



Jon Rippman
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The world leader in design and manufacturing of portable shotblast systems.



Blastrac Global Organization includes:

Blastrac BV – Netherlands

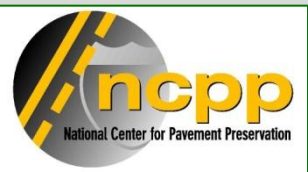
Blastrac NA – Oklahoma City

Blastrac Canada – Toronto

Blastrac Asia – Shanghai

Diamatic USA – San Diego

Blastrac products are sold and supported in 186 countries

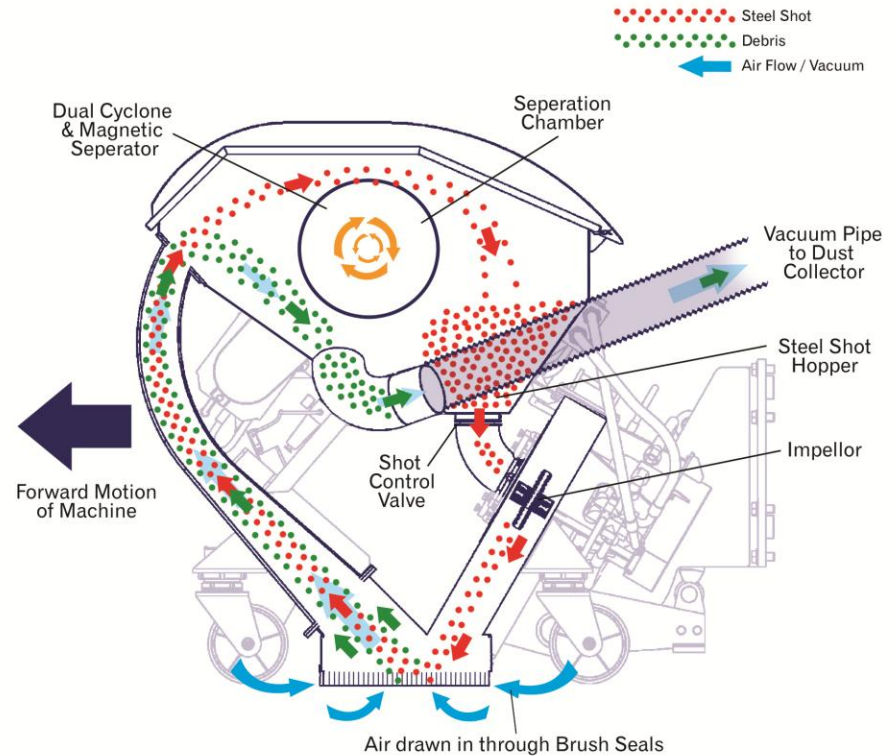


Blastrac's Inception

- Blastrac originated from The Wheelabrator Corporation.
- The Wheelabrator Corporation is a manufacture of large stationary blast equipment and has been in business for over 100 years based out of Lagrange, Ga.
- In the 50's Wheelabrator built many large blast rooms for the government and military contractors.
- In the early 1970's the US Navy approached Wheelabrator to design and build a portable machine for the removal of non-skid coatings from ship decks.
- In 1972 *Blastrac was born !!*

How It Works

Shotblasting incorporates the use of a high speed blast wheel that propels steel shot in a controlled pattern at high velocity toward a substrate. The impact of the steel shot abrades and removes contaminants while etching the surface. The steel shot rebounds into an air wash separator, there it is cleaned and returned to the blast wheel for reuse.



Why Use Shotblasting?

The use of shotblasting technology on concrete and asphalt can increase the surface area up to 300 %.

- Profile concrete surfaces to provide better penetration of chemical surface treatments.
- Remove rubber build up from airport runways, while restoring the surface textures to within FAA standards.
- Prepare bridge deck surfaces for epoxy, MMA and polymer overlay materials.
- Improve Micro and Macro textures on asphalt and concrete surfaces.
- Shotblasting will yield surface profiles ranging from ICRI CSP3 thru CSP8.



What is new and exciting?

Blastrac is one of the founding members of Pavement Synergies.

Pavement Synergies is a partnership comprised of multiple corporations with vast experience in providing products and solutions to the Road, Bridge, and Airport industries.

- Dow Corning
- Convergent Technologies
- Premier Chemical
- FMC Chemical
- Blastrac
- And growing



SYNERGIES

I-80 / Donner's Pass Project

Within the Pavement Synergies partnership there have been two test projects completed, as well as other third party evaluations. Each intent is to test the performance of a surface treatment, which is spray applied to a shot blasted surface.

Transil product of Convergent Technologies

- This product is a Lithium Silicate Anti-Scaling surface treatment which reacts with the calcium hydroxide produced during hydration. This chemical reaction creates a surface that is denser and much harder than plain concrete.
- The main application for this product would be in areas where extreme roadway rutting is a concern due to: studded tires, snow chains, or degradation caused by snow plow operations.
- It has been shown, that when applying Transil over a shot blasted surface, this will increase the penetration of the product while restoring the Micro and Macro Textures of the concrete pavement.

Results of Caltrans Donner Pass Study on the Effectiveness of Lithium Silicate Densifier on 25 Enhancing Resistance to Abrasion Loss .

| <i>26 Core ID</i> | <i>Treatment</i> | <i>Wear (inches)</i> | <i>Wear (inches)</i> | <i>Wear (mm)</i> |
|--|--|----------------------|----------------------|------------------|
| C1 | No Shotblasting-No Densifier (Control) | | 0.1875 3/16 | 0.7382 |
| C3 | Control | 0.2500 | 1/4 | 0.9843 |
| C4 | Control | 0.2500 | 1/4 | 0.9843 |
| C6 | Control | 0.2500 | 1/4 | 0.9843 |
| C10 | Control | 0.1250 | 1/8 | 0.4921 |
| C12 | Control | 0.1875 | 3/16 | 0.7382 |
| Control Section Average Wear | | 0.2083 | 3/16+ | 0.8202 |
| <u>No Shotblasting-No Densifier (Control)</u> | | | | |
| D1 | DOS | 0.0625 | 1/16 | 0.2461 |
| D3 | DOS | 0.1250 | 1/8 | 0.4921 |
| D5 | DOS | 0.0625 | 1/16 | 0.2461 |
| D6 | DOS | 0.0625 | 1/16 | 0.2461 |
| D7 | DOS | 0.0000 | 0 | 0.0000 |
| D8 | DOS | 0.0625 | 1/16 | 0.2461 |
| DOS Average Wear | | 0.0625 | 1/16 | 0.2461 |
| <u>Densifier Over Shotblasting (DOS)</u> | | | | |

Source:

*Preservation of Concrete Pavement Using a Modified Silicon Reactive Lithium Surface Densifier Over Shotblasting: A Life Cycle Cost Analysis, Douglas D. Gransberg, PhD, PE**



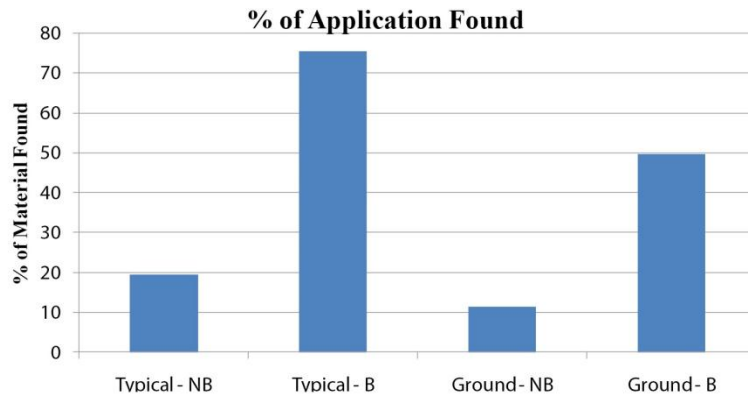
Route 113 Treatment Site-Delaware

The intent with this limited study was to determine the amount of Lithium ion penetration into a concrete roadway surface.

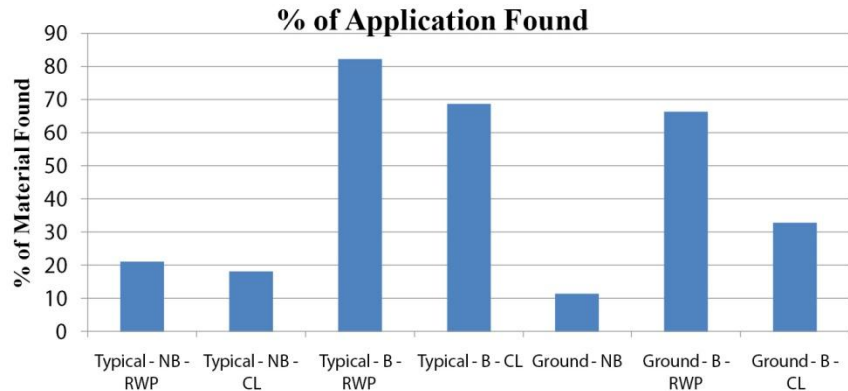
On March 26th 2010 there were 7 cores representing 4 different surface profiles.

Two were from a 'typical surface' ...Two from a 'typical but blasted' ...

Two from a 'blasted diamond ground' ...One from 'diamond ground only'.

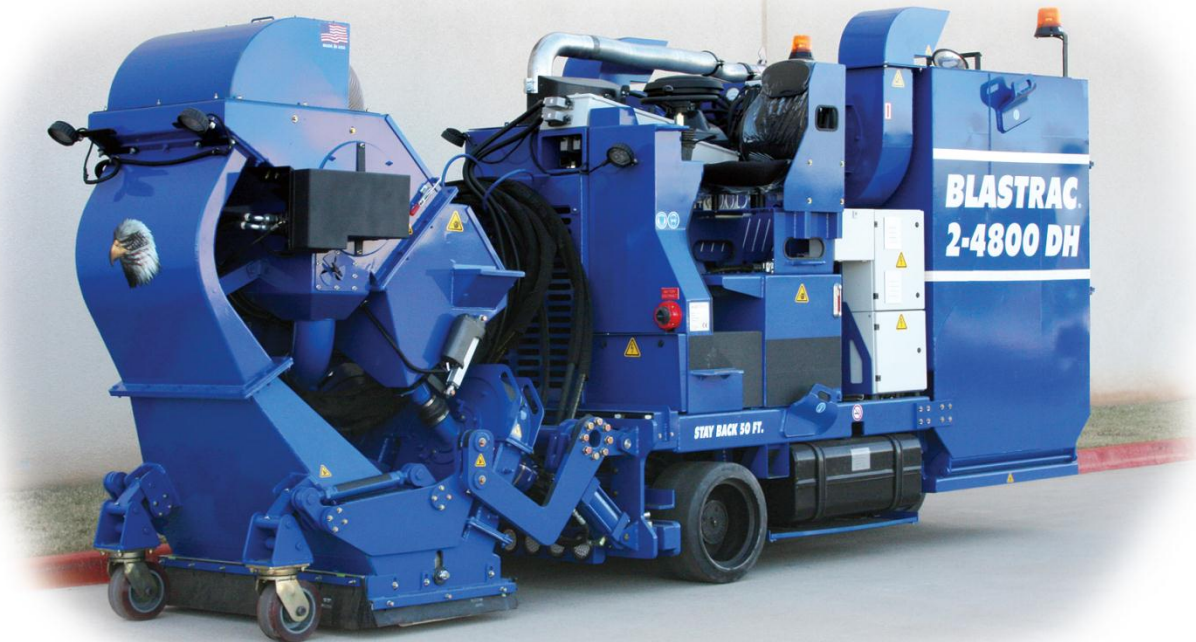


• The chart above shows all of the individual cores, to show the different from the right wheel path and the center of the lane.

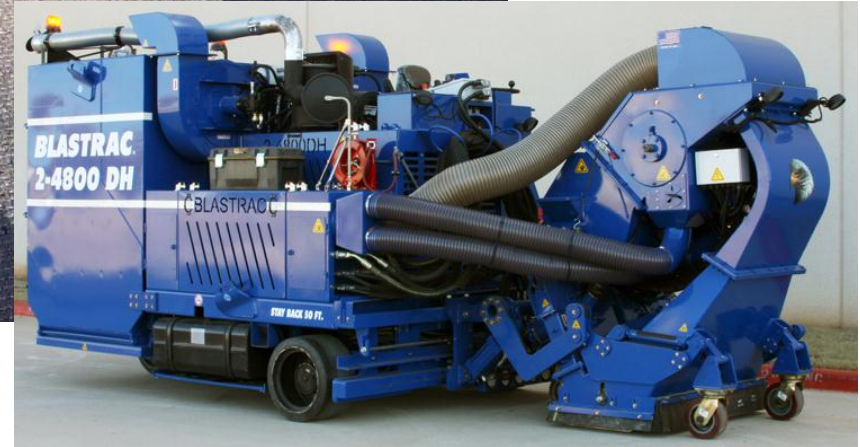


•Note: The pavement was not sampled until 9 months after the lithium treatment.

Shotblasting Equipment / 2-4800DHMKIV



Shotblasting Equipment / 2-4800DHMKIV



Shotblasting Equipment / 2-45DTM



Shotblasting Equipment / 2-45DTM



Thank you for your time!

Questions?

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