



IN CONFIDENCE TO THE CLIENT

REPORT NO: MT-08/230-B

VERTICAL LOAD TESTING OF AN ASSEMBLED MODULAR SCAFFOLD

CLIENT: **ARUJ ANAND.**
BSL AUSTRALIA PTY LTD
10 JANE STREET
BLACKTOWN NSW 2148

DATE OF TEST: JULY 11TH 2008

DATE OF REPORT: JULY 28TH 2008

TEST SYNOPSIS:

A modular scaffold assembly supplied by BSL Australia was delivered to Melbourne Testing Services (MTS) for testing. At the request of the client, load testing was to be carried-out to determine the vertical load carrying capacity of the assembled frame. Testing was to be conducted in accordance with an approved test procedure conforming to the requirements of AS/NZS 1576.3-1995 SCAFFOLDING, PART 3: PREFABRICATED AND TUBE-AND-COUPLER SCAFFOLDING.

The scope of the test was to determine the maximum limits including the assembled height, number of planked out platforms and the number of working platforms.

SCAFFOLD IDENTIFICATION:

Prior to conducting the load test, each individual item used in construction of the scaffold was visually inspected for markings. The mark BSL and the month and year of manufacture were stamped onto most of the scaffold components. No other identifying marks were noted. Detailed drawings of the scaffold's platform brackets identified the manufacturer as BRITISH SCAFFOLDING (INDIA) LTD.



FIG.1.
SCAFFOLD TEST ASSEMBLY


RODNEY WILKIE
AUTHORISED SIGNATORY

DATE: 28/07/08

Load testing was to be conducted on two adjacent standards referred to as B1 and B2 in this report. The loaded standards were located at the third cross-section or bay 3 of the test structure. Transoms and ledgers placed at two metre height intervals were used to connect the standards to each other as well as the other supporting elements. The use of diagonal bracing was omitted from the test standards and adjacent bays.

SCAFFOLD TEST SCENARIOS:

In consultation with the client a range of test scenarios were planned in order to achieve a staged increase in test load with each stage commensurate with a nominated scaffold height and number of working platforms. All three tests were conducted with dead loads commensurate with the scaffold fully planked at 2.0 metre intervals and ledgers installed at 0.5m spacing on the outer side and at 1.0m spacing on the inner side. Three board hop-ups were considered to be fitted at the platformed levels.

CALCULATION OF TEST LOADS:

Test loads B1 and B2 were calculated in accordance with AS/NZS 1576.1 and AS/NZS 1576.3 Appendix B. Dead loads “G” were calculated from the test data recorded in Table.1. A live load “Q” of 6.6 kN, corresponding to a heavy duty scaffold was adopted for the tests.

Dead Load Calculations (G):

Test Scenario 1

Scaffold height: 10m
No. of Working Platforms: 1
G = 957kg or 9.39kN
W = 233kg or 2.29kN

Test Scenario 2

Scaffold height: 10m
No. of Working Platforms: 2
G = 957kg or 9.39kN
W = 233kg or 2.29kN

Test Scenario 3

Scaffold height: 20m
No. of Working Platforms: 1
G = 1853kg or 18.17kN
W = 233kg or 2.29kN



**FIG.3.
LOADING & FORCE DEVICE**



**FIG.4.
DEFLECTION IN STANDARDS FROM
TEST LOADING**

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