Company: 
Lab name: WPI Structures Lab 
Operator ID: 
Test date: 2/25/08 

Name: 150Big1 
Number of specimens: 1 
Temperature: 
Humidity: 
Speed 1: 0.50 in/min 

**Results**

<table>
<thead>
<tr>
<th>Maximum Load (lb)</th>
<th>Extension (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6037.55</td>
<td>0.13</td>
</tr>
<tr>
<td>Mean</td>
<td>6037.55</td>
</tr>
<tr>
<td>S.D.</td>
<td>0.00</td>
</tr>
<tr>
<td>C.V.</td>
<td>0.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>6037.55</td>
</tr>
<tr>
<td>Maximum</td>
<td>6037.55</td>
</tr>
<tr>
<td>Range</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Curves**

[Graph of Tensile Test]
Company: WPI Structures Lab
Lab name: WPI Structures Lab
Operator ID: 
Test date: 2/25/08

Name: 150Big2
Number of specimens: 1
Temperature:
Humidity:
Speed 1: 0.50 in/min

Results

<table>
<thead>
<tr>
<th>Maximum Load (lbf)</th>
<th>Extension (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6646.03</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Curves

![Tensile Test Curve]
Company: WPI Structures Lab
Lab name: WPI Structures Lab
Operator ID: 1
Test date: 2/25/08
Name: 150Big3
Number of specimens: 1
Temperature: 
Humidity: 
Speed 1: 0.50 in/min

Results

<table>
<thead>
<tr>
<th></th>
<th>Maximum Load (lbf)</th>
<th>Extension (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6229.01</td>
<td>0.33</td>
</tr>
<tr>
<td>Mean</td>
<td>6229.01</td>
<td>0.33</td>
</tr>
<tr>
<td>S.D.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>C.V.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>6229.01</td>
<td>0.33</td>
</tr>
<tr>
<td>Maximum</td>
<td>6229.01</td>
<td>0.33</td>
</tr>
<tr>
<td>Range</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Curves

[Graph of Tensile Test]
Company: WPI Structures Lab

Name: 150Big4

Lab name: WPI Structures Lab

Number of specimens: 1

Operator ID: 

Temperature: 

Test date: 2/25/08

Humidity:

Speed 1: 0.50 in/min

Results

<table>
<thead>
<tr>
<th></th>
<th>Maximum Load (lb)</th>
<th>Extension (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4375.18</td>
<td>0.12</td>
</tr>
<tr>
<td>Mean</td>
<td>4375.18</td>
<td>0.12</td>
</tr>
<tr>
<td>S.D.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>C.V.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>4375.18</td>
<td>0.12</td>
</tr>
<tr>
<td>Maximum</td>
<td>4375.18</td>
<td>0.12</td>
</tr>
<tr>
<td>Range</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Curves

![Tensile Test Graph]
Company: WPI Structures Lab
Lab name: WPI Structures Lab
Operator ID: 1
Test date: 2/25/08

Note 1:

Name: 150Big5
Number of specimens: 1
Temperature: 
Humidity: 
Speed 1: 0.50 in/min

**Results**

<table>
<thead>
<tr>
<th></th>
<th>Maximum Load (lbs)</th>
<th>Extension (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6168.65</td>
<td>0.13</td>
</tr>
<tr>
<td>Mean</td>
<td>6168.65</td>
<td>0.13</td>
</tr>
<tr>
<td>S.D.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>C.V.</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>6168.65</td>
<td>0.13</td>
</tr>
<tr>
<td>Maximum</td>
<td>6168.65</td>
<td>0.13</td>
</tr>
<tr>
<td>Range</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Curves**

![Tensile Test Curves](image)
Company: 
Lab name: WPI Structures Lab 
Operator ID: 
Test date: 2/25/08

Name: 150Big6 
Number of specimens: 1 
Temperature: 
Humidity: 
Speed 1: 0.50 in/min

Note 1: 

Results

<table>
<thead>
<tr>
<th>Maximum Load (lb)</th>
<th>Extension (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5583.12</td>
</tr>
<tr>
<td>Mean</td>
<td>5583.12</td>
</tr>
<tr>
<td>S.D.</td>
<td>0.00</td>
</tr>
<tr>
<td>C.V.</td>
<td>0.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>5583.12</td>
</tr>
<tr>
<td>Maximum</td>
<td>5583.12</td>
</tr>
<tr>
<td>Range</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Curves

![Tensile Test Graph]
**Test Summary**

Counter: 1048  
Elapsed Time: 00:03:16  
Specimen Identification: 1  
Material: Concrete  
Comments:  
Procedure Name: 6x12ConcreteCyl.-1PRC  
Start Date: 01/30/2008  
Start Time: 7:06:55 AM  
End Date: 01/30/2008  
End Time: 7:10:11 AM  
Workstation: Worcester Polytechnic Inst  
Tested By: default  

**Test Results**

Diameter: 6.0000 in  
Area: 28.2743 in²  
Peak Load: 137644 lbf  
Compressive Strength: 4868 psi
Test Results

Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 142021 lbf
Compressive Strength: 5023 psi

Test Summary

Counter: 1049
Elapsed Time: 00:03:22
Specimen Identification: 2
Material: Concrete
Comments:
Procedure Name: 6x12ConcreteCyl.-1PRC
Start Date: 01/30/2008
Start Time: 7:11:36 AM
End Date: 01/30/2008
End Time: 7:14:58 AM
Workstation: Worcester Polytechnic Inst
Tested By: default
Test Summary

Counter: 1050
Elapsed Time: 00:03:35
Specimen Identification: 3
Material: Concrete
Comments:
Procedure Name: 6x12ConcreteCyl.-1PRC
Start Date: 01/30/2008
Start Time: 7:17:15 AM
End Date: 01/30/2008
End Time: 7:20:50 AM
Workstation: Worcester Polytechnic Inst
tested By: default

Test Results

Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 150855 lbf
Compressive Strength: 5335 psi
Test Summary
Counter: 1051
Elapsed Time: 00:03:14
Specimen Identification: 4
Material: Concrete
Comments:
Procedure Name: 6x12ConcreteCyl.-1PRC
Start Date: 01/30/2008
Start Time: 7:22:47 AM
End Date: 01/30/2008
End Time: 7:26:01 AM
Workstation: Worcester Polytechnic Inst
Tested By: default

Test Results
Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 135896 lbf
Compressive Strength: 4806 psi
Test Results
Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 44208 lbf

Test Summary
Counter: 1088
Elapsed Time: 00:02:58
Material: concrete
Lab:
Sample:
Specimen Identification: Split-1
Procedure Name: dpel.Concrete Split Tensile
Start Date: 02/08/2008
Start Time: 7:24:00 AM
End Date: 02/08/2008
End Time: 7:26:58 AM
Workstation: Worcester Polytechnic Inst
Tested By: default

57 days cured
Test Summary

Counter: 1089
Elapsed Time: 00:02:45
Material: Concrete
Lab:
Sample: Hilti Split-2
Specimen Identification:
Procedure Name: dpe! Conoctone Split Tensile
Start Date: 02/08/2008
Start Time: 7:29:52 AM
End Date: 02/08/2008
End Time: 7:32:37 AM
Workstation: Worcester Polytechnic Inst
Tested By: default

Test Results

Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 41262 lbf
Test Results

Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 49307 lbf

Test Summary

Counter: 1090
Elapsed Time: 00:03:18
Material: Concrete
Lab:
Sample:
Specimen Identification:
Procedure Name: dpel.Concrete Split Tensile
Start Date: 02/08/2008
Start Time: 7:35:11 AM
End Date: 02/08/2008
End Time: 7:38:29 AM
Workstation: Worcester Polytechnic Inst
tested by: default
Test Results

Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 46261 lbf

Test Summary

Counter: 1091
Elapsed Time: 00:03:05
Material: Concrete
Lab:
Sample: Hilti Split 4
Specimen Identification:
Procedure Name: dpel.Concrete Split Tensile
Start Date: 02/08/2008
Start Time: 7:40:57 AM
End Date: 02/08/2008
End Time: 7:44:02 AM
Workstation: Worcester Polytechnic Inst
Tested By: default
Test Results

Diameter: 6.0000 in
Area: 28.2743 in²
Peak Load: 50625 lbf

Test Summary

Counter: 1092
Elapsed Time: 00:03:23
Material: Conretet
Lab:
Sample: Hilti Split 5
Specimen Identification:
Procedure Name: dpel.Concrete Split Tensile
Start Date: 02/08/2008
Start Time: 7:46:24 AM
End Date: 02/08/2008
End Time: 7:49:47 AM
Workstation: Worcester Polytechnic Inst
tested By: default
Test Summary

Counter: 1142
Elapsed Time: 00:01:38
Predicted Yield Strength: 60000 psi
Specimen Identification: St1
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:12:39 PM
End Date: 02/25/2008
End Time: 2:14:17 PM
Workstation: Worcester Polytechnic Ins
Tested By: default

Test Results

Diameter: 0.2550 in
Area: 0.0511 in²
Tensile Strength: 109980 psi
Peak Load: 5620 lbf
Stress at Offset: 102300 psi
Load at Offset: 5227 lbf
Tangent Modulus: 34879780 psi

(Handwritten note: breaking = 1.81 lb, 0.90)
Test Summary

Counter: 1142
Elapsed Time: 00:01:38
Predicted Yield Strength: 60000 psi
Specimen Identification: St1
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:12:39 PM
End Date: 02/25/2008
End Time: 2:14:17 PM
Workstation: Worcester Polytechnic Ins
Tested By: default

Test Results

Diameter: 0.2550 in
Area: 0.0511 in²
Tensile Strength: 109980 psi
Peak Load: 5620 lbf
Stress at Offset: 102300 psi
Load at Offset: 5227 lbf
Tangent Modulus: 34879780 psi
**Test Summary**

- Counter: 1143
- Elapsed Time: 00:01:34
- Predicted Yield Strength: 60000 psi
- Specimen Identification: ST 2
- Material: Steel
- Procedure Name: dpe1 steel Ext
- Start Date: 02/25/2008
- Start Time: 2:21:20 PM
- End Date: 02/25/2008
- End Time: 2:22:54 PM
- Workstation: Worcester Polytechnic Ins
- Tested By: default

**Test Results**

- Diameter: 0.2400 in
- Area: 0.0452 in²
- Tensile Strength: 123739 psi
- Peak Load: 5593 lbf
- Stress at Offset: 113940 psi
- Load at Offset: 5150 lbf
- Tangent Modulus: 32429870 psi

Necking ➔ 1188 ± 183
Test Summary

Counter: 1144
Elapsed Time: 00:01:45
Predicted Yield Strength: 60000 psi
Specimen Identification: ST-3
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:28:34 PM
End Date: 02/25/2008
End Time: 2:30:19 PM
Workstation: Worcester Polytechnic Ins
Tested By: default

Test Results

Diameter: 0.2430 in
Area: 0.0464 in²
Tensile Strength: 124418 psi
Peak Load: 5773 lbf
Stress at Offset: 111560 psi
Load at Offset: 5176 lbf
Tangent Modulus: 27409020 psi
Test Results

Diameter: 0.2430 in
Area: 0.0464 in²
Tensile Strength: 124418 psi
Peak Load: 5773 lbf
Stress at Offset: 111560 psi
Load at Offset: 5176 lbf
Tangent Modulus: 27409020 psi

Test Summary

Counter: 1144
Elapsed Time: 00:01:45
Predicted Yield Strength: 60000 psi
Specimen Identification: ST-3
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:28:34 PM
End Date: 02/25/2008
End Time: 2:30:19 PM
Workstation: Worcester Polytechnic Ins
tested By: default
Test Summary

Counter: 1145
Elapsed Time: 00:00:30
Predicted Yield Strength: 60000 psi
Specimen Identification: ST-4
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:36:36 PM
End Date: 02/25/2008
End Time: 2:37:06 PM
Workstation: Worcester Polytechnic Ins
Tested By: default

Test Results

Diameter: 0.2460 in
Area: 0.0475 in²
Tensile Strength: 121853 psi
Peak Load: 5788 lbf
Stress at Offset: Failed
Load at Offset: Failed
Tangent Modulus: 26412250 psi

thins slipped
Test Summary

Counter: 1147
Elapsed Time: 00:01:29
Predicted Yield Strength: 60000 psi
Specimen Identification: St-6
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:51:56 PM
End Date: 02/25/2008
End Time: 2:53:25 PM
Workstation: Worcester Polytechnic Ins
Tested By: default

Test Results

Diameter: 0.2300 in
Area: 0.0415 in²
Tensile Strength: 136482 psi
Peak Load: 5664 lbf
Stress at Offset: 118960 psi
Load at Offset: 4937 lbf
Tangent Modulus: 41564330 psi
Test Summary

Counter: 1147
Elapsed Time: 00:01:29
Predicted Yield Strength: 60000 psi
Specimen Identification: St-6
Material: Steel
Procedure Name: dpel steel Ext
Start Date: 02/25/2008
Start Time: 2:51:56 PM
End Date: 02/25/2008
End Time: 2:53:25 PM
Workstation: Worcester Polytechnic Ins
tested By: default

Test Results

Diameter: 0.2300 in
Area: 0.0415 in²
Tensile Strength: 136482 psi
Peak Load: 5664 lbf
Stress at Offset: 118960 psi
Load at Offset: 4937 lbf
Tangent Modulus: 41564330 psi