# SFI TEST REPORT FOR LIGHT ALLOY WHEEL

**Model#AD38U**  
Corporate name: Forgestar  
Contact: Wong

**Reference No.** 150404  
**Type** CF5V deep  
**Nominal designation of rim** 20×10.5J  
**Offset (mm)** 61.5  
**P.C.D. (mm)** 130  
**Number of bolt holes** 5  
**Structure** 1-PC  
**Material** A356-T6  
**Manufacturing method** FLOW FORMING

## 1. Tire used for test

<table>
<thead>
<tr>
<th>Item</th>
<th>Nominal designation of tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial load endurance test</td>
<td>285/35R20</td>
</tr>
<tr>
<td>Impact test</td>
<td>265/35R20</td>
</tr>
</tbody>
</table>

**PCD** $\phi 15.75*28.5$  
**MAX LOADING:** 1600LBS

## 2. Testing conditions and results

### (1) Rotary bending fatigue test

- **Date of test**: (Month) 03 (Day) 27 (Year) 2015  
- **Testing equipment approval number**: A-238  
- **Bending moment during test (kgf.m)**: 361  
- **Rotational speed for test**: 100,000 circles  
- **Damage to disk wheel**: None  
- **Loosening of tightening section**: OK  
- **Evaluation**:  

<table>
<thead>
<tr>
<th>Damage to disk wheel</th>
<th>Loosening of tightening section</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>OK</td>
<td>Qualified</td>
</tr>
</tbody>
</table>

- **Used in calculation of bending moment [kN] {kgf}**: $r 725.76 \ (m) \ d 0.0615 \ (m) \ W 0.3556 \ (kgs)$  
- **Calculated bending moment value M [kNm] {kgfm}**: $r 360.47 \ (m) \ d (m)$

### (2) Radial load endurance test

- **Date of test**: (Month) 03 (Day) 28 (Year) 2015  
- **Testing equipment approval number**: B-224  
- **Pre-test air pressure [kpa] {kgf/cm²}**: 460  
- **Radial load during test [kN] {kgf}**: 1633  
- **Rotational speed for test**: 500,000 circles  
- **Damage to disk wheel**: None  
- **Loosening of fixture section etc.**: OK  
- **Evaluation**:  

<table>
<thead>
<tr>
<th>Damage to disk wheel</th>
<th>Loosening of fixture section etc.</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>OK</td>
<td>Qualified</td>
</tr>
</tbody>
</table>

- **Used in calculation of Radial load [kN] {kgf}**: Calculated Radial load $Q 725.76 \ (kgf) \ W 1632.95 \ (kgs)$

### (3) Impact test 13º

- **Date of test**: (Month) 03 (Day) 26 (Year) 2015  
- **Testing equipment approval number**: C-297  
- **Pre-test air pressure [kpa] {kgf/cm²}**: 200  
- **Total width (mm)**: 269  
- **Weight mass (kg)**: 616  
- **Drop height (mm)**: 230  
- **Impact position (°)**: 0°/180°  
- **Damage to disk wheel**: NONE  
- **Air leakage**: OK  
- **Evaluation**:  

<table>
<thead>
<tr>
<th>Air leakage</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>Qualified</td>
</tr>
</tbody>
</table>

### (4) Overall evaluation: **Qualified** Disqualified