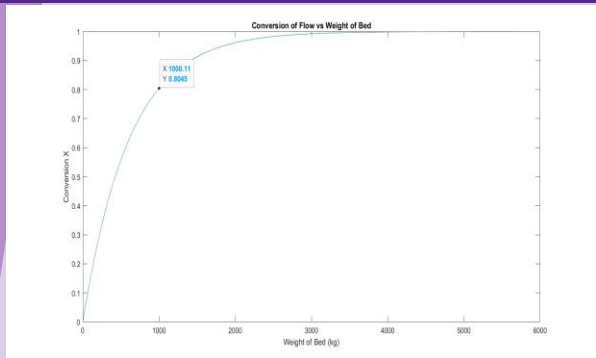
King Fahd University of Petroleum and Minerals

Optimizing the Industrial Process of Steel (OIPS)
Pioneering Steel: From Iron-Ore to Eco-Core.

Background

A manufactory that produces Green-Steel using innovative methods to reduce iron-ore via Eco-Friendly approaches.

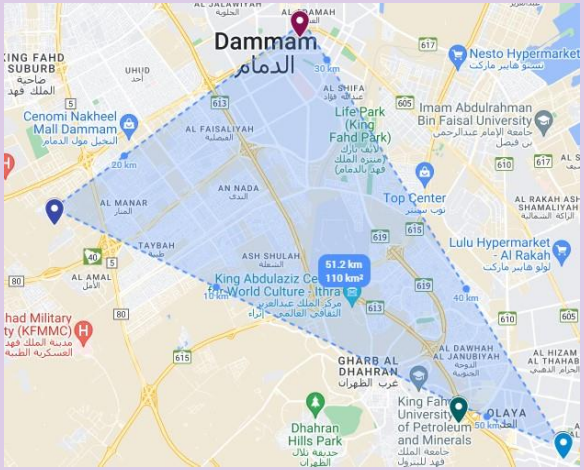
Supporting material

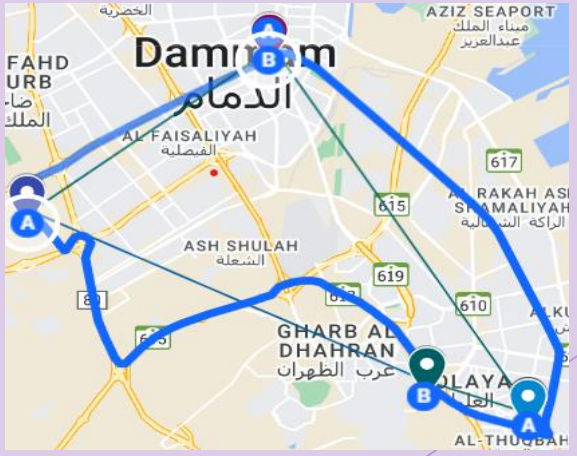


$$z = \sum_{i \epsilon N} \sum_{j \epsilon N, j \neq i} dij \times xij$$

Materials

Iron-Ore to be reduced.
Ammonia reducing agent.
TSP method.





Results

680,000 Kg/year of Water as by-product.
1,135,000 Kg/year Gree-Steel produced.
~ $4,000,000 Estimated equipment cost.

Key Findings

Zero CO_2 emissions.
High quality green-steel.

Prototype