




# Case Study

<b>PROJECT NAME:</b>	"Klamme" Valle Aurina, Alto Adige, Italy;		
<b>Community/Country:</b>	San Pietro/ Sankt Peter, Predoi/ Prettau, Italy;		
<b>Amiantit entity</b>	Amitech Germany		
<b>Description:</b> <i>project</i> <i>(short abstract)</i>	3,3 km pressure pipeline DN 1800, PN 6- PN 20, SN 5 '; incl. 1,3 km pressure tunnel, man-made cavern water intake ive a short intro about the project and its special challenges.		
<i>Application:</i>	Hydro power plant		
<i>Transported medium</i>	Water		
<i>Working pressure</i>	PN 6 to PN 20		
<i>Type:</i>	<input checked="" type="checkbox"/> new installation <input type="checkbox"/> relining <input type="checkbox"/> replacement <input type="checkbox"/> other type.		
<i>Demanded standards</i> <i>/ specifications /</i> <i>approvals:</i>	EN, AWWA,		

<i>Special requirement on pipe-system:</i>	light weight, pipe laying m/per day;	
<i>Order value in Euro (€):</i>	total project value was 55 US\$ ';	
	<i>Opted pipe system:</i>	<input checked="" type="checkbox"/> GRP round filament <input type="checkbox"/> Ductile <input type="checkbox"/> GRE <input type="checkbox"/> GRP centrifugally cast <input type="checkbox"/> GRP cross winded <input type="checkbox"/> GRP oval shaped <input type="checkbox"/> Meyer Polycrrete <input type="checkbox"/> PVC <input type="checkbox"/> PE/PP <input type="checkbox"/> other pipe systems.
	<i>Other materials in this project?</i>	steel
	<i>Why our product?</i>	<input checked="" type="checkbox"/> light weight <input checked="" type="checkbox"/> corrosion resistance <input checked="" type="checkbox"/> flow characteristics <input type="checkbox"/> chem. properties <input checked="" type="checkbox"/> mech. properties <input type="checkbox"/> other reasons?.
	<i>Owner (name, town):</i>	AHR Energie, Steinhaus 109 B, IT 39030 Ahrntal ( BZ), Italy;
<i>Consultant / Engineer: (name, town)</i>	Studio G, Dr. Anton Griessmair, Bruneck (BZ);	
<i>Contractor: (name, town)</i>	Karl Wieser OHG, Mühlen in Taufers (BZ), Italy;	
<b>Pipe Details – material 1:</b>		
<i>Total length supplied (m)</i>	3300 m	
<i>Pipe lengths supplied (m)</i>		
<i>Diameter DN min/max (mm):</i>	DN 1800	

<i>Pressure PN min/max (bar):</i>	max. 20 bar	
<i>Stiffness SN min/max (N/m<sup>2</sup>):</i>	SN 5', SN 10 ';	
<i>Joint types:</i>	Reka	
<i>Fittings used:</i>	special bends 11 ° - 30 °	
<b>Pipe Details – material 2 (if different material was additionally used)</b>		
<i>Total length supplied (m)</i>		
<i>Pipe lengths supplied (m)</i>		
<i>Diameter DN min/max (mm):</i>		
<i>Pressure PN min/max (bar):</i>		
<i>Stiffness SN min/max (N/m<sup>2</sup>):</i>		
<i>Joint types:</i>	What joints have been used in that project?	
<i>Fittings used:</i>	What fittings have been used? sort/number?	
<b>Installation Details:</b>		
<i>Type:</i>	<input type="checkbox"/> open trench/below <input type="checkbox"/> micro tunneling <input type="checkbox"/> subaqueous <input type="checkbox"/> sliplining <input type="checkbox"/> jacking <input type="checkbox"/> aboveground <input type="checkbox"/> suspended <input checked="" type="checkbox"/> 1300 m DN 1800, PN 6, SN 5' Tunnel on saddle.	
<i>Trench dimensions (m)</i>	4 m	
<i>Laying depth (m)</i>	between 2,5 and 6 m	
<i>Native soil type</i>	SC 1	
<i>Backfill soil type / compaction</i>	SC 1	
<i>Thrust blocks/ lockjoints</i>	5 thrustblocks	
<i>Angular deflection</i>	angular deflection	

<i>min/max in degrees</i>	max 0,8 °;	
<i>Quality measures during installation</i>	what quality measures have been taken tightness/leakage test, compaction test, bedding material test;	
<i>Duration-months</i>	installation time 4 months;	
<i>Year start</i>		
<i>Year end</i>		
<i>Number of shafts (jacking)</i>	how many shafts have been used?	
<i>Shaft distance (jacking)</i>	how has been the distance between the shafts?	
<i>Tunnelling equipment (jacking)</i>	what equipment was in use?	
<b>Summary:</b>	the largest private hydro power plant in North Italy	
<b>Owner/Consultant/ Contractor comments:</b>	deliveries just in sequence, coaching on site, perfect product;	