      |
|          | <b>Company Name:</b> | <b>Product Name:</b>            | <b>Conc.:</b> | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |
|          | Kyzen Corporation    | Metalnox M6960                  | 100           |                    | <input checked="" type="checkbox"/> |                      |
|          | Petroferm Inc        | Lenium CP (no longer available) | 100           |                    | <input checked="" type="checkbox"/> |                      |

Conclusion: Both products were very effective on the smaller gears. The addition of heat and ultrasonics will help to improve overall performance on the more difficult parts and soils.