### Drill Pipe Performance Sheet

**Asset Number:** WS41-35  
**Grade:** S-135  
**Tool Joint:** 6.625” x 2.750” NC50  
**Range:** 3  
**Size and Weight:** 5,000” 19.50 pfp 0.362” wall IEU

#### Pipe Body:

<table>
<thead>
<tr>
<th>Nominal ID (in):</th>
<th>Ultra Class 90% RBW</th>
<th>Premium 80% RBW</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD (in):</td>
<td>5.000</td>
<td>4.964</td>
</tr>
<tr>
<td>Wall Thickness (in):</td>
<td>0.362</td>
<td>0.344</td>
</tr>
<tr>
<td>Tensile Strength (lbs):</td>
<td>712,070</td>
<td>673,826</td>
</tr>
<tr>
<td>Torsional Strength (ft-lbs):</td>
<td>74,100</td>
<td>70,043</td>
</tr>
<tr>
<td>Burst Capacity (psi):</td>
<td>17,105</td>
<td>18,571</td>
</tr>
<tr>
<td>Collapse Capacity (psi):</td>
<td>15,672</td>
<td>14,292</td>
</tr>
</tbody>
</table>

**Notes:** Body properties are calculated based on uniform OD and wall thickness. Burst capacity for Nominal (100% RBW) is based on 87.5% RBW per API.

#### Tubular Assembly:

| Adjusted Weight (lbs/ft): | 22.39 |
| Approximate Length (ft):  | 44.5  |
| Box TJ Length (in):       | 12    |
| Pin TJ Length (in):       | 9     |
| Upset Type:               | IEU   |
| Fluid Displacement (gal/ft): | 0.34  |
| Fluid Capacity w/o IPC (gal/ft): | Not Reported |
| Fluid Capacity w/o IPC (bbls/ft): | 0.0169 |
| Smooth Edge Height (in):  | N/A   |
| Smooth Edge OD (in):      | N/A   |
| SE Elevator Shoulder Capacity (lbs): | N/A  |

**Notes:** These are OEM values that may vary with actual values due to mill tolerances, IPC tolerances, OEM rounding, and other factors. Pipe is purchased at a guaranteed 95% RBW. IPC is applied to a nominal thickness of 0.009”. Pipe will have an ID of 4.218”, which is smaller than pipe purchased at 87.5%.

#### Connection: NC50

- **TJ OD (in):** 6.625
- **TJ ID (in):** 2.750
- **MYS (ksi):** 120

**Maximum MUT (ft-lbs):** 38,000
- **Tension at Shoulder Separation @ Max MUT (lbs):** Tensile Limited
- **Tension at Connection Yield @ Max MUT (lbs):** 1,230,700

**Minimum MUT (ft-lbs):** 31,700
- **Tension at Shoulder Separation @ Min MUT (lbs):** 1,529,500
- **Tension at Connection Yield @ Min MUT (lbs):** 1,532,700

**Tool Joint Torsional Strength (ft-lbs):** 63,400
**Tool Joint Tensile Strength (lbs):** 1,532,700

**Notes:** MUT values are based on a friction factor of 1.0. There is no published pressure rating for this connection.

#### Elevator Shoulder:

- **Nominal TJ OD (in):** 6.625
- **Nominal TJ OD Elevator Shoulder Capacity (lbs):** 1,411,900
- **Assumed Elevator Bore (in):** 5.250

**Smooth Edge Height (in):** N/A
**Smooth Edge OD (in):** N/A
**SE Elevator Shoulder Capacity (lbs):** N/A

**Nominal TJ OD (in):** 6.625

**Notes:** Elevator capacity based on assumed elevator bore, no wear factor, and contact stress of 110, 100 psi. An increased elevator shoulder OD increases elevator capacity without affecting make-up torque.

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**Performance Datasheet**

**Drill Pipe**

Size: 5" IEU x 19.50 lbs/ft
Connection: NC50
Pipe grade: S-135
Range: 3

**WORKSTRINGS**

**DRILL PIPE COMBINED LOAD**

* Make-up Torque calculated with a dope friction factor of 1.0

**DRILL PIPE WEAR**

Vallourec Drilling Products provides a worldwide repair network and running assistance with VAM Services and VAM Field Service International.

* These values are only recommendations, Vallourec Drilling Products follows API specification for calculations. API only gives a single value for the proper makeup torque. All data nominal and calculated per standard methods. Vallourec Drilling Products does not assume responsibility for results obtained through the use of this information. No warranty expressed or implied.

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