

Texeurop (BD) Ltd. (10029)

Vogra, Joydebpur, Gazipur
(+ 23.983317N, 90.382354E)

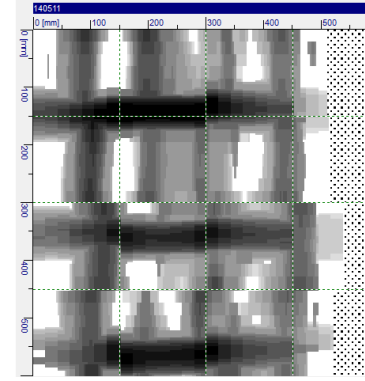
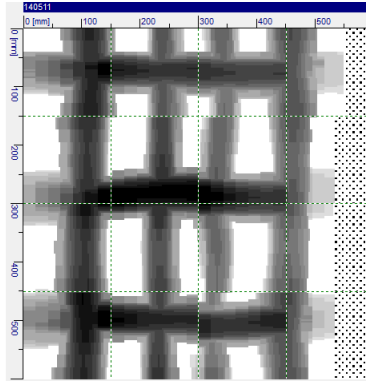
11.MAY.2014



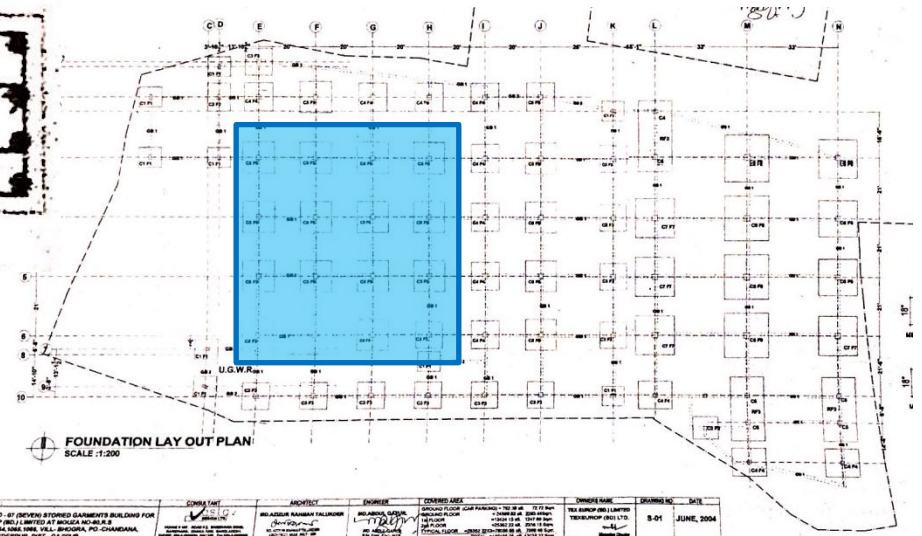
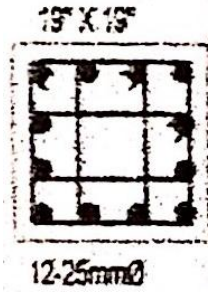
Identified Priority 1 Concerns

- Columns between grid line E'-I'/2'-6' of Garments Building appear to be overstressed
- Uncontrolled heavy storage loading on the 6th floor of Garments Building

The interior columns, C4 and C5, between grid line E'-I'/2'-6' of Garments Building are supporting the tributary area of 6.30 m x 6.00 m of 8 storeys. The actual condition of column details does not match the details specified in the drawing.



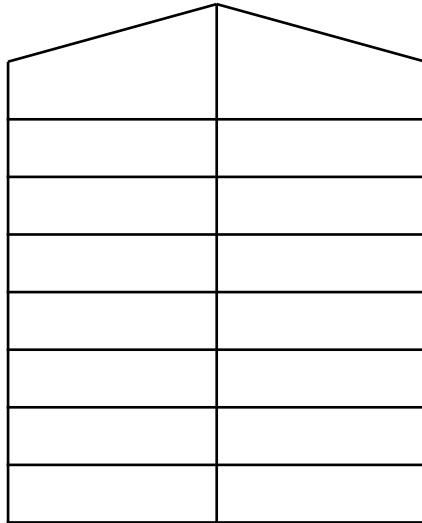
Note:-
 Materials
 Cement = Scan / Hoicim / Cemex
 Sand = 50% Local + 50% Sylhet
 Aggregate = 12-25mm down Size Well Graded crushing stone chips.
 Compressive strength of concrete



	Drawing	On-Site
Size	19"x 19"	18" x 18"
Vertical rebar	12 - φ 25 mm	12 - φ 25 mm
Aggregate	Stone	Brick

COMPANY NAME: ACCORD PROJECT: GARMENTS BUILDING FOR... ENGINEER: RAHMAN TALUKDER... DATE: 01 JUNE, 2004

Floor
Roof
7th FL
6th FL
5th FL
4th FL
3rd FL
2nd FL
1st FL
Ground



Usage
Roof
Dining
Cutting
Sewing
Sewing
Sewing
Office
Fabric store
Fabric store



From the result obtained, calculation check of columns between grid line E'-I'/2'-6' appears to be overstressed. Column C4 is indicated that the FoS is **1.14**. And Column C5 is indicated that the FoS is **1.21**.

Remark: Check at ground floor

BANGLADESH UNIVERSITY OF ENGINEERING TECHNOLOGY (BUET)
DEPARTMENT OF CIVIL ENGINEERING

Mobile: 01819 557 964, PABX: 966 5650 80 Ext. 7226, www.buet.ac.bd/ce/



CONCRETE LABORATORY

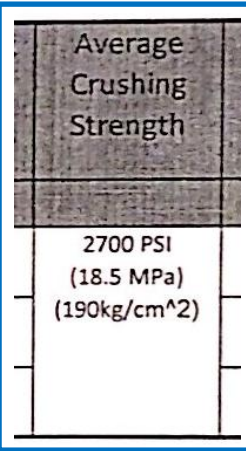
BRTC No : 1100-34795/05-06/CE; Dt:-8/2/2005
 Sent by : Nazmul Hossain
 Ref. No. : Dt: 8/2/2005
 Project : Teesrop (BD) Ltd., Vogra, Joydebpur, Gazipur
 Sample : Cylinder [Mix proportion(as quoted)];- Aggregate Type: Brick chips
 Location : Ground floor Roof
 Test : Compressive Strength [ASTM C39]
 Date of Test : 11/02/2005

TEST REPORT

Sl. No.	Date of Casting as per the letter	Specimen Designation/ Frog/Mark	Specimen Area (sq. in)	Maximum Load (lb)	Crushing Strength (psi)	Average Crushing Strength (18.5 MPa) (190kg/cm ²)	Mode of Failure
1	08/01/2005 (30 days test)	-	12.67	34310	2708	2700 PSI (18.5 MPa) (190kg/cm ²)	Combined*
2	-	-	12.67	34082	2690	-	Combined*
3	-	-	12.48	33733	2703	-	Combined*

Note: Samples were received in unsealed condition

*Combined = Mortar and Aggregate Failure



Manufacturers of Alloy Steel Casting, Specialized Steel, High Strength Deformed Bars & Wire Rod in Auto Re-Rolling Mill and Ship Breakers.

রহিম স্টীল মিলস্ কোঃ (প্ৰাইভেট) লিমিটেড
Rahim Steel Mills Co. (Pvt) Ltd.

Dated: 21.06.2004

TO WHOM IT MAY CONCERN

We are happy to certify that **TEX EUROP (BD) LTD.** (Joydebpur, Gazipur) is our valued Corporate Client since 2004. We are maintaining corporate relationship with **TEX EUROP (BD) LTD.** We are the large manufacturer of **ASTM A615 Grade 60**, Bar through the most modern and fully automated steel making and re-rolling facilities in our industrial complex with technical collaboration with **ATA Steel of India and Florida Steel of USA.**

Rahim Steel Mills over the Year

- a. 1991 The Establishment of the ASTM A615 Grade 60.

We maintain International Steel Manufacturing Standard.

Thanking You

Shafiqul Islam
 General Manager
 Rahim Group



ASTM A615 Grade 60.

Countersigned by :

Test Performed by :

Dr. Md. Abdur Rouf
 Professor



Dr. Md. Ferdous Alam
 Professor

Department of Civil Engineering
 BUET, Dhaka-1000, Bangladesh

Department of Civil Engineering
 BUET, Dhaka-1000, Bangladesh

Important Notes: Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.

We were provided with copies of compressive strength of concrete with brick chips tested by BUET and certification of steel reinforcement issued by manufacturer. According to those results, the compressive strength of concrete with brick chips is 18.5 MPa and steel reinforcement of grade 60 has been used. For the purposes of this report, we have continued to use the Accord guidelines for pre=2005 construction: the decision whether to adopt the values from the BUET report is left to the Detailed Engineering Assessment.



Uncontrolled heavy storage loading was found on the 6th floor supporting by 7.5” thick flat slab without drop panel or column cap. The loading must be reduced to 2.0 kPa to avoid overstress in punching shear, until a DEA is completed for this item.

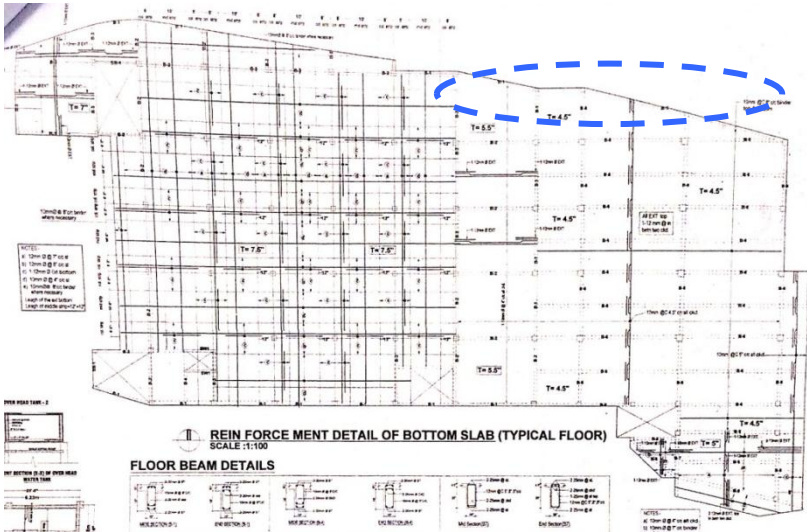
Identified Priority 2 Concerns

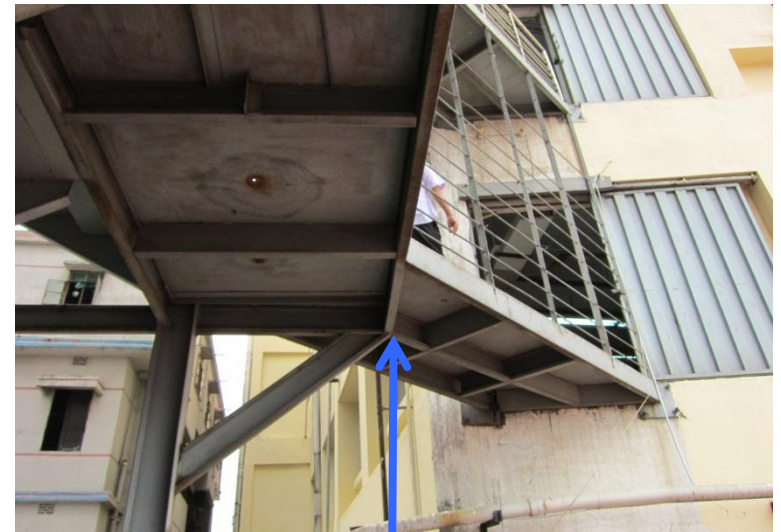
- Loading plans for cantilevered slabs of Garments Building to be investigated
 - Inconsistencies between the drawings of Garments Building and the actual as-built conditions
- Stability and capacity check of connecting bridge between Garments Building and Generator Building
- Steel column supporting roof in Dyeing Shed has been chopped off

The loading plans on cantilevered slabs (approx. 3 m long without beam) and related elements of Garments Building should be investigated due to the reduction of capacity, in term of compressive strength, supporting column.



A roof slab not shown on the drawings is present between the Garments Building and Dyeing Shed.





There are connecting bridges between Garments Building and Generator Building on 2nd – 6th floor. The stability and capacity of these elements and the related structure should be investigated.

Steel column supporting roof in Dyeing Shed was chopped off. The stability and capacity of steel truss above should be investigated.



Identified Priority 3 Concerns

- Steel column supporting roof in Dyeing Shed has been chopped off
- No fireproofing for steel structure elements (if required)



Structural steel elements of Garments Building and Sheds are unclear whether fire proofing material is applied (if required).

Overall Stability System



Concerns on the stability system for lateral loading and seismic loading. Façade brickwork walls lack of moment capacity in the connections between columns and beams especially in flat slab areas of Garments Building, as well as the ground floor of the Generator Building and Utility Building.

We require that these items be investigated in a Detail Engineering Assessment.



Water Ingress at Roof Level



There is no water ingress found at roof level. However water ponding has been found on the roof slab after the rain. It is also unclear whether waterproofing material is applied.

Priority Actions

Problems Observed Summary

- ITEM 1: (Priority 1) Columns between grid line E'-I'/2'-6' of Garments Building appear to be overstressed.**
- ITEM 2: (Priority 1) Uncontrolled heavy storage loading on the 6th floor of Garments Building.**
- ITEM 3: (Priority 2) Loading plans for cantilevered slabs of Garments Building to be investigated**
- ITEM 4: (Priority 2) Inconsistencies between the drawings of Garments Building and the actual as-built conditions.**
- ITEM 5: (Priority 2) Stability and capacity check of connecting bridge between Garments Building and Generator Building.**
- ITEM 6: (Priority 2) Steel column supporting roof in Dyeing Shed has been chopped off**
- ITEM 7: (Priority 2) Overall stability system**
- ITEM 8: (Priority 3) No fireproofing for steel structure elements (if required).**
- ITEM 9: (Priority 3) No waterproofing material at roof level.**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Columns between grid line E'-P'/2'-6' of Garments Building appear to be overstressed.	Remove roof shed immediately. Load in this area does not exceed 2.0kPa on every floor. Verify in-situ concrete stresses either by cores or existing cylinder strength data for [the identified columns / cores from 4 columns]. Core sizes to be a minimum of 100 mm diameter Factory Engineer to review design, loads and columns stresses in area identified above. A Detail Engineering Assessment of Factory to be commenced immediately.	Immediate – Now
2	Columns between grid line E'-P'/2'-6' of Garments Building appear to be overstressed.	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity. A Detailed Engineering Assessment to be completed.	6-weeks
3	Columns between grid line E'-P'/2'-6' of Garments Building appear to be overstressed.	Continue to implement load plan.	6-months
4	Uncontrolled heavy storage loading on the 6th floor of Garments Building.	Reduce stacking height to ensure total load does not exceed 2 kPa. Factory Engineer to review design, loads, columns stresses and shear stresses in area identified above. Factory Engineer to state the maximum weight that is allowed per square meter. Suggest that state the value on notice boards in this area.	Immediate – Now
5	Uncontrolled heavy storage loading on the 6th floor of Garments Building.	Adopt some sort of signage/staff guidance to ensure that the maximum weight of storage is not exceeded. (Loading Plans).	6-weeks
6	Uncontrolled heavy storage loading on the 6th floor of Garments Building.	Maintain standards of quality control to ensure that storage procedures are correctly followed so that overloading problems do not arise in the future. Implement Loading Plan.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
7	Loading plans for cantilevered slabs of Garments Building to be investigated	Factory Engineer to review design, loads and slab in area identified above to confirm suitability for loads applied. Adopt some sort of signage/ staff guidance to ensure that the maximum weight of storage is not exceeded. (Loading Plans).	6-weeks
8	Loading plans for cantilevered slabs of Garments Building to be investigated	Maintain standards of quality control to ensure that loading procedures are correctly followed so that overloading problems do not arise in the future. Implement Loading Plan.	6-months
9	Inconsistencies between the drawings of Garments Building and the actual as-built conditions.	Factory Engineer to survey the actual conditions and revise the drawings. Factory Engineer to review design, loads and columns stresses to confirm suitability for loads applied. Produce and actively manage a loading plan for all floor plates within this area giving consideration to floor capacity and column capacity.	6-weeks
10	Inconsistencies between the drawings of Garments Building and the actual as-built conditions.	Continue to implement load plan	6-months
11	Stability and capacity check of connecting bridge between Garments Building and Generator Building.	Detail Engineering Assessment to be carried out in particular the stability and capacity of connecting bridge.	6-weeks
12	Stability and capacity check of connecting bridge between Garments Building and Generator Building.	Continue to implement loading plan. A Detailed Engineering Assessment is to be completed.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Steel column supporting roof in Dyeing Shed has been chopped off	Detail Engineering Assessment to be carried out in particular the stability and capacity of connecting bridge.	6-weeks
14	Steel column supporting roof in Dyeing Shed has been chopped off	Perform any repair work designed in the DEA.	6-months
15	Overall stability system	Request that the Detail Engineering Assessment of the overall building to be carried out and in particular, stability and foundation aspects should be investigated in detail.	6-weeks
16	No fireproofing for steel structure elements (if required).	Fireproofing material for structural steel element is recommended as suggested in BNBC Codes. Maintain standard of quality control.	6-months
17	No waterproofing material at roof level.	Engineer to inspect water damaged structure including the exterior and propose a suitable repair. For both durability and serviceability, waterproofing on the roof slab is recommended. Moreover the roof slab drainage system should be investigated.	6-months