

SRI LANKAN GRAPHITE UPGRADE

Invention summary:

Sri Lanka (Ceylon) is the world's purest vein graphite producers since the early 18th century. Industrial Technology Institute disclosed an innovative technology to produce Graphite of natural purity below 90% up to well above 99% carbon purity as a value addition to graphite. A low cost purification unit was constructed for purification of low grade graphite to high grade.

Technology overview:

The novel graphite purification technology based on the floatation method was patented and lead to National awards winning. The technology was transferred to graphite industry and commercial production of pure graphite already began.

Potential application:

Pure natural graphite can be used as primary and secondary battery material, lubricant and paint industry. High conductivity leads to electronic and other high-end applications.

Advantages of the products:

- Bulk density - *ca.* 1.02 g/cm²
- Electrical conductivity (S/m) at 0.8MPa >2200 S/m
- Particle size (D50) < 500 μm
- Interlayer spacing - *ca.* 3.33 Å
- Purity (% carbon) > 99%

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