

ARH Knit Composite Ltd. (11386)

Shinabo, Mouchak, Kaliakoir, Gazipur

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ACCORD
on Fire and Building Safety in Bangladesh



Identified Priority 1 Concerns

1st Priority 1 Concern



Photo taken at the 4th floor level
(roof)

**Intent to continue construction beyond the
5th Storey**

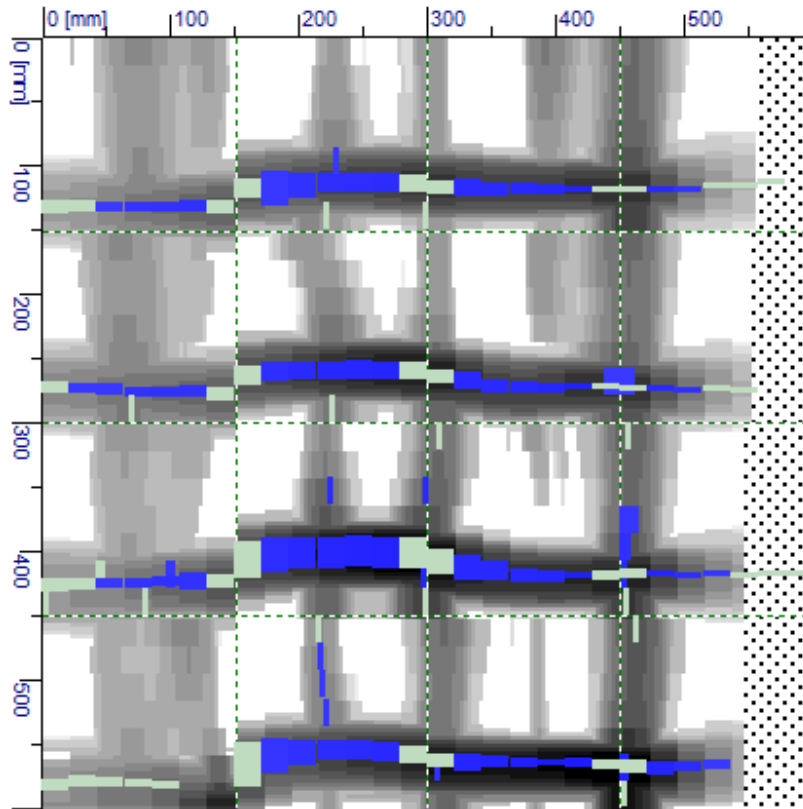
The owner intends to continue construction up to the 10th storey.
Column load run-downs indicate very high column stresses for a 10 Storey Construction:

- **To build to 7th storey + roof:** A Structural Engineer must assess the structure in conjunction with the lack of reinforcing steel in the columns and the column stresses developed over the height of 7 storeys (plus basement).
- **To build to 9th storey + roof:** A Detailed Engineering Assessment is required to validate the suitability of the materials and construction to support the additional levels.

For both cases; implement any corrective works prescribed by the Detailed Engineering Assessment.

Identified Priority 2 Concerns

1st Priority 2 Concern



As measured at the factory with the Ferro-scanner, instead of 20x20mm bars, we found 16x20mm bars. This situation has direct consequence for the continuation of the project up to the 10th Storey + Basement.

Reinforcing steel is missing

Identified Priority 3 Concerns

1st Priority 3 Concern



No loading plan is in place for any of the floors to ensure compliance with actual design loads. A loading plan is required to be developed for every floor.

No Loading Plans in place

Priority Actions

Problems Observed Summary

ITEM 1: (Priority 1) As discussed at the factory, the owner wants to build a full 10 storeys, but is so far at the 4th floor level. A full Detailed Engineering Assessment and full verification must be carried out for the entire project, before any further construction.

ITEM 2: (Priority 2) As measured at the factory with the Ferro-scanner, the column reinforcing found in places is not as per the Structural Drawings.

ITEM 3: (Priority 3) There were no loading plans in effect and some moderately heavy storage was observed within the factory.

Item 1 and Actions

Continuation of the construction beyond the 5th storey above ground, possibly up to the 10th storey.

Priority 1 (Immediate – Now)

- For any construction above the 6th storey, but below 9th storey, a Structural Engineer is to conduct an assessment of the design loads and column stresses.
- The feasibility of construction above the 8th storey is to be evaluated by a Detailed Engineering Assessment.

Priority 2 (within 6 weeks)

- Begin implementation of any corrective works deemed necessary by the DEA or assessment.

Priority 3 (within 6 months)

- Fully implement any corrective works deemed necessary by the DEA or assessment.

Item 2 and actions

Deficient Rebar quantities in the columns.

Priority 1 (Immediate – Now)

- Begin a confirmation survey of column reinforcement for use in the Structural Engineer's assessment or the Detailed Engineering Assessment.

Priority 2 (within 6 weeks)

- Begin any corrective works deemed necessary by the DEA.

Priority 3 (within 6 months)

- Complete any corrective works deemed necessary by the DEA.

Item 3 and Actions

High levels of storage in certain areas and no Loading Plans in place.

Priority 1 (Immediate – Now)

- Confirm allowable design floor loadings.

Priority 2 (within 6 weeks)

- Factory Engineer to produce and actively manage a loading plan for all floor plates within the factory giving consideration to slab, beam and column capacities.

Priority 3 (within 6 months)

- Maintain and enforce the Loading Plans.