

Tensile Tests on Clip Assemblies for Gecko Scaffold Systems

A series of tensile tests were conducted on a range of scaffold clip system assemblies for Robuild Pty Ltd In the Structure Laboratory at the School of Engineering, James Cook University, in Townsville Australia.

Each of the assemblies were loaded at 5mm/min in the 100kN Instron testing machine until failure (i.e. disengagement of the assembly). The maximum tensile load applied in the tests are listed in Table 1. The related load-displacement plots are given in Figure 1 to 5.

Table 1. Maximum Tensile Load

| Test # | Assembly Type | Load (kN) |
|--------|---|-----------|
| 1 | 35mm Groove Clip assembly connection (radius box section) | 20.2 |
| 2 | 25mm Groove Clip assembly connection (radius box section) | 25.2 |
| 3 | 25mm Swivel Joint assembly connection | 14.6 |
| 4 | 25mm Hinge Connection assembly (square box section) | 27.3 |
| 5 | 35mm Groove Clip assembly connection (square box section) | 27.8 |

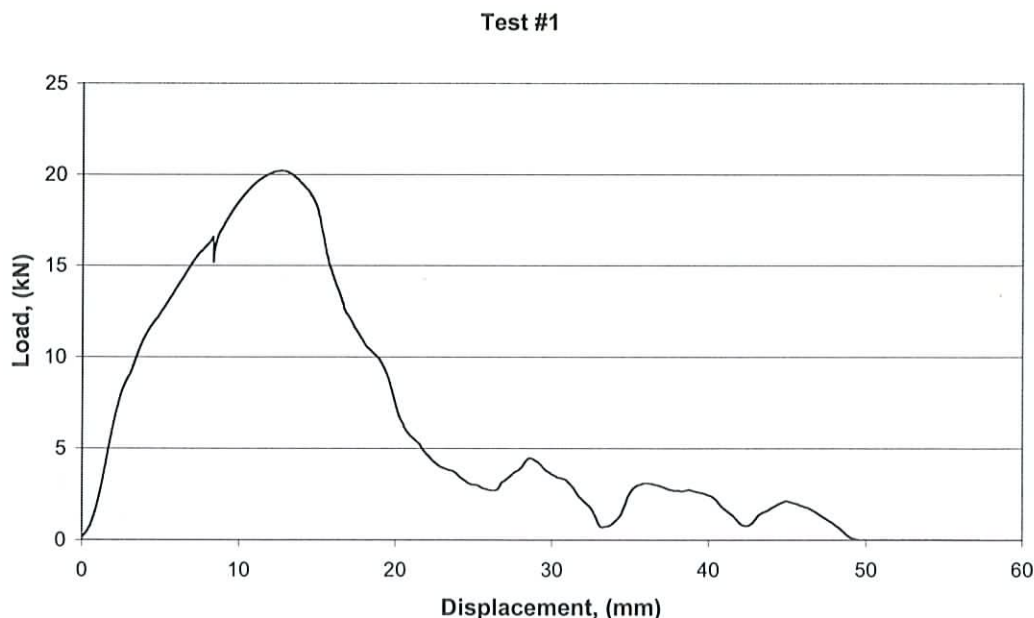


Figure 1. Load vs Displacement Tensile Test #1
35mm Groove Clip assembly connection (radius box section)

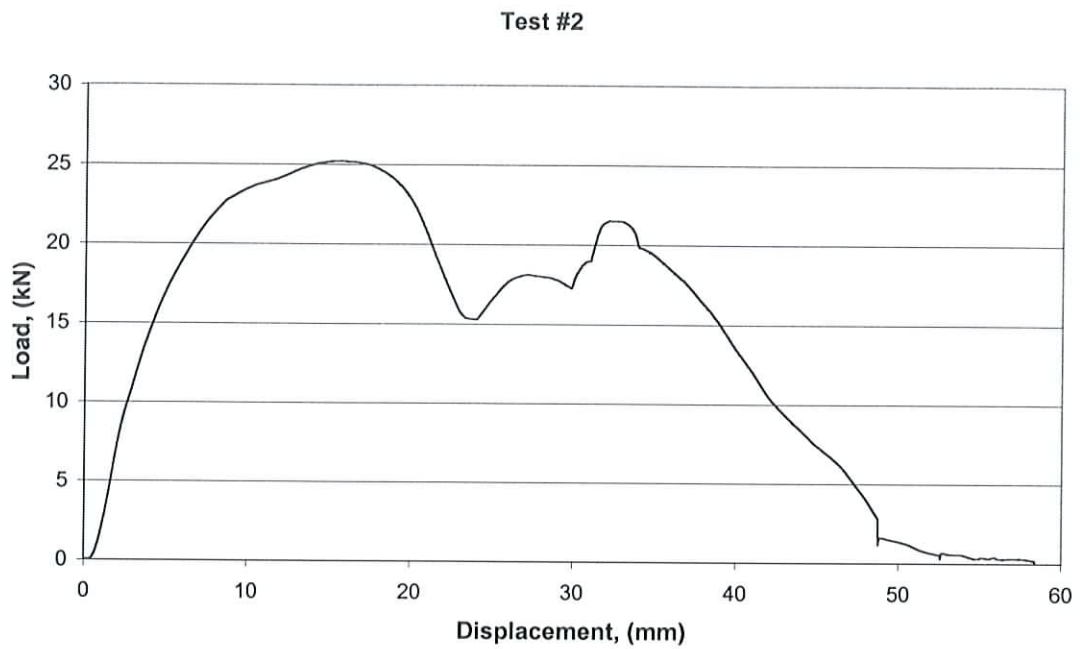


Figure 2. Load vs Displacement Tensile Test #2
25mm Groove Clip assembly connection (radius box section)

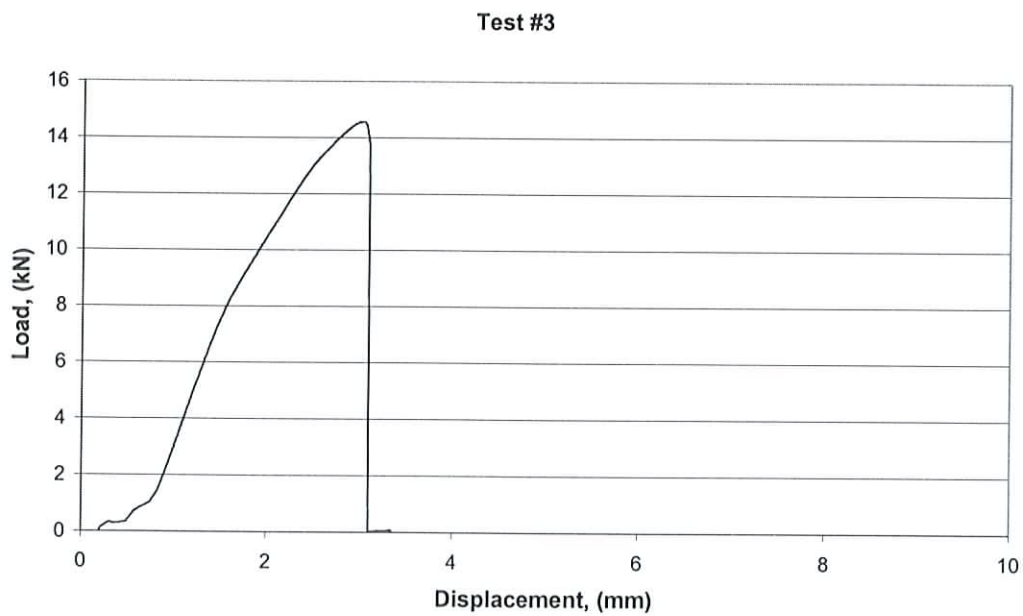


Figure 3. Load vs Displacement Tensile Test #3
25mm Swivel Joint assembly connection (radius box section)

Test #4

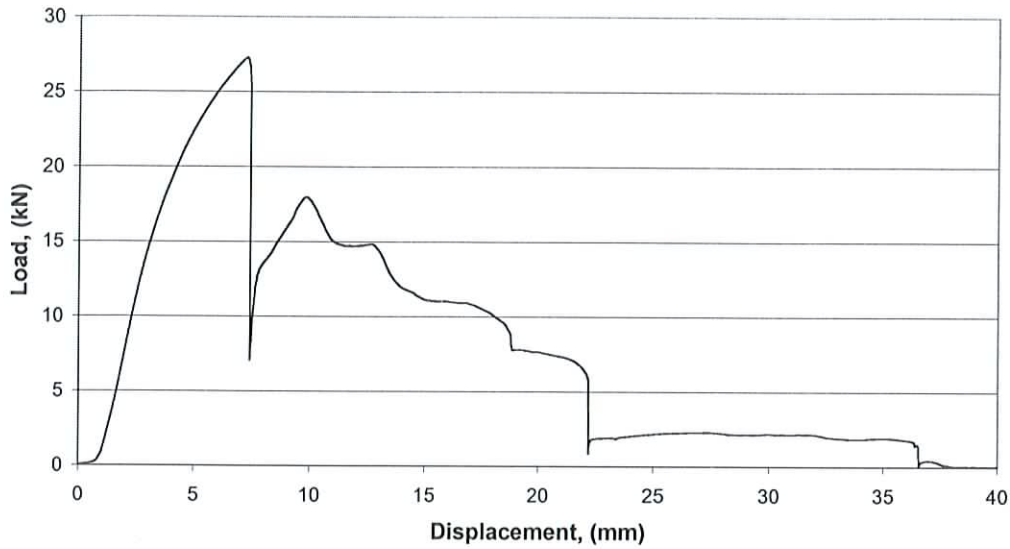


Figure 4. Load vs Displacement Tensile Test #4
25mm Hinge Connection assembly (square box section)

Test #5

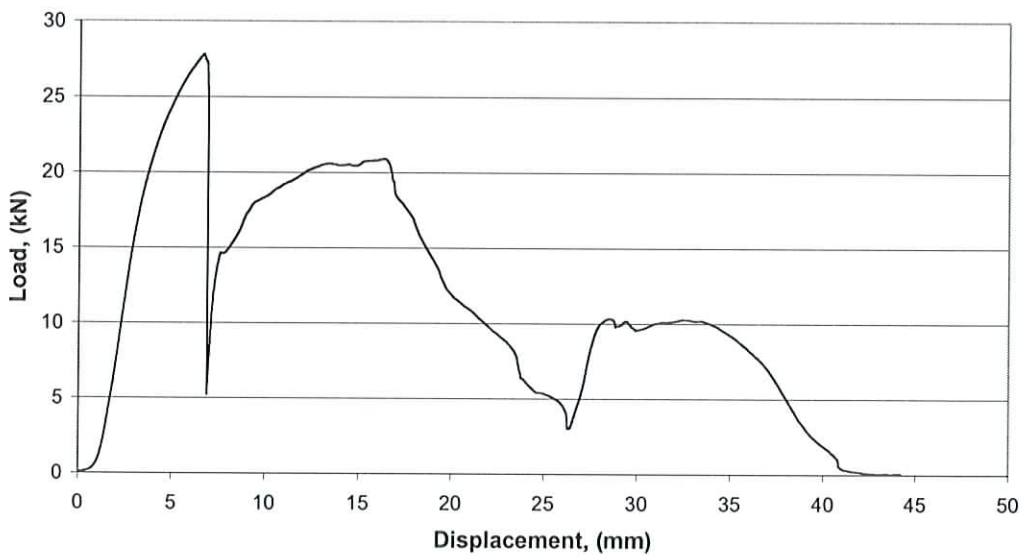


Figure 5. Load vs Displacement Tensile Test #5
35mm Groove Clip assembly connection (square box section)

Tested by

Mr. S. Petersen
Snr Technician
School of Engineering
James Cook University
Date: 27/11/06

Checked

Dr. J. D. Ginger
Snr Lecturer
School of Engineering
James Cook University
Date: 27/11/06

Prof J. G. Loughran
Head of School
School of Engineering
James Cook University
Date: 27/11/06