WATER PIPELINE POWER STATION RELLSWERK
Austria
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Client: Vorarlberger Illwerke AG

The ARGE Rellswerk Vandans has been assigned with the construction of the pumped storage power plant „Rellswerk“ by Vorarlberger Illwerke AG. MAX STREICHER Österreich was responsible for the execution of the pipeline DN 1000. The origin of the 2,281 m long pipeline is located in the valley at a height of 1,450 m above sea level, where the inlet into the power station takes place; whereas the upstream connection to the existing culvert of the water conductor system „Lünersee-Latschau“ in „Saloniental“ takes place at a height of 1,690 m above sea level. The construction site was located within a protected landscape area „Rellstal-Lünersee“ (community Vandans). The site could only be reached via a narrow and steep graveled one-way mountain road. (Length from the valley to the construction site: approx. 7 km). This kind of conditions put high demands on the transport of material and equipment as well as the execution of works.

**Project details**

<table>
<thead>
<tr>
<th>Project details</th>
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<tbody>
<tr>
<td><strong>Client</strong></td>
<td>Vorarlberger Illwerke AG</td>
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<tr>
<td><strong>Scope of work</strong></td>
<td>EPC – Pipeline Construction</td>
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<tr>
<td><strong>Location</strong></td>
<td>Rellstal (community Vandans), Austria</td>
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<tr>
<td><strong>Total length</strong></td>
<td>approx. 2.3 km</td>
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<tr>
<td><strong>Pipe diameter</strong></td>
<td>DN 1000 (1016 mm x 17 mm)</td>
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<tr>
<td><strong>Pressure stage</strong></td>
<td>65 bar</td>
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<tr>
<td><strong>Pipe length</strong></td>
<td>13 m</td>
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<tr>
<td><strong>Pipe weight</strong></td>
<td>430 kg/m</td>
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<tr>
<td><strong>Material</strong></td>
<td>API 5L X-65 PSL2</td>
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<tr>
<td><strong>Insulation</strong></td>
<td>PE-Insulation according DIN 30670-N-v</td>
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<tr>
<td><strong>Internal coating</strong></td>
<td>600 µm solvent-free epoxy coating</td>
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<tr>
<td><strong>Bending</strong></td>
<td>&gt; 70%</td>
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<tr>
<td><strong>Execution period</strong></td>
<td>May 2015 – October 2015</td>
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**Challenges**

- Height difference: 240 m
- Tight time frame for pipe laying works due to closed access road during the winter months because of avalanche risk

**Location:**

Rellstal (community Vandans), Austria