

ZENESIS®

"From chaos to order"

ZENESIS® *Products*



Development History of ZENESIS® Technology

2000: Conceptual product design, Exploration of manufacturing technology.

2001.7: Creation of a dedicated research team.

2001.9: 1st patent on patterning technology. (Patent no. 10-0428947 / US 6626167)

2002.1: Design for manufacturing process completed.

2003.4: Start of test marketing.

Current: Design and production ready for each product category. Over a dozen patents registered and pending on patterned diamond design and production technology.



Cured Concrete Blades

Cutting material: Cured and reinforced concrete (Flint concrete).

Diameter: 12" to 60".

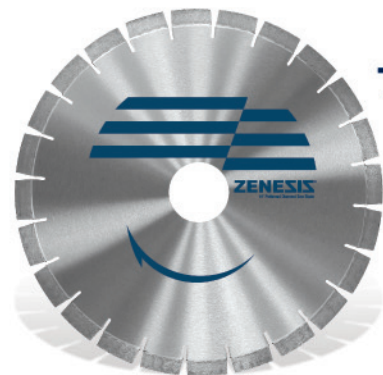
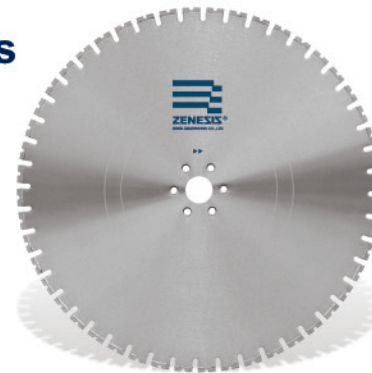
Equipment: 10 HP to 80 HP.

Wall Saw Blades

Cutting material: Heavy reinforced concrete.

Diameter: 12" to 60".

Equipment: 5HP to 50HP
(Electric / Hydraulic).



Trimming Blades

Cutting material: Granite.

Diameter: 12", 14", 16", 18", 20".

Equipment: 5HP to 30HP (Manual / C.N.C.).

Core Bits

Cutting material: Heavy reinforced concrete (dry/wet).

Diameter: 2" up to 14".

Equipment: 1HP to 15HP.



ZENESIS® TECHNOLOGY



EHWA DIAMOND IND. CO., LTD.

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Printed by Ehwa Diamond. 12 / 2006



Use approved safety guards and protective goggles.
Do not use in curved or obliqued cuts.



ZENESIS® TECHNOLOGY

ZENESIS® is a platform technology that brings to life dramatic improvement in diamond tool performance by its ability to custom design and mass produce optimal patterns of diamonds based on application needs.

Conventional Diamond Tools

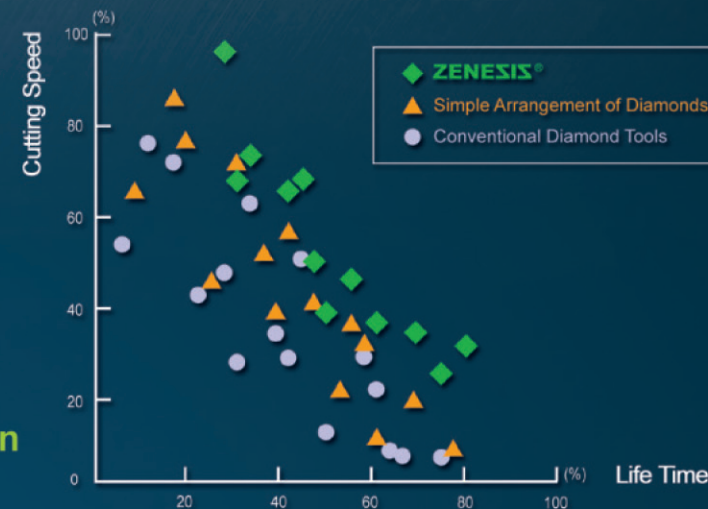
- Diamonds are randomly distributed.
- Random variation results in inconsistent product performance.
- Trade-off is made between cutting speed and life.

Simple Arrangement of Diamonds

- Elimination of randomness provides only marginal improvement in performance...
- ... and does not justify the increase in cost.

ZENESIS® Technology: A New Generation of Diamond Tools

- Delivers optimally customized patterns of diamonds for specific applications.
- Maximizes product consistency.
- Significantly improves both cutting speed and blade life.
- Enables cost-effective mass production.
- Is protected by patented technologies.



30 ~ 70 %
Improvement

ZENESIS®
Technology

A New Generation
of Diamond Tools

Conventional
Diamond
Tools

Simple
Arrangement
of Diamonds

DEVELOPMENT



Examples of ZENESIS® Patterns

Inclined Triangular Structure

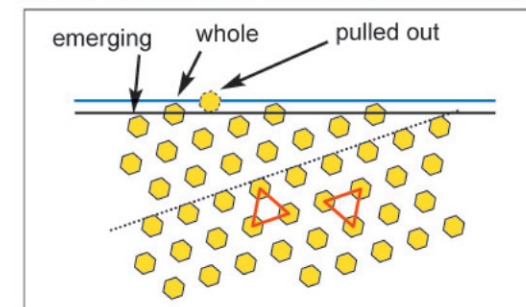
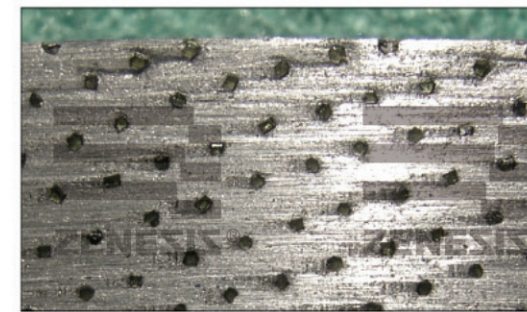
• **Design:** Inclined Triangular Structure

• **Concept:**

Diamond pattern is designed to expose a pre-determined number of diamonds at an uninterrupted and regular sequence (consistency in wear progression).

• **Effect:**

Consistent, smooth cutting performance throughout blade life.



Alternating Diamond Layers

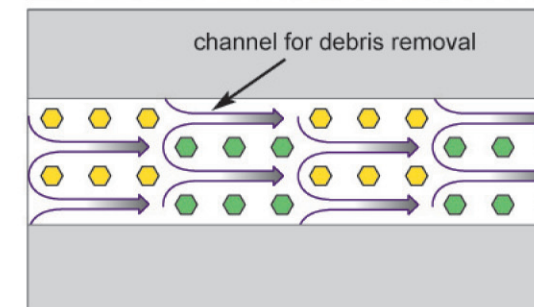
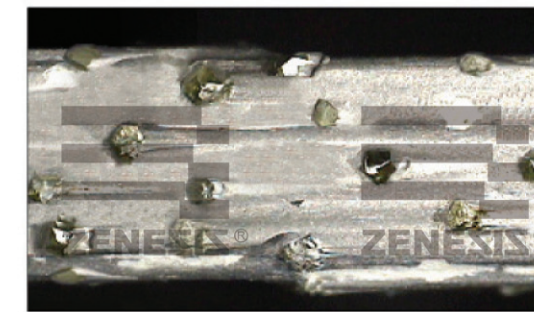
• **Design:** Alternating Diamond Layers

• **Concept:**

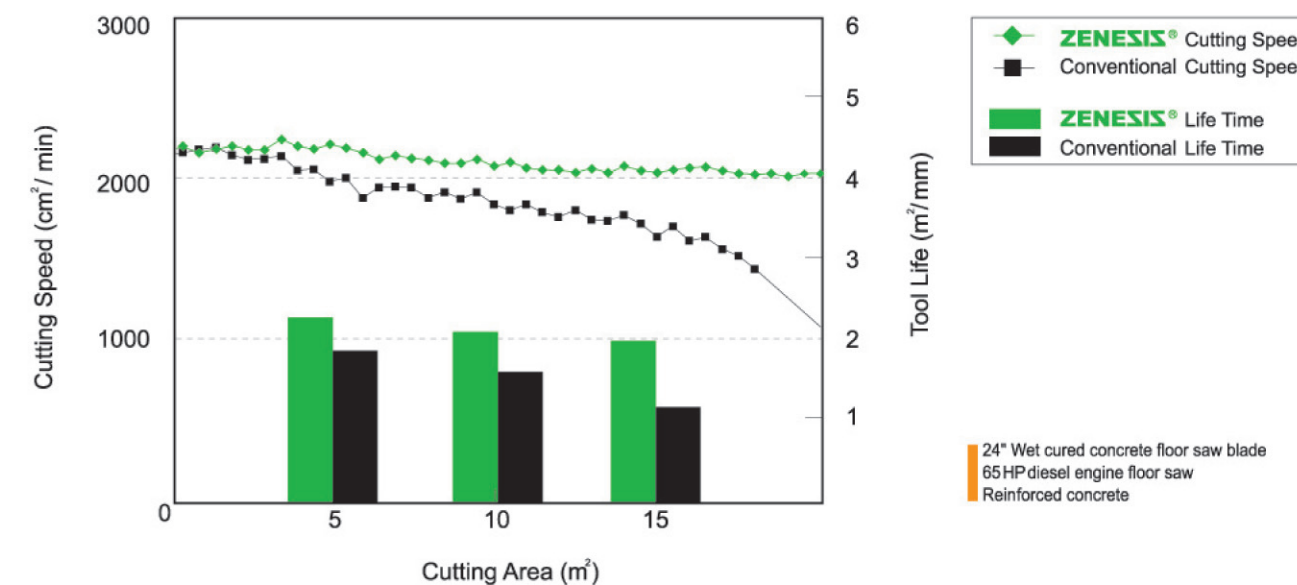
Diamond layers are patterned to control the height of diamond exposure and the length of diamond "tail" and to create channels optimized for debris removal.

• **Effect:**

Significant improvement in both cutting speed and life.



Performance : ZENESIS® vs. Conventional

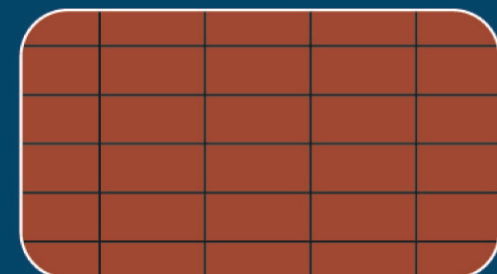


PATTERNING TECHNOLOGY

Industrial efforts continually evolve to reduce randomness in processes.



Random arrangement of various-sized stones.



Simple arrangement of bricks provide marginal improvement, but...



Ultimately, an engineered design provides the maximum effect.