6. **Fresh Sand Addition Control with Indicator for Bucket Elevator & Belt Working Condition**

Objective

To design and implement an automatic control and indication system that prevents hopper overflow, stops sand feeding when full, and monitors the belt and elevator operating conditions

Problem Statement

In the current sand handling system, fresh sand is transferred from the bottom collection point to the upper hopper using a belt conveyor and bucket elevator. However, when the hopper becomes full, the sand continues to be fed, causing overflow. The excess sand flows back down to the bottom area, leading to several issues such as:

- Sand wastage and spillage in the working area
- Belt slippage or belt cut due to overloading
- Equipment wear and breakdown
- Increased maintenance costs and downtime

There is currently no automatic control system to stop sand feeding when the hopper reaches its full capacity or an indication system to monitor the status of the belt and elevator.

ZG Project Guide- Mr. Sanjay Kulkarni 9822741344