

KDS Apparels Ltd. (Extension)

251-252, Nasirabad I/A, Baizid Bostami Road, Chattogram, Bangladesh
(22.392195, 91.819786)

21 July 2022



Building Information

Block-C Building: Partially 6 storied (G+5) building.

Observations

Deflected beam and slab under the over head water tank (OHWT)



Deflection at Inverted beam of OHWT



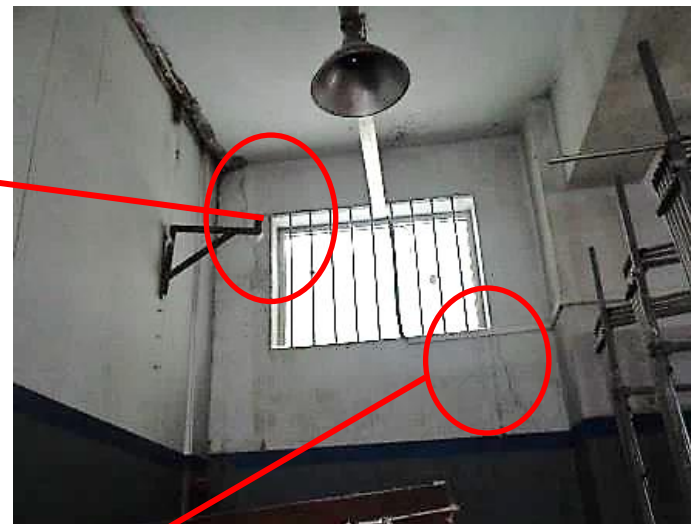
Deflection at slab

Deflection at Inverted slab of OHWT was observed. Building engineer is required to check whether the deflection cross the normal design limit or not and take necessary action as per engineer's guideline.

Crack on brick wall



Zoom view of crack



Cracks on wall



Zoom view of crack



Cracks on wall

Crack was observed at brick wall. Building engineer is required to check the intensity of crack and suggest proper repair methodology.

Localized high loading on 2nd floor



Yarn store (2nd Floor), RC part

As per prepared load plan, allowable live load limit of 2nd floor (Yarn store) is 7.5 kPa. But, at the time of inspection calculated localize loading was found more than 7.5 kPa.



Yarn store (2nd Floor), Steel part

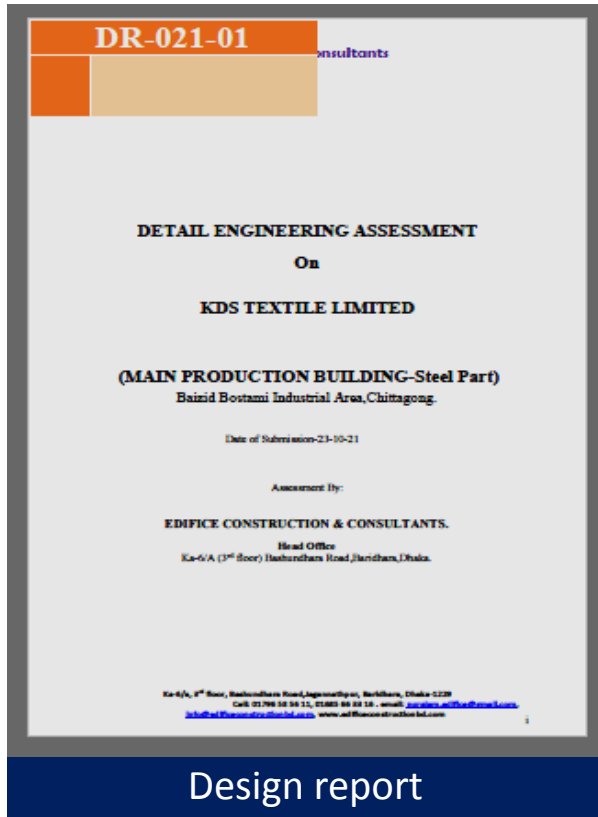


Storage rack (5th Floor), RC part

Storage rack has no allowable loading limit. Also, the rack has no adequate anchorage.

Information missing in the design report

Observation: Block-C (Steel Part)



A Detail Engineering Assessment (DEA) report was provided for the Block-C (Steel Part) at the time of inspection which was prepared based on software analysis. Adequacy of sub beams, vertical bracings (I-section) and serviceability checks as per BNBC were not incorporated in the DEA report.
Factory is required incorporate all type of adequacy check in the DEA report.

Standing water on the roof and floor of RO plant

Observation: Block-C (Steel Part)



Standing water on the roof of RO plant



Standing water on the floor of RO plant

Standing water & growth of algae/ vegetation on roof floor due to improper drainage system. Factory engineer is required to provide adequate slope to wash out the water.

Corrosion on steel column at toilet zone

Corrosion was found on steel column at toilet zone. The building engineer to investigate the reason of corrosion and suggest proper remedial measure accordingly.



Corrosion on steel column

Lack of information in as-built drawing

Observation: Block-C (Steel Part)



Vertical bracing (I-section)



Vertical bracing (Box-section)

No information related to vertical bracing details in the as built drawing of Block-C (Steel Part).



Wastage storage area

No information related to wastage storage area in the as built drawing of Block-C (Steel Part). Factory engineer is required to survey the whole structure and to prepare accurate as-built drawing. Also, check the connection adequacy for uplift forces.

Problems Observed

Block-C (RC part):

Item 01: Deflected beam and slab under the overhead water tank (OHWT).

Item 02: Crack on brick wall

Item 03: Localized high loading on 2nd floor.

Block-C (Steel part):

Item 04: Information missing in the design report.

Item 05: Standing water on the roof and floor of RO plant.

Item 06: Corrosion on steel column at toilet zone.

Item 07: Lack of information in as-built drawing.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Deflected of slab under the overhead water tank. [Block-C (RC part)]	Building engineer is required to check the adequacy of OHWT slab to confirm deflection is within the allowable limit.	6-weeks
02	Deflected of slab under the overhead water tank. [Block-C (RC part)]	Produce and actively manage a loading plan for the OHWT and maintain accordingly.	6-weeks
03	Deflected of slab under the overhead water tank. [Block-C (RC part)]	Carry out remedial works if required.	6-months
04	Deflected of slab under the overhead water tank. [Block-C (RC part)]	Continue to implement the load management plan.	6-months
05	Crack on brick wall. [Block-C (RC part)]	Building engineer is required to check the extent of crack and suggest proper repair methodology.	6-weeks
06	Crack on brick wall. [Block-C (RC part)]	Carry out remedial works.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
07	Localized high loading on 2nd floor. [Block-C]	Factory engineer to investigate the floor loading arising from storage and advise on any necessary alterations taking account of floor capacity and column capacity.	6-weeks
08	Localized high loading on 2nd floor. [Block-C]	Check the adequacy of steel storage rack.	6-weeks
09	Localized high loading on 2nd floor. [Block-C]	Adequately anchor and brace all non-structural elements to resist earthquake forces to comply with the BNBC.	6-weeks
10	Localized high loading on 2nd floor. [Block-C]	Make any structural alterations as advised by factory engineer.	6-months
11	Localized high loading on 2nd floor. [Block-C]	Continue to implement the load management plan.	6-months
12	Information missing in the DEA report. [Block-C (Steel part)]	Factory is required incorporate all type of adequacy check in the DEA report and the report should be in compliance with section 1.9.1 of BNBC (part 6).	6-weeks
13	Information missing in the DEA report. [Block-C (Steel part)]	Carry out remedial works (if any) after reviewed by the RSC.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
14	Standing water on the roof and floor of RO plant. [Block-C (Steel part)]	Factory engineer is required to develop roof drainage system with adequate slope and outlets.	6-weeks
15	Corrosion on steel column at toilet zone. [Block-C (Steel part)]	The building engineer to investigate the reason of corrosion and suggest proper remedial measure accordingly.	6-weeks
16	Corrosion on steel column at toilet zone. [Block-C (Steel part)]	Remove rust from affected steel member and apply corrosion resistance coating to the steel member.	6-weeks
17	Lack of information in as-built drawing. [Block-C (Steel part)]	Building engineer is survey the whole structure and prepare accurate as-built drawings with structural details.	6-weeks
18	Lack of information in as-built drawing. [Block-C (Steel part)]	Check for the connection adequacy of truss support for uplift forces and suggest proper remedial actions accordingly.	6-weeks
19	Lack of information in as-built drawing. [Block-C (Steel part)]	Carry out suggested remedial works if required.	6-months