



***Kimberlite***<sup>®</sup>

*Value Proposition of Efficient Chemical Working*

# Company Information



- Kimberlite, incorporated in 1997 to manufacture specialty chemicals .
- One of the leading companies which provides innovative solutions for various industrial applications.
- Having Business Operations across 40 Countries Across the Globe.
- Corporate office and New production unit is located at Doddaballapur, 35 kms from Bangalore
- Two production facilities are located at Malur - 50 Kms away from the city of Bangalore
- ISO 9001:2015 certified
- NSF 60 Certificate
- FDA Certificate
- Kosher Certificate
- Halal Certificate

# R&D- QC Lab Facilities

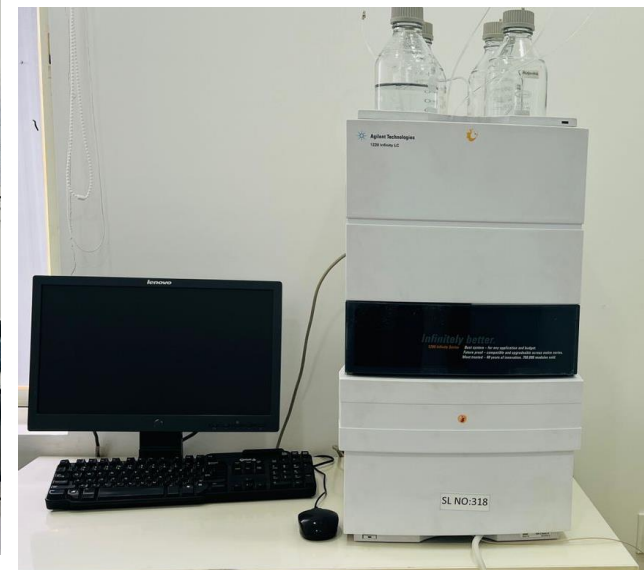
- Well equipped synthesis laboratory and Formulation Laboratory
- Motivated R&D- QC team to innovate products that maintain highest quality standards
- Advanced instrumentation facilities such as HPLCs, UV-Visible Spectrophotometer, Digital melting point, Brookfield viscometer.



R&D Laboratory



QC Laboratory



HPLC



UV-Vis Spectroscopy

# Industries we serve

Mining Industry (Iron, Alumina, Gold, coal & copper)

Total water treatment ( Boiler, Cooling Tower, RO, ETP & STP).

Sugar Process and Distilleries.

Pulp and Paper Mill

Ceramic industry

Leather industry

Textiles

Paints & Coatings

Soaps & Detergents

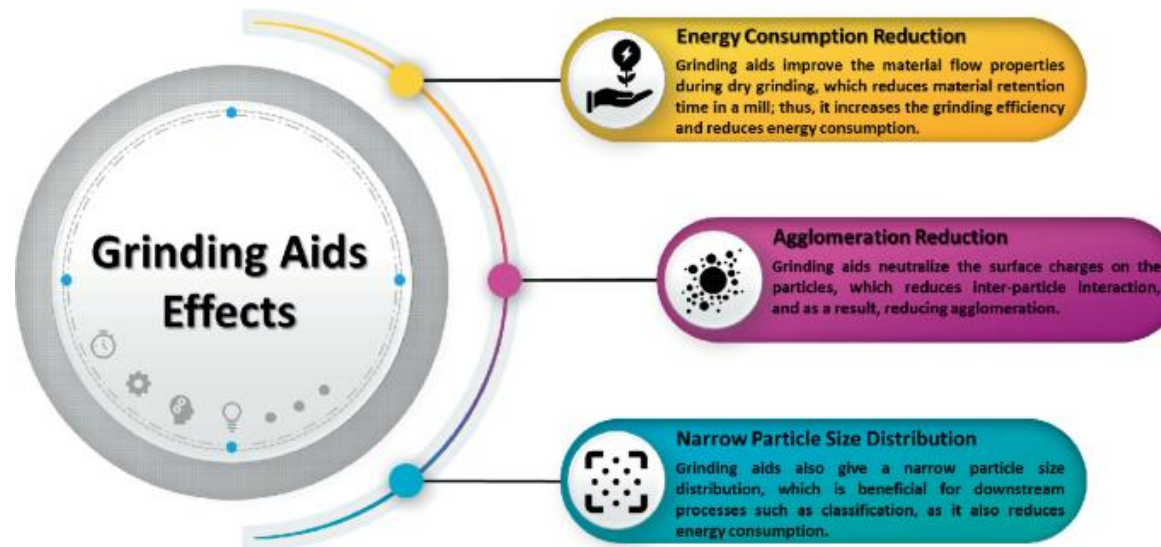
Aquaculture

## What we Offer for Iron Ore Mining

- Grinding Aid
- Dewatering Aid
- Binder for pelletization
- Flotation Aids
- Dust Suppressants

# Grinding Aid's

- Function
  - To neutralize the charge present on the surface of the ore particle there by reduce surface free energy
- Advantages



## HOW DO GRINDING AGENTS WORK?

The most important impact of grinding agent, is to reduce the effects of the attraction forces between particles. Fine particles are better dispersed and more easily separated in end product. This allows advantages on grinding efficiency via:

- Reduction of the agglomeration and the “coating” of the grinding elements.
- Improved product dispersion from feed to separator, increased separator efficiency, reduced by-pass
- Reduction of crusher fill level.
- Spend more time grinding coarse material

## OUR PRODUCT

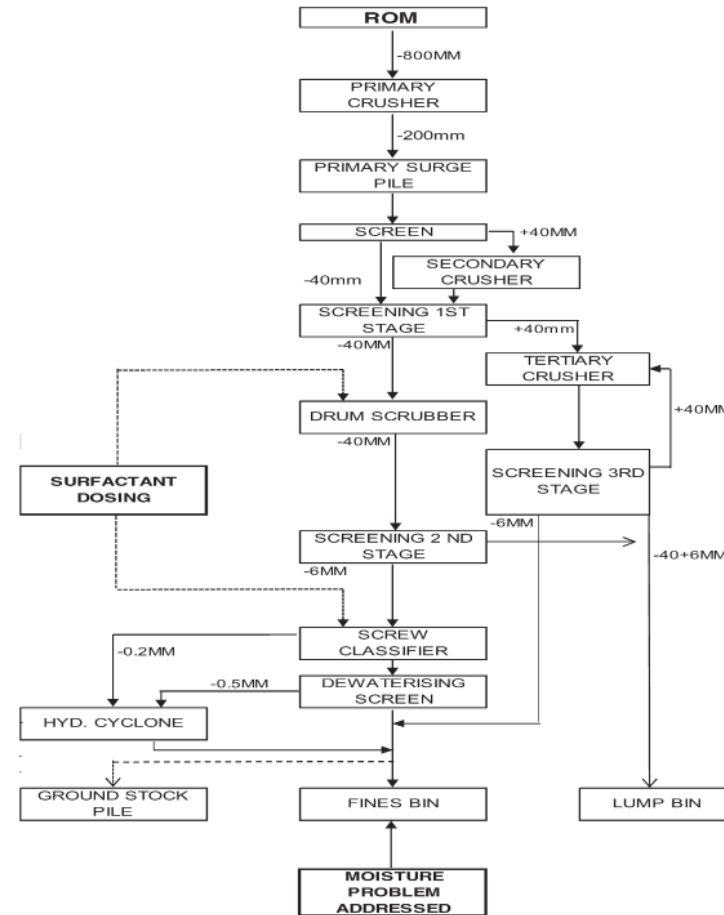
- TC 70142

# Dewatering Aid's

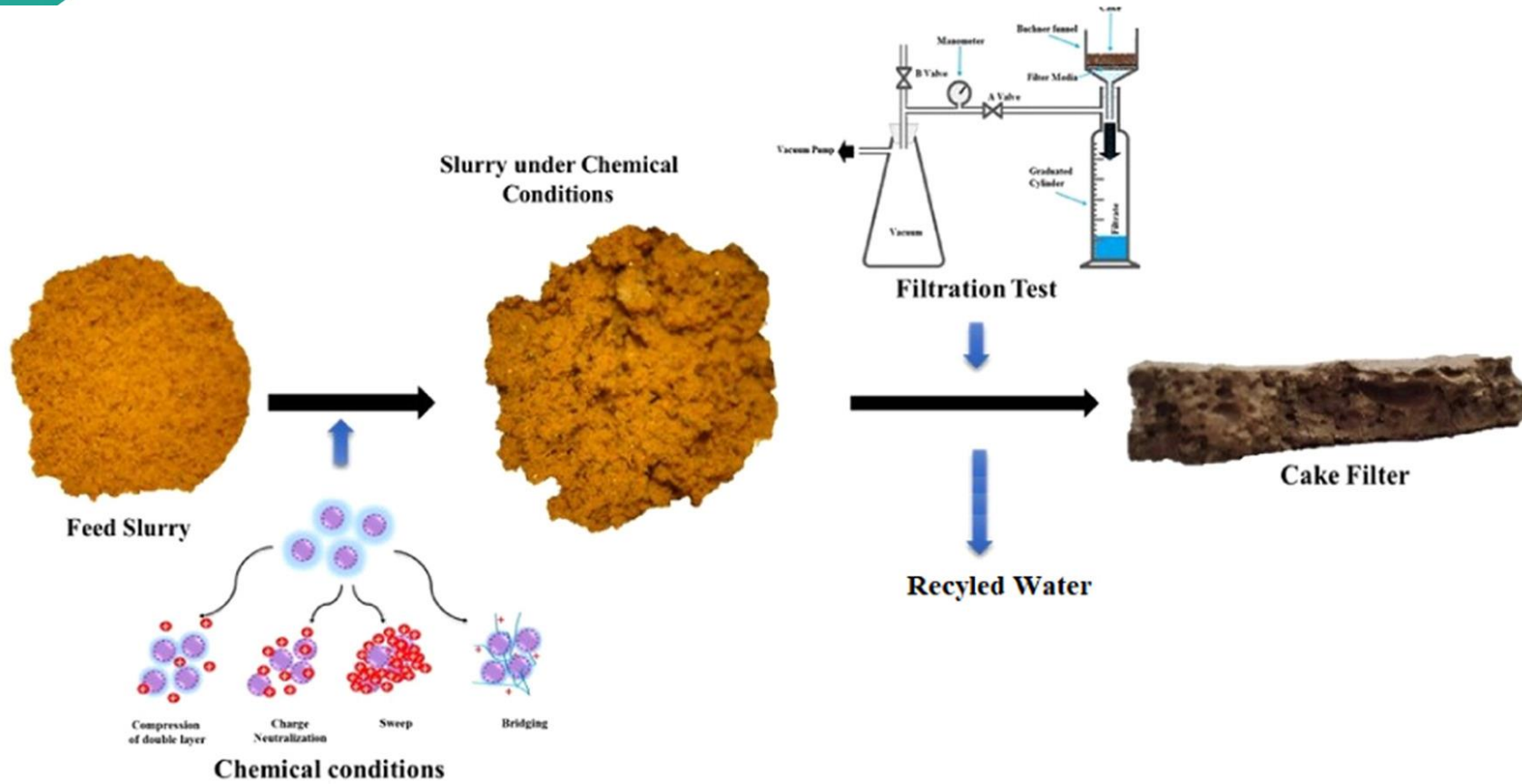
- Tons of Mineral wastes were generated from ore processing creates lot of Sludge which contains higher % of water
- Before disposal, the mining tailings accumulated in the waste pool/dam are dewatered,
- Chemical dewatering agents – which include surfactants, flocculants, polymers, sulfonates, and sulfates – are mostly used to reduce the water from the waste.



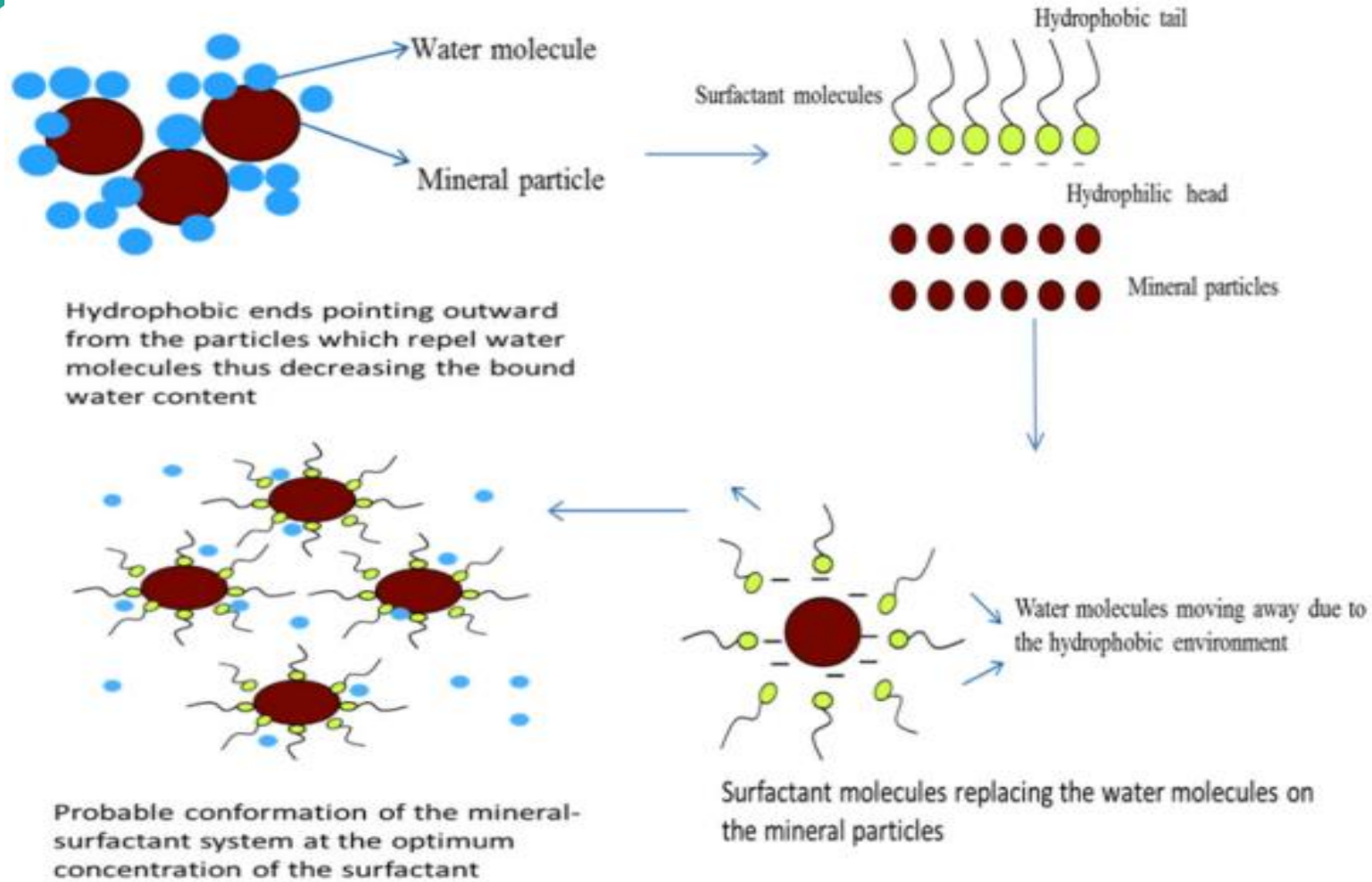
## Steps in Iron Ore Extraction and Point of Addition of Dewatering aid



## Dewatering Process



## Mechanism of Dewatering Aid



➤ Our Product: TC 401

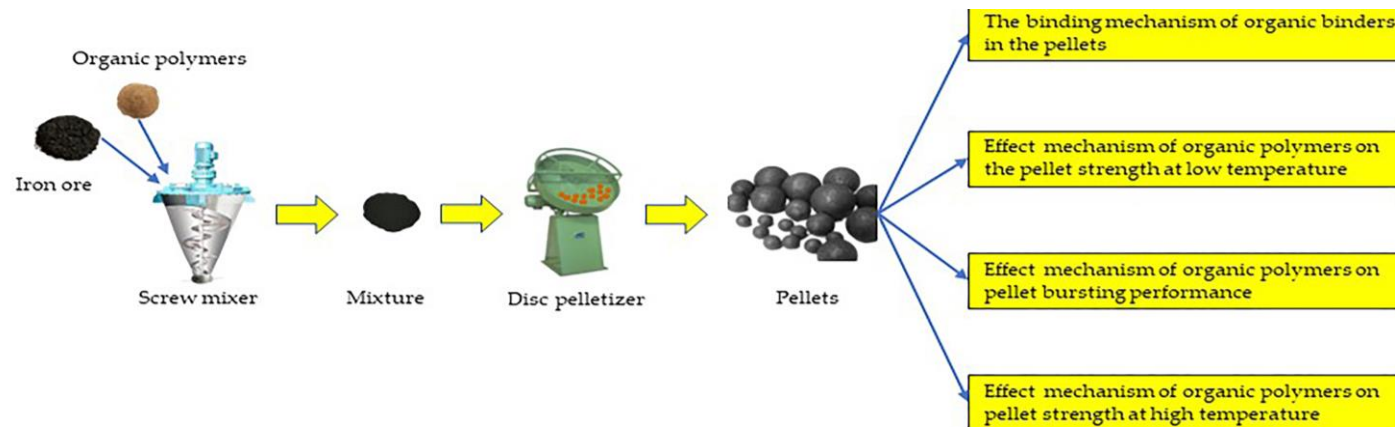
# Binder for Pelletization

- Binders are used in the pelletizing of iron ore aiming to improve the performance of the process in the following aspects
- Promoting and facilitating the balling
- Increasing the green and dry strength of the pellets
- Preventing the collapse of pellets in the initial stages of heating, when a large volume of gas generated by water vaporization tends to crack pellets
- Improving the properties of the fired pellets.

# Types of binder

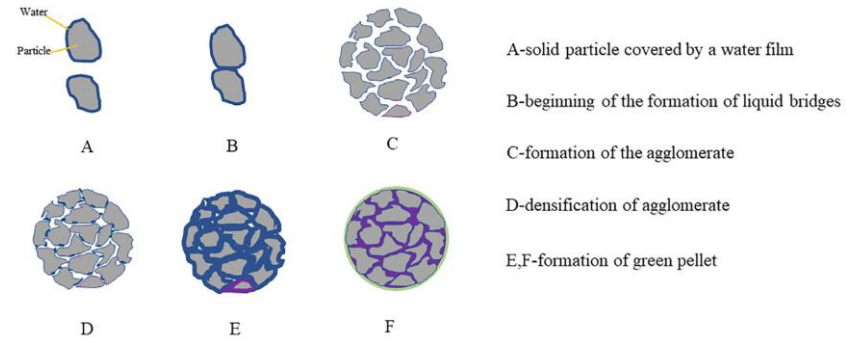
- Inorganic Binder
    - Bentonite – Low Cost but inorganic compounds from bentonite are contaminants increasing the amount of acid gangue in the pellet
  - Organic Binder-
    - Cellulose Based
    - Poly Acrylamide
- it burns without leaving any residue in the final pellet

## Process of Binding

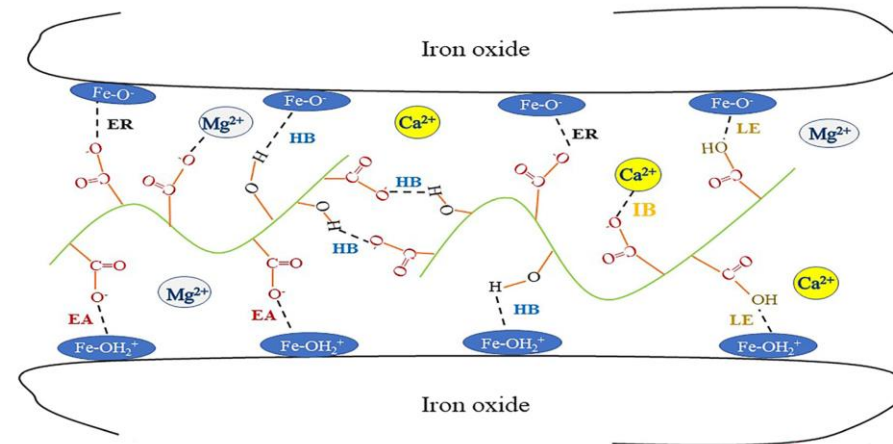




# The Binding Mechanism of Organic Binders in the Pellets



## Surface interactions between iron oxide and binder



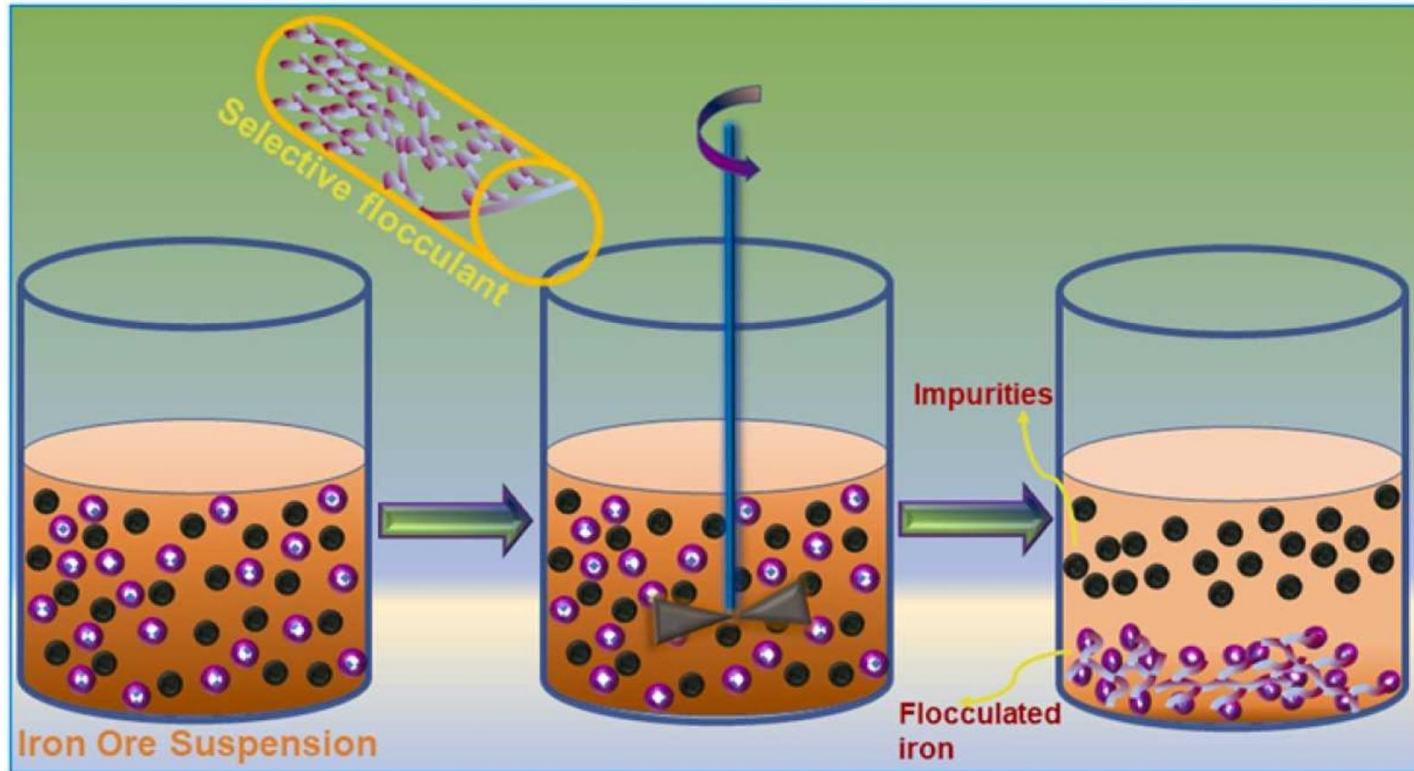
➤ Our Product: TC 80141

# Flotation Aids/ Beneficiation

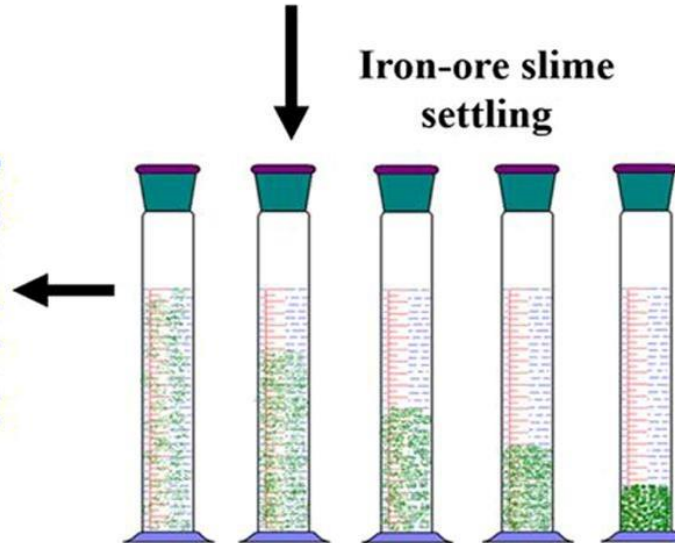
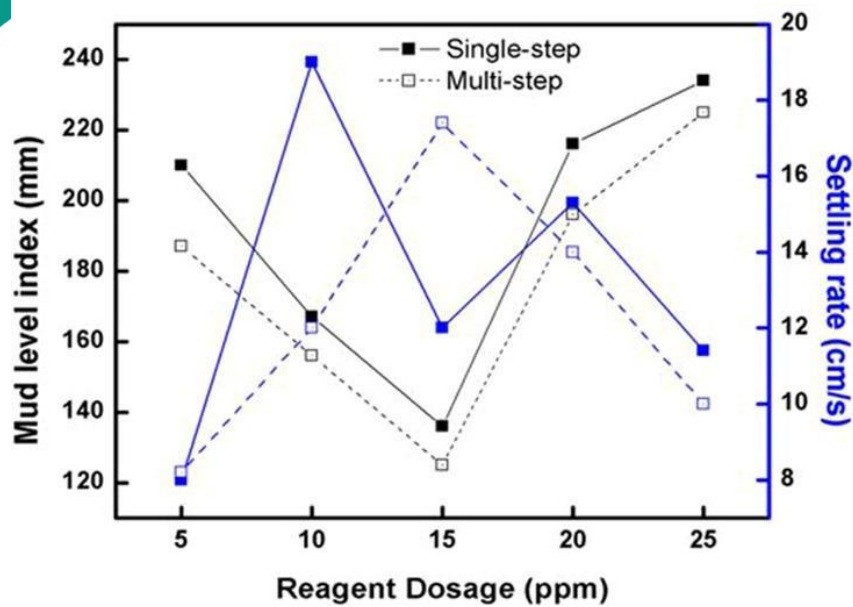
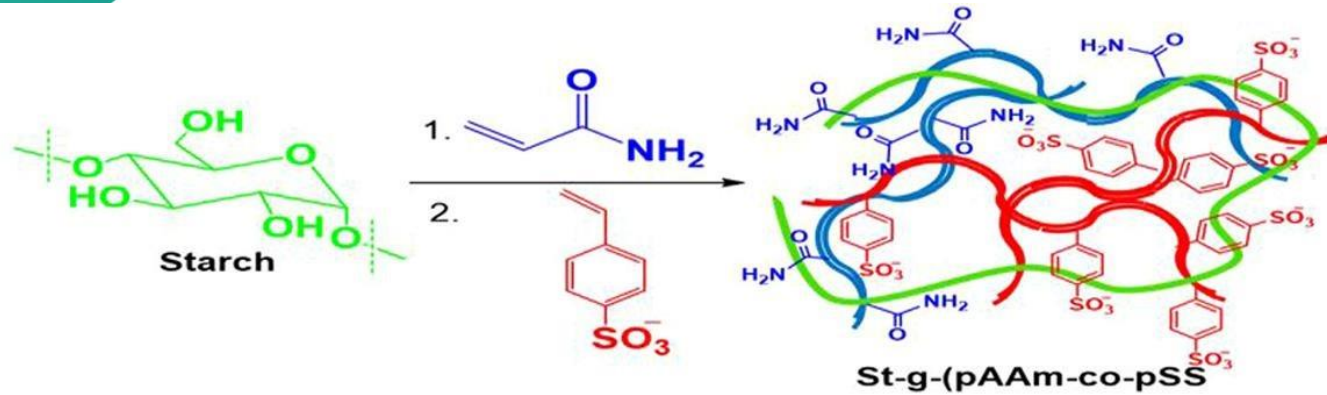
- Beneficiation aims to eliminate the harmful elements in iron ore concentrate, which could impose a detrimental effect on iron making
- Beneficiation can be done many physico-chemical methods like Froth Flotation, Electrostatic Separation, Magnetic Separation, Sedimentation, Elutriation etc, and flocculation.
- Among the above methods, Flocculation is the most important method
- Flotation processes are applicable to beneficiation of substantial tonnage. In mining the amount of fines generated is more than 40%.
- Higher molecular weight polymers have been used as flocculants for colloidal suspensions to separate and dewater solid-liquid (water) systems



# Iron ore beneficiation by Flocculant



# Performance by Flocculant

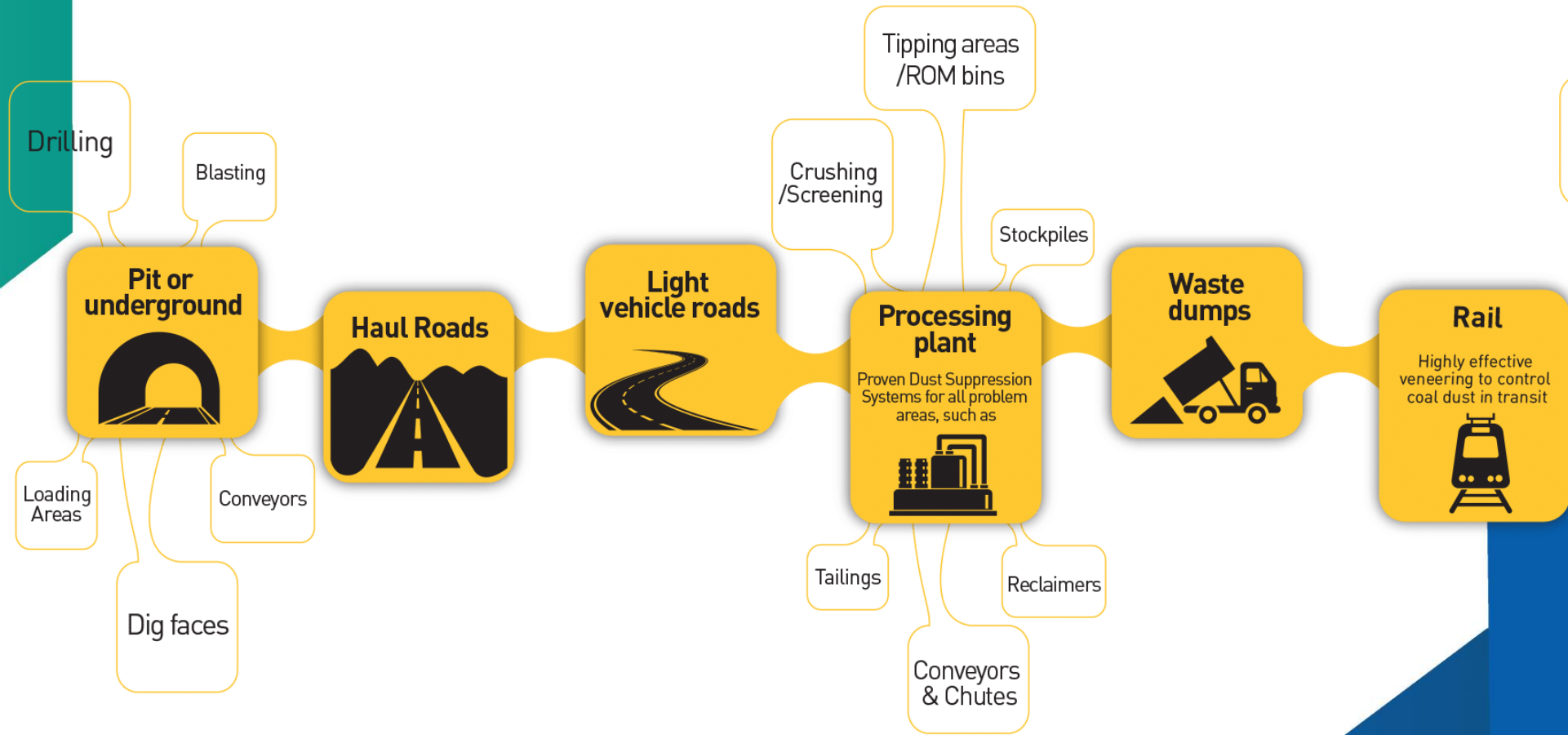


Our Product: TC 4326

# Dust Suppressants

- Dust production in mining operations is an inevitable hurdle
- Mining operations handle massive quantities of material every day, and the dust generated during handling can become a serious health and safety hazard to both the mining personnel and surrounding community.
- Many operators use water sprays alone to suppress dust and remain in compliance. However, this method is largely ineffective, as water droplets are too large to effectively keep bulk solids wet.

# Source of Dust in Mining



## The benefits of using dust suppression in mines

- Reduces visual dust
- Minimizes water usage
- Minimizes conveyor slippage
- Eliminates excessive moisture content in material
- Reduces chute blockages
- Improves housekeeping standards
- Increases safe work areas during operation

# Iron Ore



**WITHOUT SUPPRESSION**

**WITH SUPPRESSION**

## **SAFETY, HEALTH & ENVIRONMENTAL POLICY**

To achieve and maintain leadership in manufacturing quality products by adopting continuous improvement and process up gradation methods which enlightens the customer. Also the company is committed to work towards continually reducing risk of injury, occupational illness and environmental impact of its operation. It is committed to provide awareness on quality, safety, health and environmental systems. As a part of this commitment it is working towards improving workplace safety, maximizing reuse of water and conservation of resources. The company enhances safety, health and environment awareness among employees and associated stakeholders through effective communication and training.



A handwritten signature in blue ink, appearing to read "K. Hase", written over a large, loopy flourish.

**Managing Director**

**Kimberlite Chemicals India Pvt Ltd.**

## Quality Policy :

# Kimberlite<sup>®</sup>

*Value Proposition of Efficient Chemical Working™*

*"To Achieve And Maintain Leadership In Manufacturing Quality Products By Adopting Continous Improvement And Process Upgradation Methods Which Enlightens The Customer"*

**Kimberlite Chemicals is committed to meet the customer satisfaction by**

- ▶ *Constantly supplying the best Quality Products which meet the customer requirements.*
- ▶ *Complying applicable statutory and legal requirements.*
- ▶ *Involving all the employees to continually improve the quality of the products through effective implementation of quality management system through out the organization.*

**Date : 01.06.2018**



**Managing Director**



# Awards

# Kimberlite®

Value Proposition of Efficient Chemical Working





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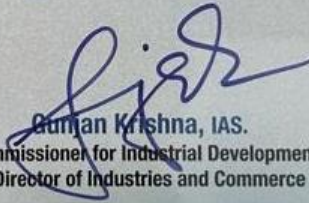
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**STATE EXPORT EXCELLENCE AWARD**

FOR THE YEARS (2017-18, 2018-19 & 2019-20)

**M/S KIMBERLITE CHEMICALS INDIA PVT. LTD., BENGALURU RURAL**  
Award Category - Chemicals Exporter

22nd July 2023  
Bengaluru

  
Gunjan Krishna, IAS.  
Commissioner for Industrial Development  
& Director of Industries and Commerce



# Thank You.....

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