



Korea Accelerator and Plasma Research Association
Physico Technology Laboratory

is **Rock Excavation** affecting your Project ?
Here is a Solution...

ECO FRIENDLY PULSE PLASMA ROCK FRAGMENTATION TECHNOLOGY FROM KAPRA, S. KOREA

Features

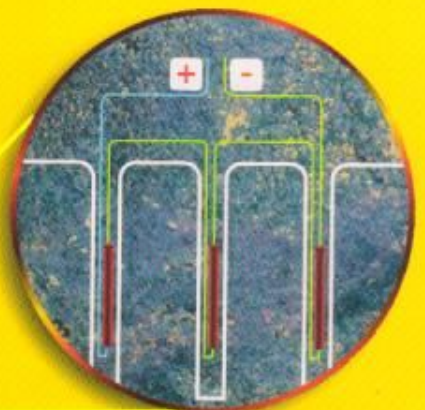
- Thermal Process
- Electrodes Filled with Aluminium and Copper Oxide
- Takes Miliseconds for the Reaction
- Impact Energy due to Conversion of powders to Plasma State Causes Fracturing of Rocks
- Process Generates Heat and Impact Waves to Crack and Break the Rock

Product Detail

- Electro Powder Impactor (EPI)
- Input Powder : 30 KVA, 380 V, 3 Phase, 50 Hz
- Storage Energy : 268.92 kJ, output Energy 1,34, 680 Kw
- Impact Cells : $2 \text{ Al} + 3 \text{ CuO} = \text{Al}_2\text{O}_3 + 3 \text{ Cu} + 1197 \text{ KJ}$
- EPI & Impact Cells Patented Worldwide US, Europe, Japan, Korea etc.



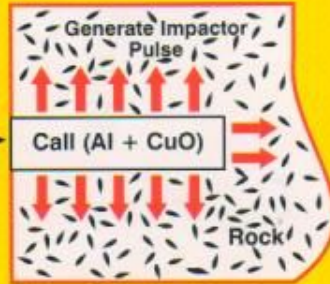
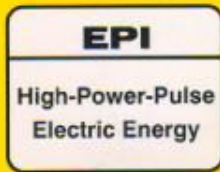
Overall Concept



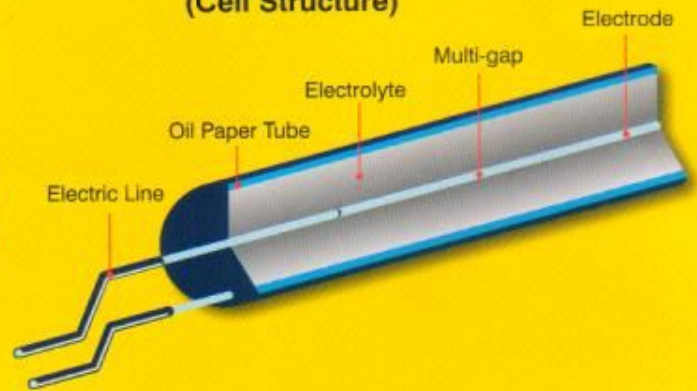
(EPI pulse Power)



(Cell)



(Cell Structure)



Process

- Drill Holes of 51 mm to a depth of 3 Metre
- Insert Plasma cells
- Plug the Holes with sand bags
- Energized Electro power Impactor (EPI) using 30 KVA Generator
- Provide Pulse to Plasma Cells From EPI
- Remove the Fragmented Rock using Normal Excavator

Advantages

- No License Required for Usage
- No Permission for Blasting or Stocking of Impact Cell and EPI
- Low Vibrations, Low noise and Low Dust
- No Flying of Rocks and No Gases / Fumes
- Resonance Frequency not Overlapping to Building/Structure, Hence safe to use near to Building/Structure

Applications

SAFE AND SPEEDY ROCK EXCAVATION FOR...

- Building Foundations ●
- Tunnels ●
- Next to the Airport, Rail Lines, Roads, Power Plants, Dams, Canals ●
- Industrial Plants, Oil and Gas Pipelines, City Utility Network etc. ●
- Used for Weak to Hard Rock ●

DATT TREYA INC.

404, Race Course Tower, Race Course, Vadodara - 390 007, INDIA,
Ph.: +91-265-2321802 Fax: +91-265-2344901,
Email: dattatreya_con@hotmail.com, info@dattatreya.com

www.dattatreya.com