To avoid misinterpretation of the designation of special implant stainless steel according to ASTM F138 or ASTM F139 the following information may be valuable:

Often a designation 316 LVM is used in inquiries, customer orders or even customer’s specifications. This is not a traceable designation on the level of international standards. It is more a kind of brand name. Consequently, using this designation may result in problems with regulatory affairs or the notified body. The only referable and valid designation which exits for this specific alloy is: **UNS S31673**.

In the German DIN, the designation 1.4441 is given. It is taken from the former DIN 17443 which is no longer valid.

The following standards are referring to this alloy (explicitly or non-explicitly):
- ASTM F138 (bar, wire)
- ASTM F139 (sheet, strip)
- ISO 5832-1

Designation on AISI-Basis: AISI number 316L (UNS S31603)

This refers to a grade which shows differing compositional limits compared to the special implant stainless steel grade UNS S31673.

Therefore, UNS S31673 cannot be referred to as 316L.

<table>
<thead>
<tr>
<th>Description</th>
<th>C</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Si</th>
<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
<th>N</th>
<th>Cu</th>
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<tbody>
<tr>
<td>UNS S31673*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>17.0</td>
<td>13.0</td>
<td>2.25</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>17.0</td>
<td>13.0</td>
<td>2.25</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>max.</td>
<td>0.03</td>
<td>2.00</td>
<td>0.025</td>
<td>0.010</td>
<td>0.75</td>
<td>19.0</td>
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<td>3.00</td>
<td>0.10</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>10.0</td>
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<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<td>ASTM A276</td>
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<td>2.00</td>
<td>0.045</td>
<td>0.030</td>
<td>1.00</td>
<td>18.0</td>
<td>14.0</td>
<td>3.00</td>
<td>-</td>
</tr>
</tbody>
</table>

* additional requirement: %Cr + 3.3 x %Mo ≥ 26

“VM” is often interpreted as short term for “Vacuum Melted” depending on the process used for the re-melting technique.

There are two different processes in place for re-melting practices:
- ESR (Electro Slag Remelting)
- VAR (Vacuum Arc Remelting)

Both re-melting practices are acceptable in order to fulfill the standards.
Further information regarding our products and locations are available in our image brochure and under www.zapp.com.

The illustrations, drawings, dimensional and weight data and other information included in this data sheet are intended only for the purposes of describing our products and represent non-binding average values. They do not constitute quality data, nor can they be used as the basis for any guarantee of quality or durability. The applications presented serve only as illustrations and can be construed neither as quality data nor as a guarantee in relation to the suitability of the material. This cannot substitute for comprehensive consultation on the selection of our products and on their use in a specific application. The brochure is not subject to change control.

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