



Josh Jones
Central Region Sales Manager





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 has multiple partners positioned throughout the continental United States and the world. The Blastrac line includes... sales, service, and support.



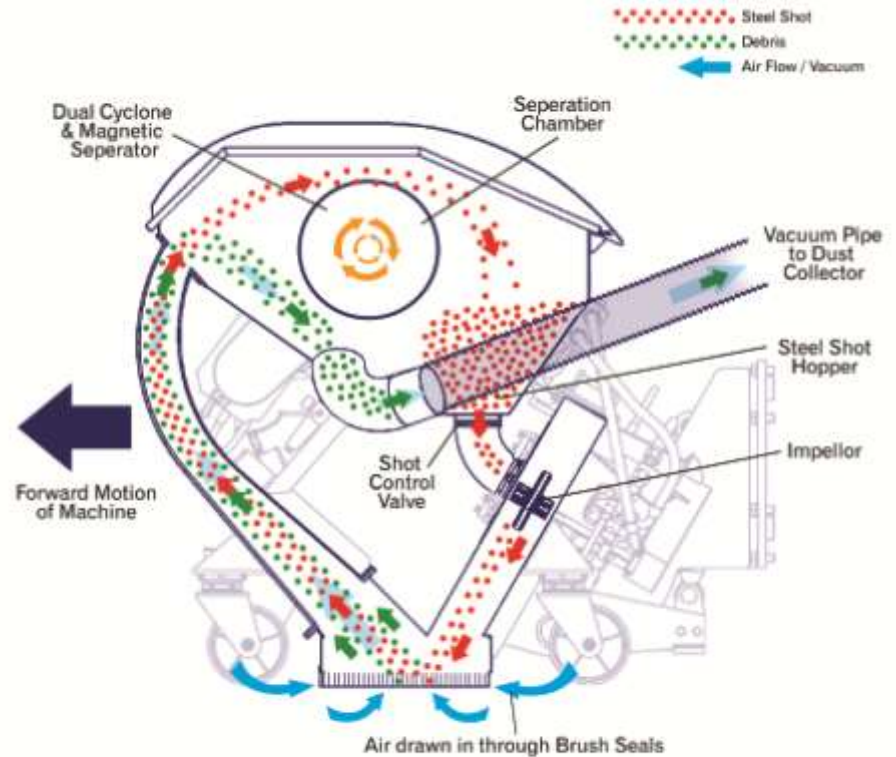
Blastrac's Inception

- Blastrac originated from The Wheelabrator Corporation.
- The Wheelabrator Corporation is a manufacturer 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.
- These rooms had multiple blast wheels which removed surface contaminants and profiled the steel surfaces to better accept surface coatings.
- 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.
- ***Blastrac was born !!***



How It Works

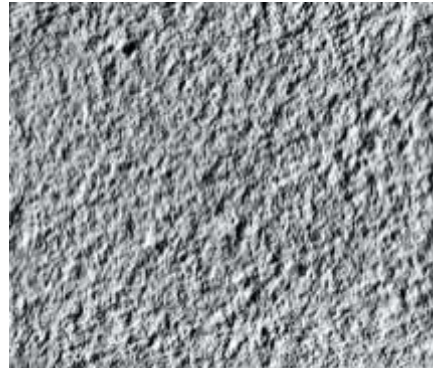
Shotblasting incorporates the use of a high speed blast wheel that propels steel shot in a controlled pattern at high velocity toward a substrate. The impact of the steel shot abrades and removes contaminants while etching the surface. The steel shot rebounds into an air wash separator, there it is cleaned 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 polymer overlayment projects.
- Improve Micro and Macro textures on asphalt and concrete surfaces
- Shotblasting will yield surface profiles ranging from a CSP3 and a CSP8. Or between 32 and 210mils.



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 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 / Donners 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 cement 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 .

26 Core ID	Treatment	Wear (inches)	Wear (inches)	Wear (mm)	
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**



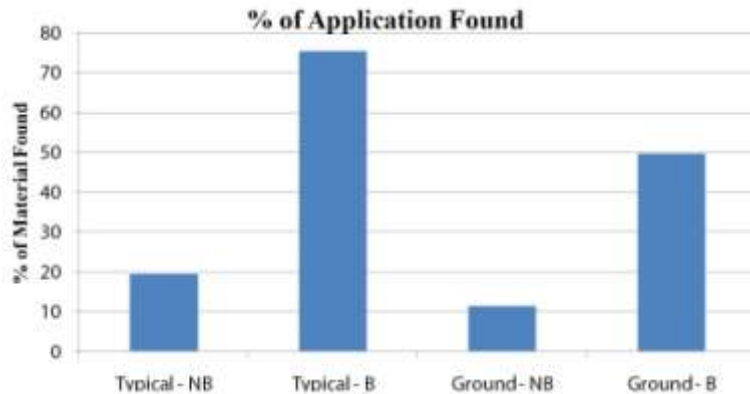
Route 113 Treatment Site-Delaware

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

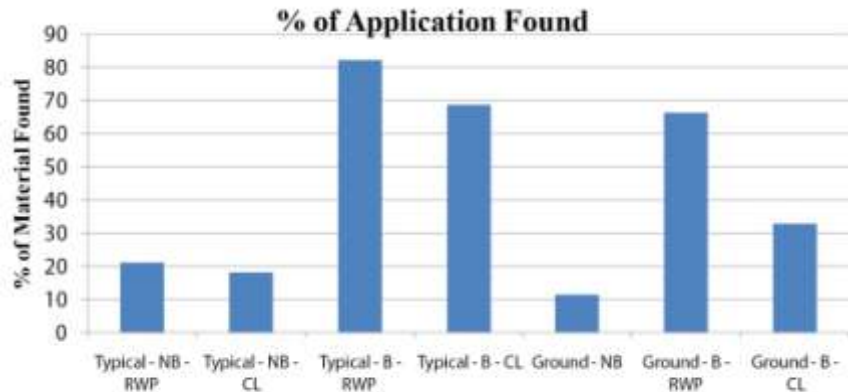
On March 26th 2010 there were 7 cores representing 4 different surface profiles.

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.

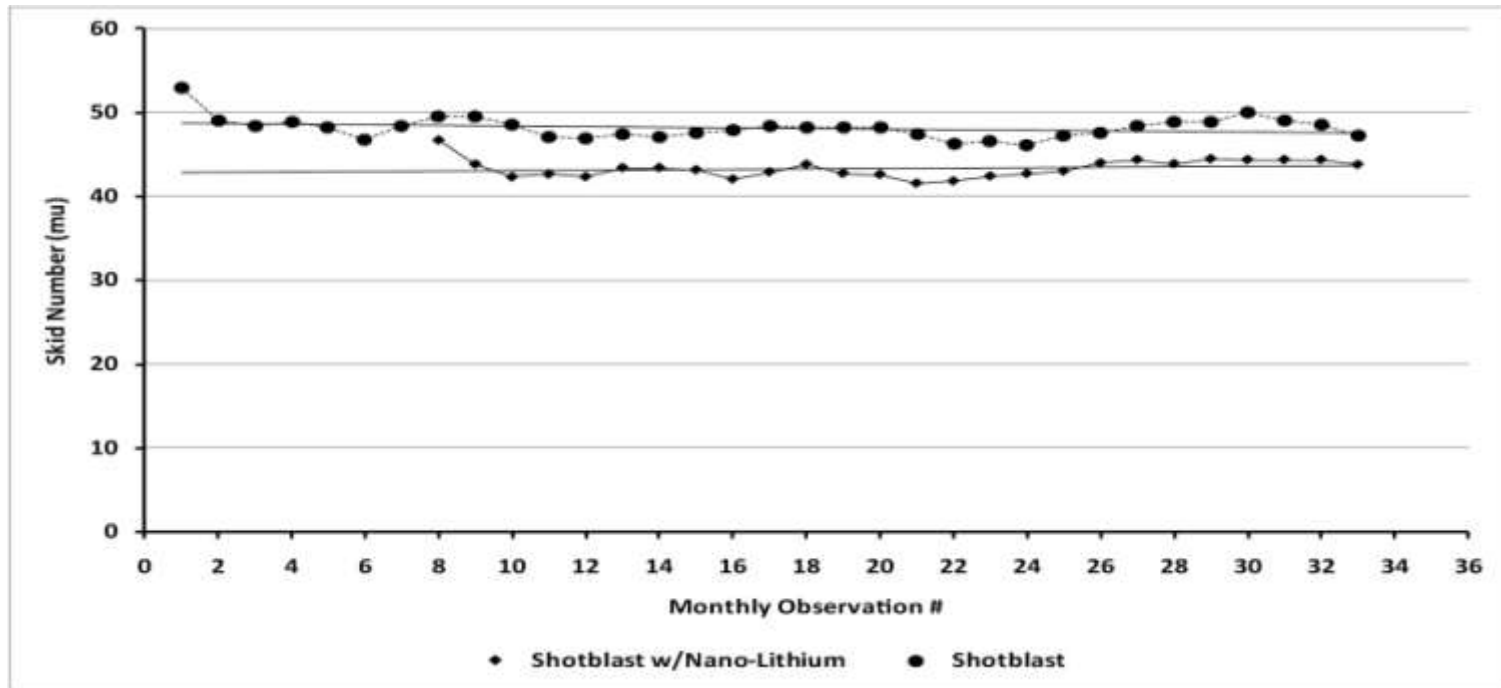


•Note: The pavement was not sampled until 9 months after the lithium treatment.

US Highway 77-Oklahoma City

- A study was made and sponsored by the Oklahoma Department of Transportation with Caleb Riemer, PE / ODOT as the lead of the project.
- Two ¼ mile sections of roadway were shotblasted. One had the Transil product applied to the surface while the other was left as a blasted surface.
- One of the study's objectives was to track the skid number change over time. This would identify any potential safety hazards that may exist from a chemical application to the roadway surface.
- The other objective was to monitor and take monthly measurements of the macro texture and skid numbers over a 33 month time period.
- The following slide shows a graph of the results from testing. Initially you will notice a loss of skid number. This is due to abrasion from vehicle traffic, but the skid number does level off.
- The shotblasted and treated roadway does show a lower skid number than the shotblasted only surface, the skid number retained is roughly 44.

US Highway 77-Oklahoma City



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**

Shotblasting Equipment / 2-4800DHMKIV



Shotblasting Equipment / 2-4800DHMKIV



Shotblasting Equipment / 2-45DTM



Shotblasting Equipment / 2-45DTM



Thank you for your time!
Questions?

Josh Jones
Central Region Sales Manager



13201 North Santa Fe Ave., Oklahoma City, OK 73114
C: 405-996-8568 O: 405.478.3440 F: 866-485-1046

E: josh.jones@blastrac.com

