Cold Rolled Ultra High-Tensile Strength Steel Sheet (1300, 1500, 1700 MPa-grade)

**Effect**
- Weight Reduction of Bumpers
- Strengthening and Weight Reduction of Body Framework Components

**Progress**
1. Under Development
2. Development Completed
3. Commercialized

**Points**
High strength has been realized by utilizing the WQ system.

<table>
<thead>
<tr>
<th>Specification</th>
<th>YS (MPa)</th>
<th>TS (MPa)</th>
<th>EL (%)</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS1300</td>
<td>1160</td>
<td>1370</td>
<td>6</td>
<td>Commercialized</td>
</tr>
<tr>
<td>MS1500</td>
<td>1280</td>
<td>1570</td>
<td>6</td>
<td>Commercialized</td>
</tr>
<tr>
<td>MS1700</td>
<td>1450</td>
<td>1720</td>
<td>5</td>
<td>Under Development</td>
</tr>
</tbody>
</table>

**Delays Fracture Property**
Cracks are confirmed by soaking in hydrochloric acid, using test piece (TP) with cutting edge.

**Roll Form Formability**
It can be bend to 1.5 R. (MS1300, MS1500, thickness: 1.2 mm)

**Applied Stress**

<table>
<thead>
<tr>
<th>Specification</th>
<th>0.9TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS1300</td>
<td>OOO</td>
</tr>
<tr>
<td>MS1500</td>
<td>OOO</td>
</tr>
</tbody>
</table>

**Evaluation Condition**
- Bending R = 10 mm
- 0.1 N Hydrochloric Acid × 200 hrs

**Welding Condition**
- Electrode: Tip diameter 6Φ - DR type
- Applied Pressure: 4.1 kN
- Weld Time: 10 cycles

**Spot Weldability**
The range of the proper welding current is wide (thickness: 1.2 mm)