CHECKING STRUCTURAL INTEGRITY FOR SEED FILTRATION STRUCTURES LOCATED AT ALUMINA PLANT

HINDALCO INDUSTRIES LIMITED, RENUKOOT

CASE REFERENCE: 393/CS/2019-2020/HIL-RENUKOOT

BRIEF:

The Seed Filtration Plant (SFP) structure on Hindalco, Renukoot premises is under distress due to heaving of ground in and around the structure. The uplift in Bay 7-9 has been recorded to range from 332 mm to 892mm. As a preliminary remedial measure to contain distress to the structure, the Hindalco team is gearing up to completely dismantle and reconstruct the structure and flooring between bay 7-9 by installing pile foundations as per recommendations of IIT BHU.

Given that the heaving of the foundation soil is a continuous phenomenon combined with the absence of any confirmatory reports on depth in subsoil up to which caustic soda concentration exists, it is very important that thorough structural and foundation stability analysis be conducted in order to evaluate the effect of preliminary remedial measures that are planned to be implemented in bay 7-9.

In addition to analysis of bays 7-9, stability of the immediately adjacent bays as well as the effect of proposed reconstruction of bay 7-9 on overall stability of the structure will also have to be analyzed.

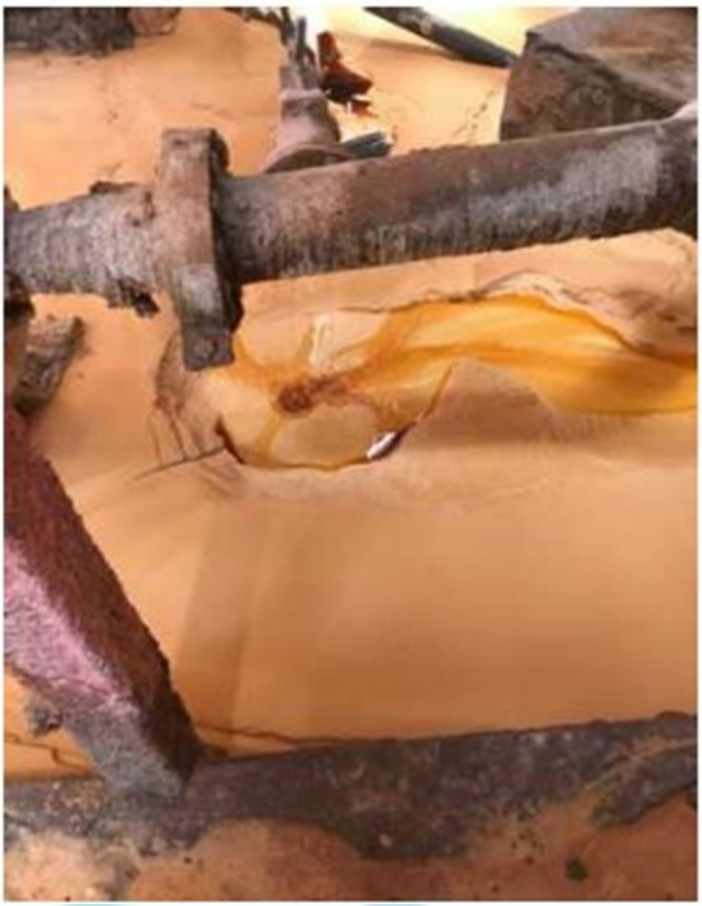
Based on the detailed structural and foundation stability analysis, any required corrective and preventive retrofitting may be recommended for implementation.

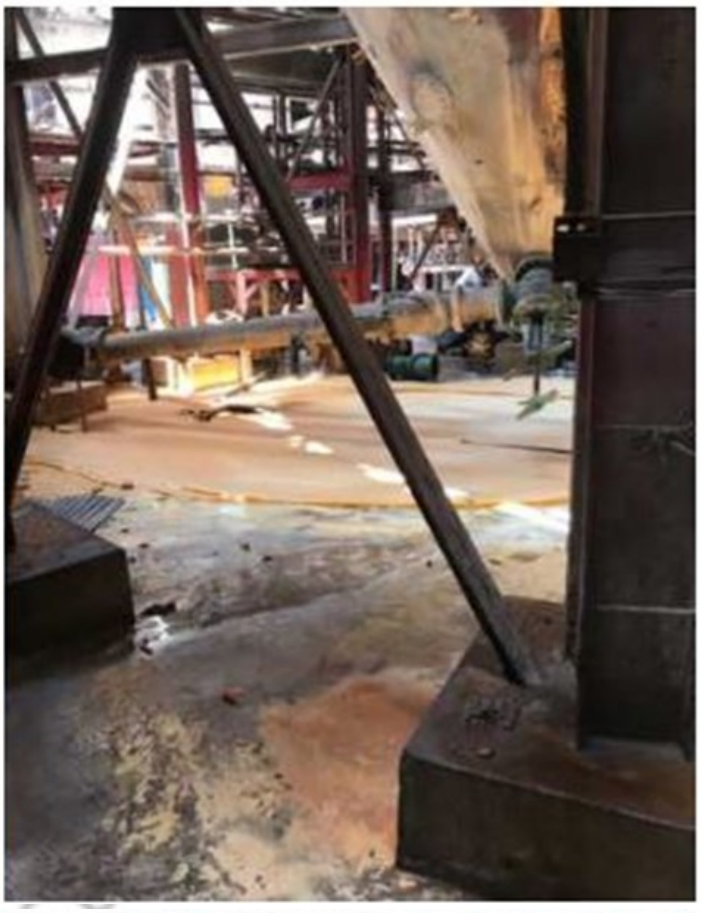
Duration: June, 2019 – September, 2019

Contractor/ Client: Hindalco Industries Limited, Renukoot

Location: Renukoot, Uttar Pradesh, India.

Role of Genstru: Proof Consultant to Hindalco Industries Limited





Main Deliverables:

a) Reviewing the details/ data received from the client for the structures.
b) Reviewing the detailed structural sufficiency/ evaluation report for bay 7-9 provided by the client (Hindalco Industries Limited).
c) Provided detailed comment on structural integrity report along with suggestions on possible energy efficient retrofitting measures.


AREA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