Report on

PERFORMANCE TEST ON BALCONY PARAPET (GLASS FIBER REINFORCED CONCRETE PANELS) OF *"BEARYS LAKE SIDE HABITAT"* APARTMENT UNDER CONSTRUCTION AT KODIGEHALLI, BANGALORE

APRIL 2006

Report for

M/s. BEARYS PROPERTIES & Developments

Bearys Horizon # 21, Wood street

Bangalore – 560 025

CIVIL-AID TECHNOCLINIC (P) LTD

1/4, II Floor, Acharya Patashala Annexe Building, N R Colony

Bangalore 560 019

Report on	:	Performance test on balcony parapet (Glass fiber reinforced concrete panels) of "BEARYS LAKE SIDE HABITAT" Apartmnet under construction at Kodigehalli, Bangalore
Report for	:	M/s. BEARYS PROPERTIES & Developments Bearys Horizon # 21, Wood street Bangalore – 560 025
Reference	:	Mr. Gurudutt, Representative M/s. SHENISHA Corporation, Mumbai
Dates of test	:	8th to 10th April 2006
Test carried out under the guidance of	:	Sri. S. Sudarshan Technical Director Civil-Aid Technoclinic Pvt. Ltd Bangalore
Test carried out by	:	Sri. S. Manoranjan Senior Civil Engineer Sri. Thulasi Prasad Civil Engineer Sri. M. T. Srinivasa Sr. Testing Assistant Civil Aid Technoclinic Pvt. Ltd.. Bangalore
Test carried out in the presence of	:	Mr. Syed Abid M/s. BEARYS Properties & Developments Bangalore Mr. Gurudutt Representative M/s. SHENISHA Corporation, Mumbai
Date of submission of report	:	10th April 2006

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A. INTRODUCTION

The construction of Apartment building *"BEARYS LAKE SIDE HABITAT"* at Kodigehalli, Bangalore is in progress. At present the r.c. frame work is almost complete.

Now the concerned authorities proposed to fix "Glass fibre reinforced concrete" (GRC) precast panels for balcony regions of the apartment as a parapet. Hence, a reference was made to us to conduct lateral load test on GRC parapet as per standard practice, to ascertain the behavior / performance of the precast parapet under service loads.

In response to this, lateral load test was carried out by CTPL from 08th to 10th of April 2006. This report in brief depicts the outcome of the test carried out and conclusions thereon.

B. DETAILS OF LOAD TEST

The lateral load was applied at the tip of the GRC parapet using mechanical jacks. The load was uniformly distributed on the parapet thro' steel loading frames. The applied load was measured using load cells connected to a digital load indicator. The deflection during the application of test load was measured with deflectometer.

The details of typical test set up are illustrated in sketch CTPL/RES – 01.

Test location	:	ALPHA TOWER – 2nd floor Living balcony – (B02)*
Length of parapet	:	4.19 mts
Height of parapet	:	*1.0 mt*
Intensity of test load	:	112.5 kg/mt Run** (i.e., 75 x 1.5)
Total load applied	:	112.5 x 4.19 = 471.37 kg
Technical references	:	*IS: 456 – 2000* and IS: 875-(Part-2)-1987

* As furnished by the customer

** As desired by the structural consultants.

The test load was applied gradually in four increments i.e.,25%, 50%,75% and 100% and deflection of parapet was measured at the end of each increment.

The test load was retained for 24 hrs. and deflection reading was recorded at that time. The deflection recovery was measured after 24hrs. removal of test load. The details of deflection data and deflection recovery are furnished in Table-1.

C. RESULTS OF THE TEST

The deflection after 24 hrs. of loading was observed to be in the range of 4.41 mm to 8.52 mm and the deflection recovery after 24hrs. of removal of test load is in the range of 63.7 % to 72.5 %.

S. MANORANJAN
Senior Civil Engineer

S. SUDARSHAN
Technical Director

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TABLE – 1

RESULTS OF LATERAL LOAD TEST ON GRC PARAPET

Location of test	:	ALPHA TOWER – 2nd floor, Living balcony B02*
Length of parapet	:	4.19 mt
Height of parapet	:	1.0 mt
Intensity of test load	:	112.5 kg/m Run**
Total load applied	:	112.5 x 4.19 = 471.37 kg
Dates of test	:	8th to 10th April 2006
Test equipments	:	1. Mechanical jacks – 2 Nos 2. Load cells with digital load indicator 3. Load dispersion frame 4. Deflectometer of least count 0.01 mm
Technical references	:	IS: 456 – 2000 and IS: 875 – Part 2 – 1987

Sl. No.	Deflectometer identification	Maximum deflection observed (After 24 hrs of loading) (mm)	Deflection recovery (After 24 hrs of removal of load)
1	D1	4.78	72.5%
2	D2	8.52	63.7%
3	D3	4.41	67.8%

* As furnished by the customer

** As desired by the structural consultants.

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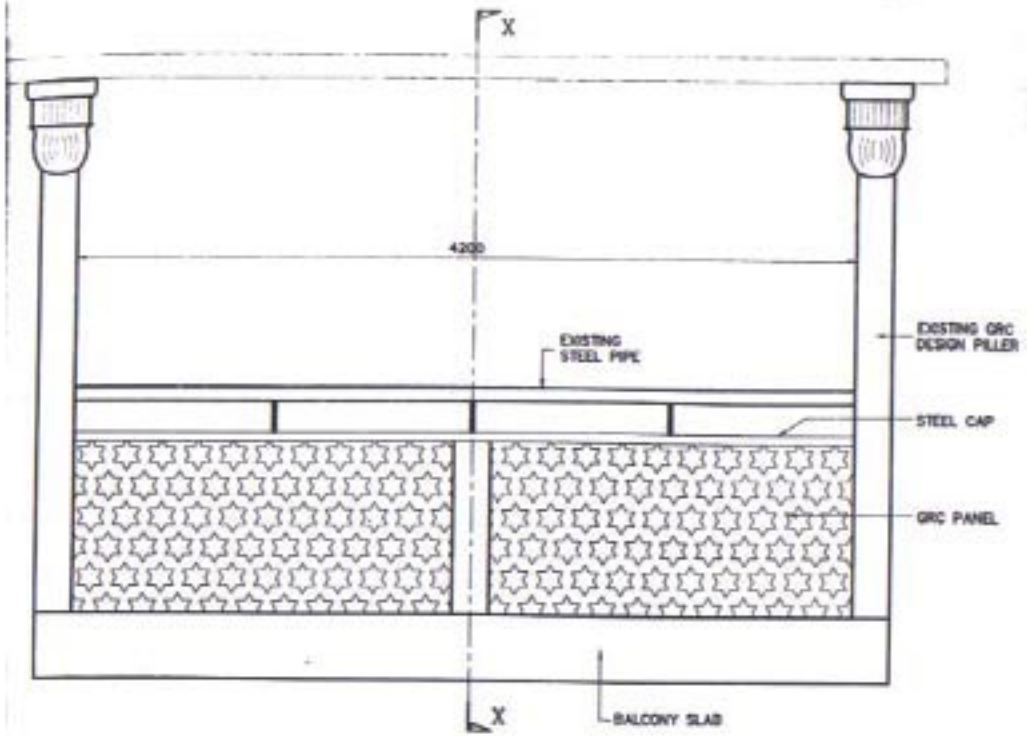
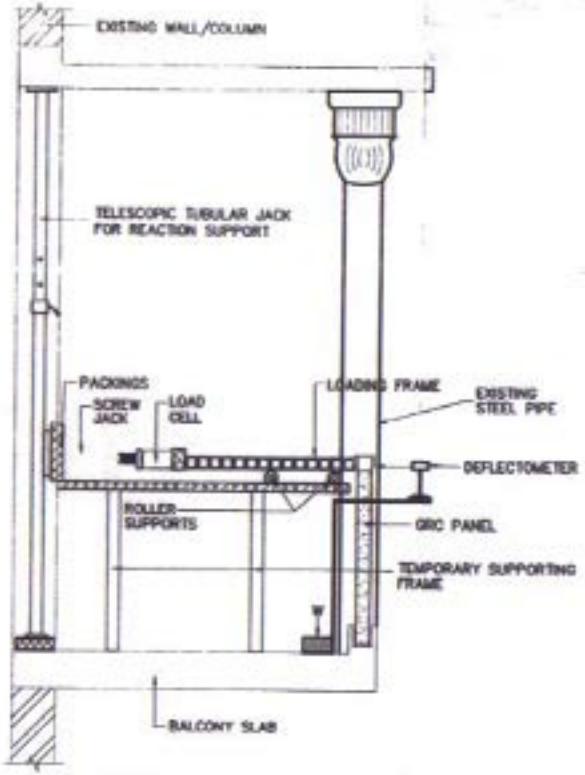
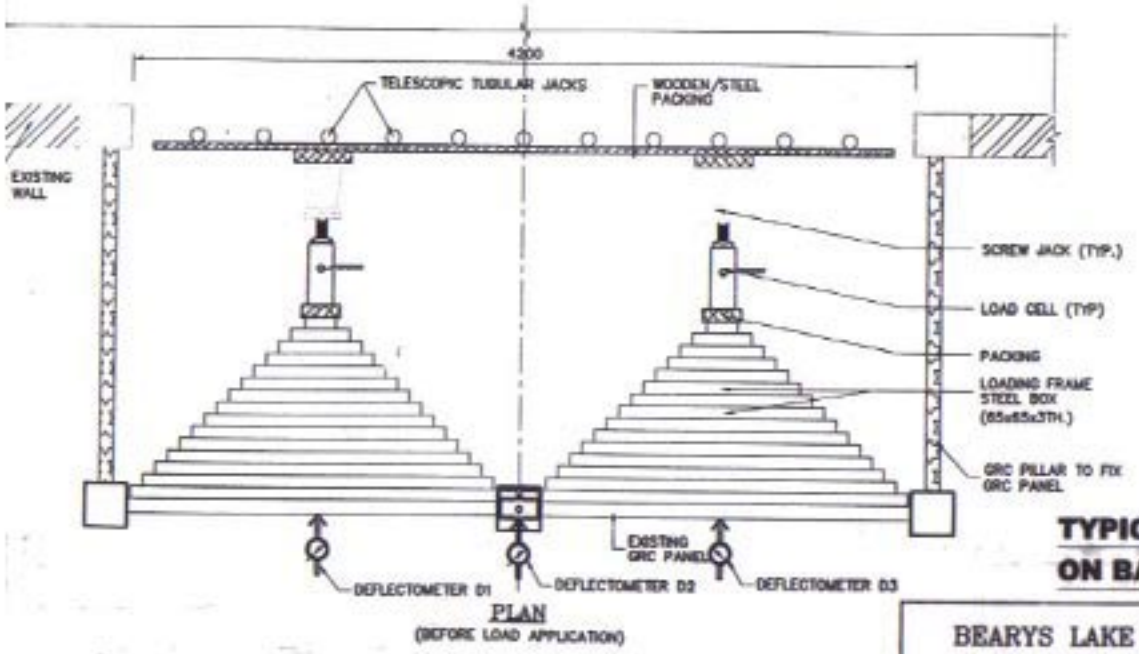


FRONT ELEVATION



SECTION X-X



PLAN
(BEFORE LOAD APPLICATION)

NOTES:

1. ALL DIMENSIONS ARE IN MM.

TYPICAL TEST SETUP FOR CARRYING OUT LATERAL LOAD TEST ON BALCONY PARAPET (GRC PANEL)

BEARYS LAKE SIDE HABITAT AT KODIGEHALLI, BANG ORE	CIVIL-AID TECHNOCLINIC PVT. LTD BANGALORE	JOB No. 2006/019 DWG No. CTPL/RES-01