



Flex Center for Purification & Crystallization

AMECA **[GROUP]**

What is the FLEX center?

AMECA **SPHERE**

- Custom manufacturing processes for specific graphite application needs via AMECA Sphere
- Multiple moving skids that are swapped out depending on customer need
- Automated HMI-systems that are loaded on a per-batch basis depending the custom manufacturing client need
- Enhance wet-lab and analytical space to test Key Quality Attributes (KQA's) prior to shipment of product

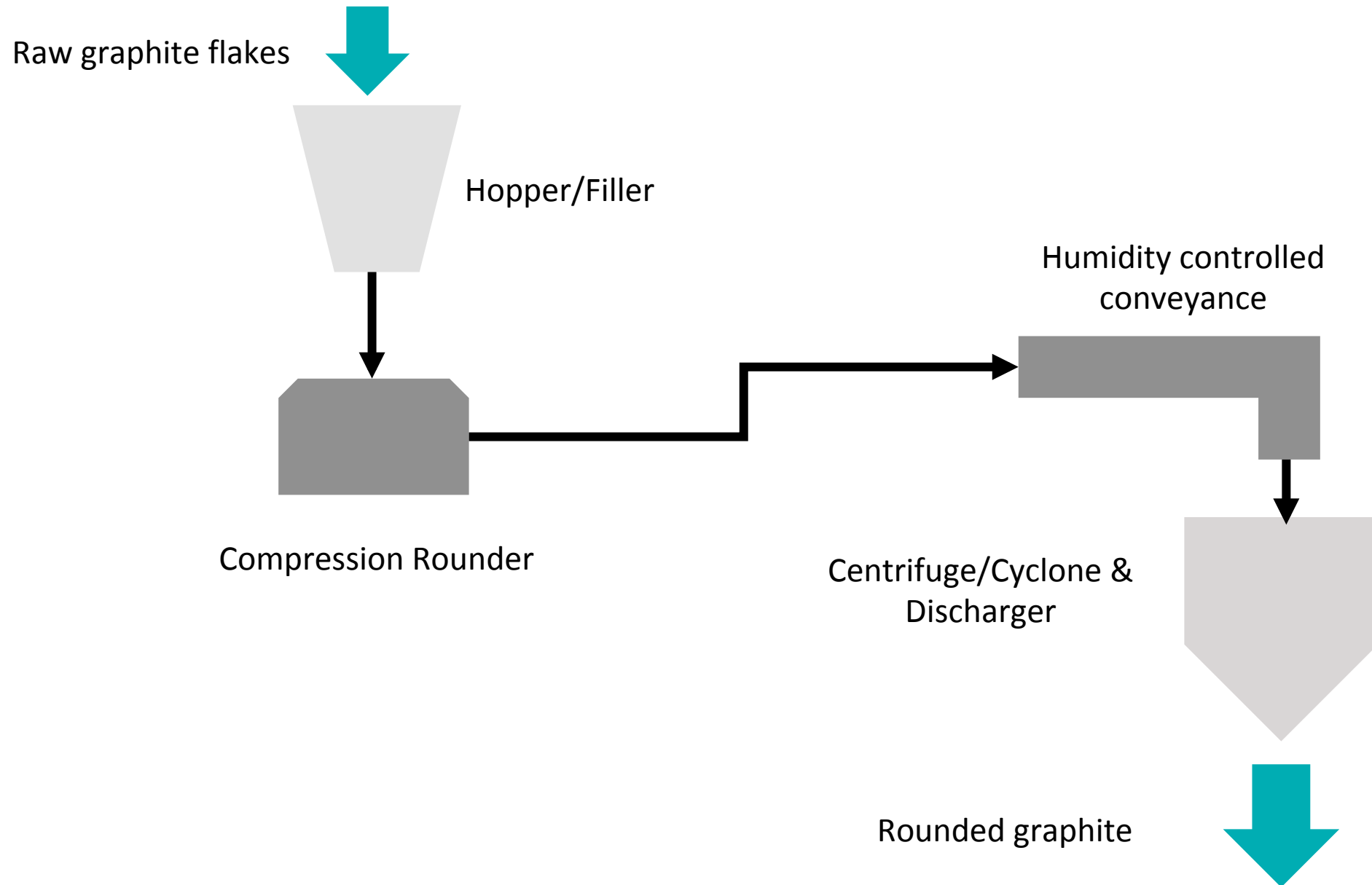


SPHEROIDIZATION

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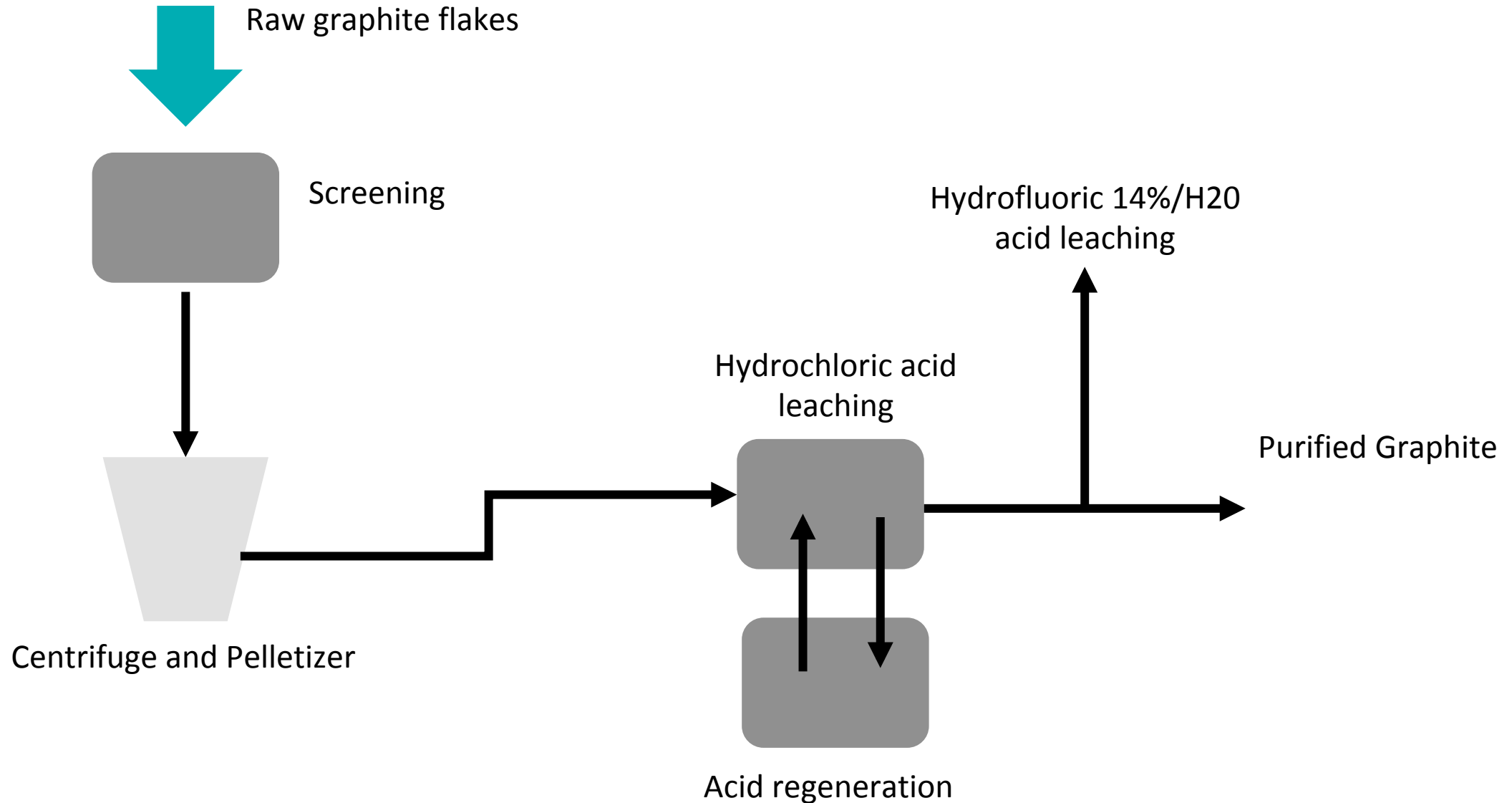
Spheroidization

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Hydrometallurgical Purification

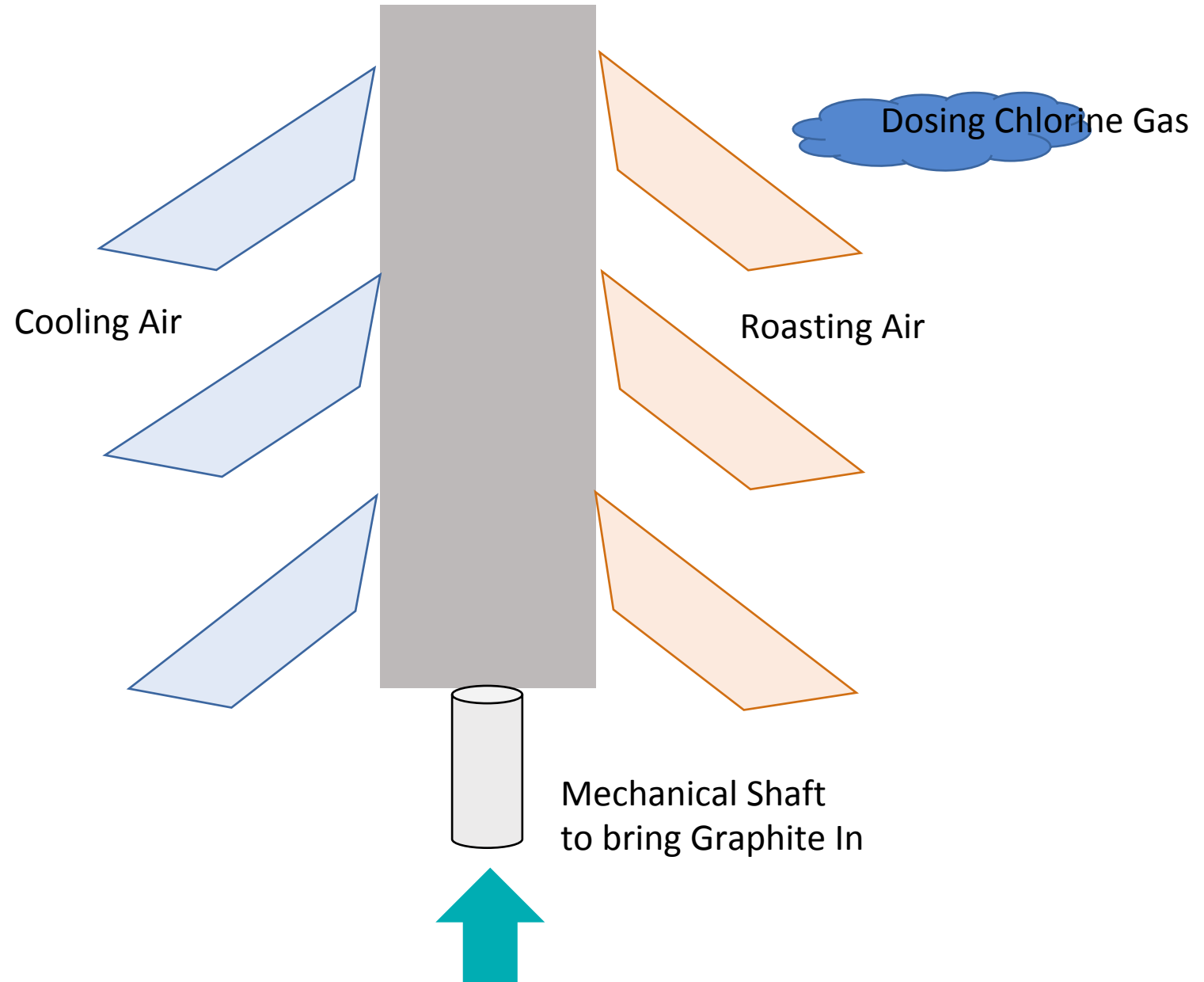
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Pyrometallurgy Purification

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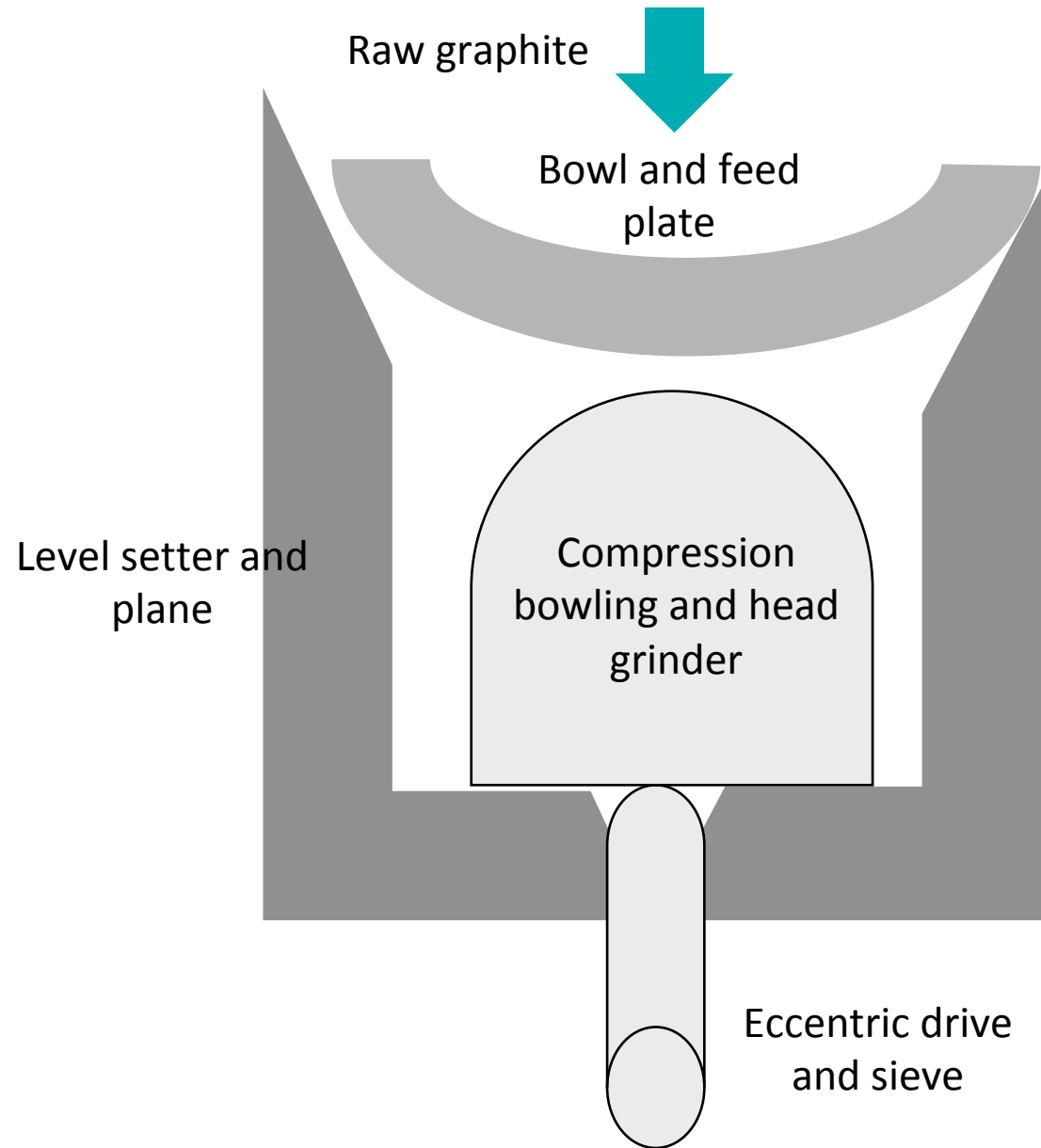
Roast at a specific temperature and atmosphere, add chlorine gas for chlorinating the impurities in the graphite, and generate gas phase or condensed complexes with chloride to eliminate impurities with low melting and boiling points. The purification efficiency of this method is known to be high, reaching more than 98%



Cyclonic Comminution

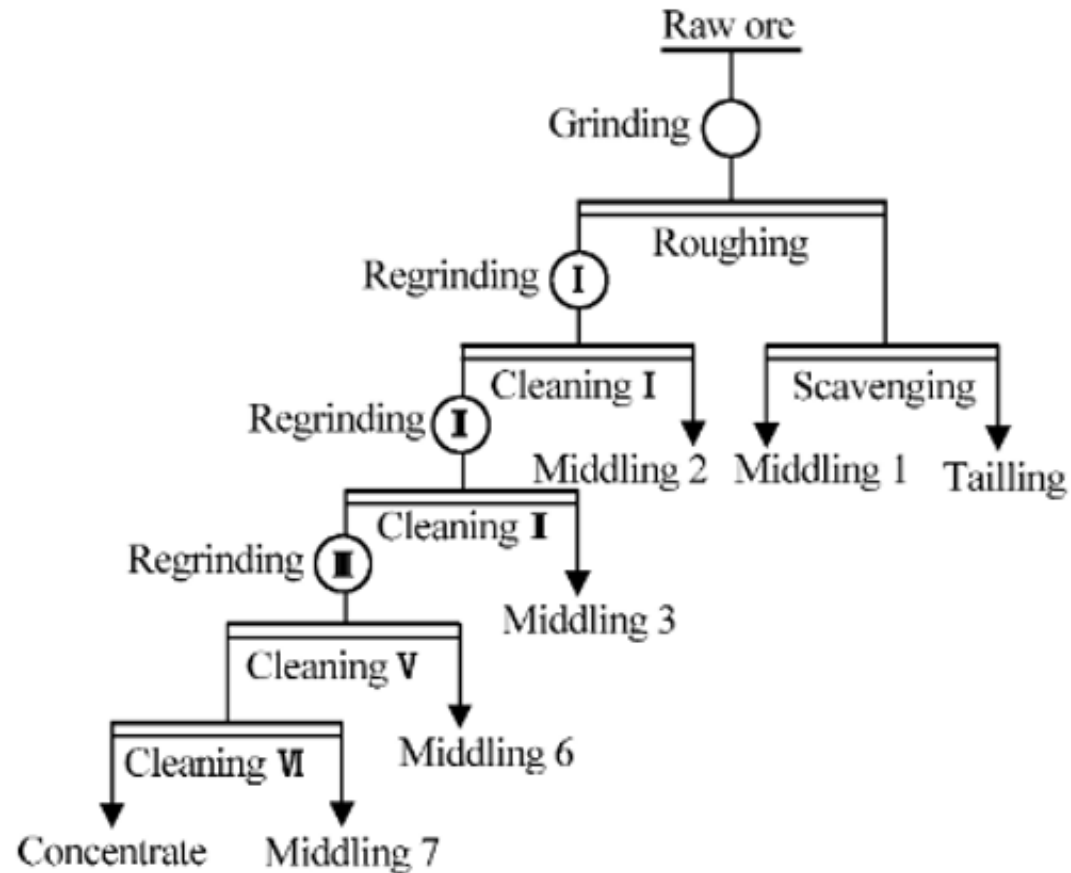
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The reactivity of solid constituents enhances with particle size reduction, which in turn allows the mechanical separation of undesirable ingredients. Comminution essentially produces outfit particles of different sizes



Typical multi-stage grinding-flotation technique for the flotation of graphite

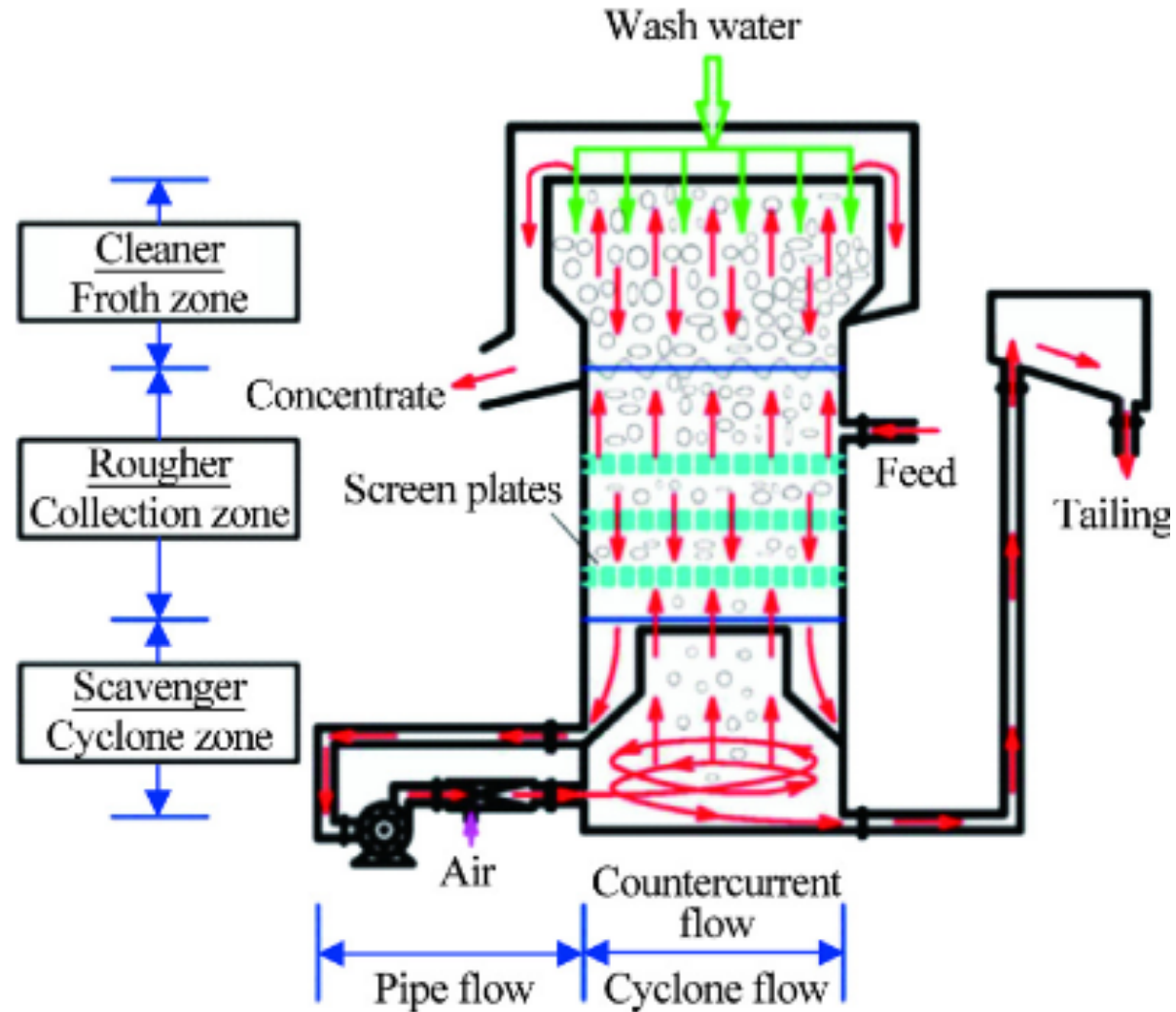
The flaky graphite ore is purified via multi-stage grinding-flotation steps as shown. This process prevents the graphite flakes from being destroyed during the regrinding, generating a large amount of middling

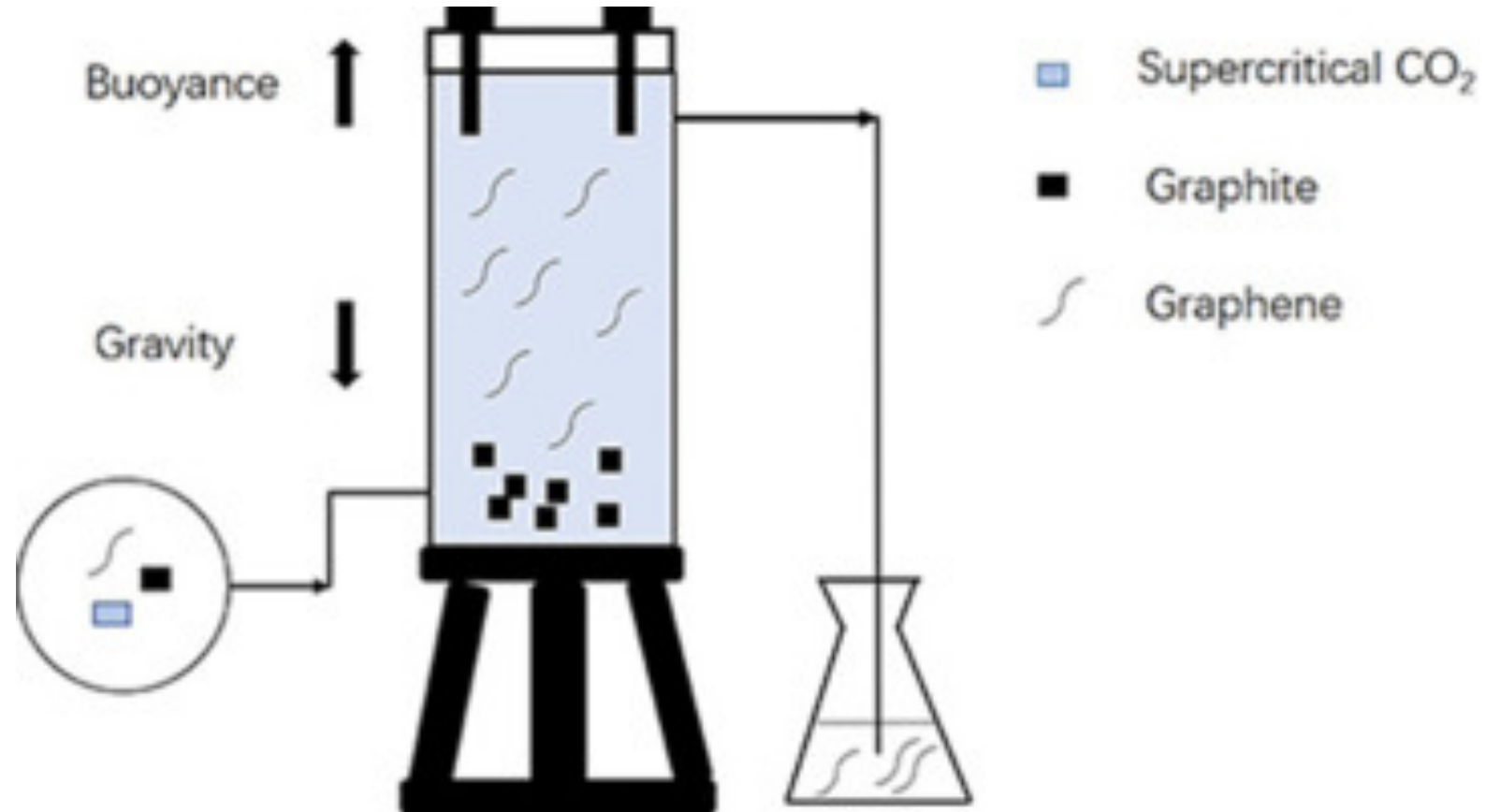


Reverse Cyclone Flotation Separation

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Ensuing portion of flaky graphite ore does not contain the predictable large flakes. Ores must be ground to a much smaller size to upgrade the recovery of graphite concentrate

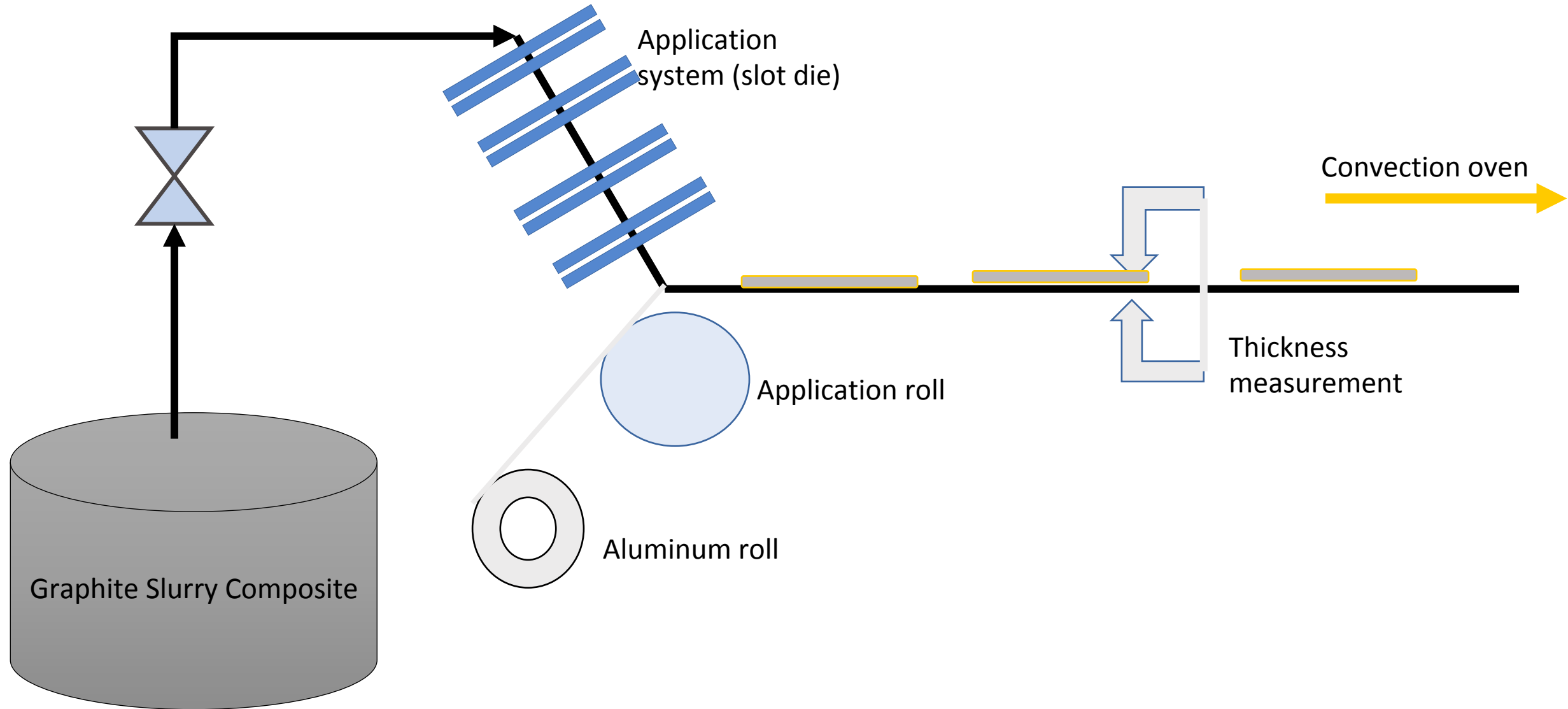




Flex Centre for Coating Processes

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Coating Process #1: Film



Coating Process #2: Particle Coating

