

REFERENCE LIST: SEWAGE AND SLUDGE TREATMENT SYSTEMS
(SOA Cat. OS22)

* **PROVINCIA AUTONOMA DI TRENTO**

INSTALLATION AND STARTUP OF A MOBILE MBR-SYSTEM AT BESENELLO (4.000 PEQ)

Installation of a prefabricated treatment plant for the municipality Besenello (TN). The prefabricated system has a special membrane technology build as sludge plant (MBR) and a throughput of 42 m³/h (on 2 separate and autonomic lines, 21 m³/h). In 2 sound insulated and heated container you find all the machines. The two sludge tanks are transportable and made of stainless steel.

Throughput: 1.008 m³/d

Membrane type: flat, microfiltration

Location of execution: Besenello (TN)

Date of execution: 2014

Project: Provincia Autonoma di Trento - Dr. Eng. Giovanni Gatti

* **ARA PUSTERTAL SpA**

ENERGY OPTIMIZING FOR THE WWTP BASSA VAL PUSTERIA (40.000 PEQ)

The treatment System Bassa Val Pusteria was build in the year 1994-1998 and in September 1999 set up. Following systems optimized or replaced:

- replacement of aeration device;
- retrofitting of 2 mixers;
- replacement of 3 compressors;
- gas injection with sound insulation.

Throughput: 5.680 m³/d

Location of execution: Rio Pusteria (BZ)

Date of execution: 2014 - ongoing

Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **ECOCENTER SpA**

OPTIMIZING OF NITRIFICATION FOR THE WWTP BOLZANO (374.000 PEQ)

Replacement of the sludge fan with three new HST turbo compressors. Every compressor is able to produce 7.350 Nm³/h air with 630 mbar pressure.

Throughput: 35.616 m³/d
Location of execution: Bolzano (BZ)
Date of execution: 2013 - 2014
Project: Ecocenter SpA - Dr. Eng. Bruno Eisenstecken

* **ARA PUSTERTAL SpA**

ADAPTATION AND IMPROVEMENT AT THE WWTP SOMPUNT (30.000 PEQ)

The treatment plant Sompunt was build in 1985-1990 and in December 1990 start up. Following systems are improved or replaced:

- screening system;
- sludge dewatering with flocculation system and feed pump;
- 4 remaining surplus activated sludge pump;
- replacement of 2 compressors;
- replacement of water and sludge pumps;
- adjustment at the scrubber;
- storage supernatants;
- silicon biogas filter;
- replacement gasometer membrane;
- fine bubble aeration system in lines 3 and 4;
- Pneumatic system.

Throughput: 6.000 m³/d
Location of execution: Sompunt (BZ)
Date of execution: 2014
Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **PAVIA ACQUE Scarl**

PRIORITY ACTIONS FOR ENHANCEMENT OF WWTP CAVA MANARA (15.000 PEQ)

Installation of the MBR System (10.400 m²) with Ultrafiltration-membranes, automation system and periphery.

Throughput: 3.750 m³/d
Membrane type: hollow fibre, ultrafiltration

Location of execution: Cava Manara (PV)
Date of execution: 2013 - 2014
Project: Pavia Acque Scarl – Dr. Eng. Girolamo Fiacara

* **ECOCENTER SpA**

DELIVERY AND ASSEMBLY OF A CENTRIFUGE FOR THE DEWATERING OF THE SLUDGE – ARA
BRANZOLO (280.000 PEQ)

Installing a high-efficiency centrifuge capable of treating at least 35 m³/h of sludge from 2% to
achieve returns of dehydration of 23% of dry matter.

Throughput: 5.479 m³/d
Location of execution: Branzolo (PV)
Date of execution: 2013 - 2014
Project: Ecocenter SpA – Dr. Eng. Bruno Eisenstecken

* **COMUNITÀ COMPRENSORIALE VALLE ISARCO**

ADAPTION AND FURTHER EXPANSION OF THE WWTP “BASSA VALLE ISARCO” (45.000 PEQ)

Purpose of the works is the adaptation of the treatment system “bassa valle Isarco” to revise the
limit, as well as the expansion of the system from 36.000 to 45.000 of population equivalent.
That’s why a new process stage (bio filter system) for the nitrogen elimination was arranged.
Several improvement actions are made. Both existing block heating plants was replaced with
micro gas turbines, and were placed in a new building. Also the whole gas system of the sewage
plant was renewed. Renovation and renewal works round off the works.

Throughput: 9.370 m³/d
Location of execution: Barbiano (BZ)
Date of execution: 2013 - ongoing
Project: Dr. Eng. Dieter Schönafinger
Dünser.Aigner.Kollegen – Dipl. Eng. Helmut Aigner

* **ECOCENTER SpA**

OPTIMIZING OF NITRIFICATION AT THE WWTP BOLZANO (374.000 PEQ)

The work includes the complete replacement of the ventilation system Nopon OKI-85-TV. The
new system is composed of a fine tube diffuser tzp REHAU RAUBIOXION. It guarantees a SOTR

(Standard Oxygen Transfer Rate) of 2.600 kg/h.

Throughput: 35.616 m³/d
Location of execution: Bolzano (BZ)
Date of execution: 2013 - 2014
Project: Ecocenter AG - Dr. Eng. Bruno Eisenstecken

* **FURLANI CARNI SpA**

Project and installation of a MBR System for the wastewater. The sewage plant was build for the treatment of 100 m³/d wastewater with 2.000 ppm CSB, 200 ppm N.

Throughput: 100 m³/d
Membrane type: hollow fibre, ultrafiltration
Location of execution: Trento (TN)
Date of execution: 2014
Project: Atzwanger SpA

* **COMUNITÀ COMPRENSORIALE VAL VENOSTA**

TREATMENT SYSTEM "PRATO ALLO STELVIO" RECONSTRUCTION OF THE SLUDGE DEWASTING PLANT (11.000 PEQ)

- housing of a part of the hall roof;
- rebuilding of the sludge dewatering plant and the conveyor equipment for the sludge;
- foundation slab reinforced concrete for the local dehydration and storage of sludge;
- heat- and waste air treatment for the sludge dewatering plant and conveyor equipment;
- Reconstruction and pumping device for the filter basin.

Throughput: 2.200 m³/d
Location of execution: Prato allo Stelvio (BZ)
Date of execution: 2013
Project: Bauingenieurbüro GMK - Dr. Eng. Alfred Mick

* **ARA PUSTERTAL SpA**

OPTIMIZATION OF VALUES OF NITROGEN IN WWTP ARA TOBL WITH DEMON (140,000 PEQ)

The treatment system Tobl was released in the years 1991-1996 and put into operation in July

1996. During the months December – March the remaining nitrogen from the vapour condensate of the sludge drying system, was a big problem. With the realization of the deamonification plant DEMON® (710 kgN – NH₄/d – dismaltng 73%) the nitrogen concentration is kept under the limit value and the emission of the receiving waters improved.

Throughput: 16.154 m³/d
Location of execution: Tobl / San Lorenzo (BZ)
Date of execution: 2013
Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **COMUNITÀ COMPRENSORIALE VAL VENOSTA**

Replacement of the ventilation system and periphery of the sewage plant at Prato allo Stelvio.

Throughput: 2.200 m³/d
Location of execution: Prato allo Stelvio (BZ)
Date of execution: 2011 - 2012
Project: Bauingenieurbüro GMK – Dr. Eng. Alfred Mick

* **ECOCENTER SpA**

Realization of a new anaerobic high-performance system for the pre-treatment of slag. The system handles 21.000 kg CSB/day and produces 220 m³/h Biogas (560 kWel).

The work includes the installation of 2 anaerobic reactors and the periphery. In addition 2 new high performance gas engines (output 280 kW) and a new biogas actuator.

Throughput: 5.4790 m³/d
Location of execution: Bronzolo (BZ)
Date of execution: 2011 - 2012
Project: Bauingenieurbüro GMK – Dr. Eng. Alfred Mick
Aqua Consult Ingenieur GmbH – Dipl. Eng. Roland Lange

* **ARA PUSTERTAL SpA**

Installation of a new sludge drying plant and enlargement of the bio ventilation system for the sewage plant ARA Tobl. Delivery and installation of 3 screw presses for the the sludge drying plant and the periphery and installation of 2 new turbo compressors for the enlargement of the ventilation system.

Throughput: 16.154 m³/d
Location of execution: San Lorenzo di Sebato (BZ)
Date of execution: 2010 - 2011
Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **COMUNITÀ COMPRENSORIALE VAL VENOSTA**

Modernizing of the sludge line at Glurns. Revision and installation of a new sludge heat exchanger, a periphery as well as the connection to the existing heating network.

Throughput: 6.000 m³/d
Location of execution: Glorenza (BZ)
Date of execution: 2010
Project: Ingenieure Patscheider & Partner GmbH – Dr. Eng. Roland Patscheider

* **ARA PUSTERTAL SpA**

Realization of a new power heat system for the treatment system at Glorenza with a capacity of 24.000 PEQ. Installation of the new gas engine (50 kWel) and the periphery.

Location of execution: San Candido (BZ)
Date of execution: 2010
Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **ARA PUSTERTAL SpA**

Modernizing of the power heat system at the water treatment system Rio Pusteria and the pre-treatment system with a capacity of 37.000 PEQ. Installation of the new gas engines (70 kWel) and the periphery. The primary clarifier was covered and a ventilation system installed.

Location of execution: Rio Pusteria (BZ)
Date of execution: 2010
Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **MUNICIPALITY RITTEN**

Renewal of the slug line of the water treatment Oberbozen and Unterinn. Installation of the new mechanic sludge dewatering system.

Location of execution: Auna di Sotto / Soprabolzano / Renon (BZ)

Date of execution: 2009 - 2010

Project: Studio H&T – Dr. Eng. Martin Weis

* **ECOCENTER SpA**

Realization of a new power heat coupling for the water treatment Bolzano. The work includes 3 gas engines and the periphery with 3 new gas engines with a higher capacity (280 kWel), that works with bio gas.

Location of execution: Bolzano (BZ)

Date of execution: 2009 - 2010

Project: Per. Ind. Dorianò Castelli

* **ARA PUSTERTAL SpA**

Enlargement and modernization of the sludge system for the water treatment system "Bassa Pusteria" with a capacity of 37.000 PEQ. Installation of a new pre-treatment system and grate sand trap as well as the classification and cleaning system for the screenings. Moreover the ventilation system consisting of a gas absorber for the raking and sewage treatment.

Location of execution: Rio di Pusteria (BZ)

Date of execution: 2008 - 2009

Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **ECOCENTER SpA**

Realization of a new raking system of the water treatment Bozen. Following steps have been taken: Reimbursement of the screening press, as well as classification and cleaning system, realization of a new printing installation and the installation of the new air treatment.

Location of execution: Bolzano (BZ)

Date of execution: 2007 - 2008

Project: Studio Dr. Eng. Antonio Ianeselli

* **MUNICIPALITY RITTEN**

Realization of a new electromechanically system. The system includes plate membranes with a performance of 600 EW. Additional a new drainage system for the residual sludge was realized.

Location of execution: Siffiano / Renon (BZ)
Date of execution: 2007 - 2009
Project: Studio H&T – Dr. Eng. Martin Weis

* **COMUNITÀ MONTANA LARIO INTELVESE**

Building of the main header of the waste water system for 30.000 inhabitant. This is a activated sludge plant with diving membrane (MBR), with an ultra filtration membrane ZENON and a phosphate precipitation, denitrification and nitrification. The system is able to handle 1.200 mc/h of waste water.

The system includes a over 50 km pipe system, 5 pump stations and 5 km pipes under water.

Membrane type: hollow fibre, microfiltration
Location of execution: Camoggia (CO)
Date of execution: 2007 - 2009
Project: Atzwanger SpA

* **PROVINCIA AUTONOMA DI TRENTO**

Installation of a new membrante at Trient for 20.000 inhabitants. The sewage plant of Trento Nord has a capacity for 100.000 PEQ. To increase the system the 4th line of the membrane was rebuild.

The new line has a capacity of 20.000 PEQ and is able to handle 900 mc/h. Additional 3 new basins with 9.000 m³ from the company GE ZENON were realized.

Membran type: hollow fibre, microfiltration
Location of execution: Trento (TN)
Date of execution: 2007 - 2009
Project: Atzwanger SpA

* **ECOCENTER SpA**

Realization of the 3rd digestion tower and a new power heat coupling for the water treatment Meran. Realization of the electromechanically works, that includes pumps, stirrers and works for the bio gas collection. Replacement of the power heating coupling with new ones (3 x 280 kW), that include a gas compressor and a filtering system.

Location of execution: Merano (BZ)

Date of execution: 2007 - 2008

Project: Planteam

* ***DISTRIC COMMUNITY WIPPTAL***

Realization of a new fire protection system for the waste water treatment system Wipptal. Installation of a fire protection pump station as well as a pressure increasing station for the process water.

Location of execution: Vipiteno (BZ)

Date of execution: 2006 - 2008

Project: Studio Dr. Eng. Karl Pardeller

* ***ARA PUSTERTAL SpA***

Realization of a new sewage sludge drying plant for the sewage plant Tobl. The drying system has a capacity of 2.500 kgH₂O/h, thermo oil heating boiler and thermo oil transport system. The storage for dried sludge, adaptation to the existing rendering plant, silos with pneumatically transport for the ash from the rendering system, effluent grate with supplies, ventilation, waste air treatment with 260 m² bio filter, waste water, compressed air and drinking water system.

Location of execution: San Lorenzo di Sebato (BZ)

Date of execution: 2007 - 2009

Project: ARA Pustertal SpA - Dr. Eng. Konrad Engl

* ***ECOCENTER SpA***

Realization of a new power-heating coupling at the treatment plant Branzollo.

The new system includes 3 gas engines, with their thermal and electrical energy the System and the clarifying process is ensured in chase of a power failure.

There are 3 new plants with each 237,6 kVA constant capacity and 257 kWt thermal capacity.

Additional the bio gas compressor and filtration system was installed to require the siloxane.

To the existing system a Inert – heating storage was added, consisting of 2 storages with a volume of 16 m³.

Location of execution: Branzolo (BZ)

Date of execution: 2007

Project: Per. Ind. Doriano Caselli

* ***ECOCENTER SpA***

Adaptation of the Bolzano wastewater treatment plant. Supply and installation of the after treatment system for the purified water and of the pressure increase station for the reuse of the water in the form of industrial water. Filtration and disinfection.

Location of Execution: Bolzano (BZ)

Year of Execution: 2006

Project: Studio Dr. Ing. Antonio Ianeselli

* ***GIES CONSORTIUM FOR WASTEWATER TREATMENT***

Adaptation of the wastewater treatment plant. Monitoring and workings for the groundwater lowering.

Location of Execution: Bronzolo (BZ)

Year of Execution: 2005 - 2006

Project: Studio Per. Ind. Caselli Dorianò

* ***PUBLIC SERVICE CONSORTIUM OF THE MUNICIPALITIES OF ORTISEI, S. CRISTINA, SELVA AND CASTELROTTO***

Adaptation of the Pontives wastewater treatment plant. Mechanical thickening system for excess sludge.

Location of Execution: Ortisei (BZ)

Year of Execution: 2006

Project: Studio Dr. Eng. Walther Sulzenbacher

* ***PROVINCIA AUTONOMA DI TRENTO***

Supply and installation of a prefabricated wastewater treatment plant for the Municipality of Aldeno (TN). The prefabricated system uses MBR membrane technology for sludge treatment and can handle throughout of 63 m³/h (on three completely separate and autonomous lines of 21 m³/h each). All machinery is built in three sound-insulated and heated container boxes (1 per line). The three stainless steel drainage tanks are portable. A mechanical sludge thickening system for excess sludge is located in a separate container.

Location of Execution: Aldeno (TN)
Year of Execution: 2005 - 2006
Project: Atzwanger SpA

* **ECOCENTER SpA**

Adaptation of the Merano wastewater treatment plant. Supply and installation of the transport and storage system, complete with sludge silos for drainage.

Location of Execution: Sinigo (BZ)
Year of Execution: 2005 - 2006
Project: Bauingenieurbüro GMK – Dr. Eng. Alfred Mick

* **ECOCENTER SpA**

Adaptation of the Ponte Nova's (BZ) wastewater treatment plant. Renewal and expansion of the mechanical sludge thickening system and of the sewage sludge drainage system with centrifuge and fine rack system.

Location of Execution: Ponte Nova (BZ)
Year of Execution: 2005
Project: Ecocenter SpA

* **MEDIA PUSTERIA SEWAGE SYNDICATE**

Adaptation of the wastewater treatment plant ARA TOBL of S. Lorenzo di Sebato (BZ). Execution of extra work as well as of the ventilation system for the thermal sludge utilisation plant. Thermal oil heaters, hot water circuit, ventilation and exhaust air treatment system of the premises etc.

Location of Execution: Brunico (BZ)
Year of Execution: 2004 - 2005
Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **ECOCENTER SpA**

Adaptation of the Merano wastewater treatment plant. Supply and installation of vertical type agitators for the existing sludge treatment plant as well as renewal of the fuel cell.

Location of Execution: Sinigo (BZ)
Year of Execution: 2004

Project: Ecocenter SpA

* **PROVINCIA AUTONOMA DI TRENTO**

Supply and installation of a prefabricated wastewater treatment plant for the Municipality of San Martino di Castrozza (TN). The prefabricated system uses MBR membrane technology for sludge treatment and can handle throughout of 42 m³/h (on two completely separate and autonomous lines of 21 m³/h each). All machinery is built in two sound-insulated and heated container boxes. The two stainless steel drainage tanks are portable.

Location of Execution: Pezgaiard / Tonadico (TN)

Year of Execution: 2003 - 2004

Project: Atzwanger SpA

* **PUBLIC SERVICE CONSORTIUM OF THE MUNICIPALITIES OF ORTISEI, S. CRISTINA, SELVA AND CASTELROTTO**

Expansion of the Pontives wastewater treatment plant. Coverage of the pre-treatment systems (grit chamber/grease trap and sedimentation). Ventilation and exhaust treatment systems of the premises.

Location of Execution: Ortisei (BZ)

Year of Execution: 2003 - 2005

Project: Studio Dr. Eng. Antonio Ianselli
Per. Ind. Dorian Caselli

* **VAL BADIA SEWAGE CONSORTIUM**

Expansion of the "Sompunt" wastewater treatment plant. Upgrade of the gas motor and heating systems. Various small work.

Location of Execution: Badia (BZ)

Year of Execution: 2003

Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **PUBLIC SERVICE CONSORTIUM OF THE MUNICIPALITIES OF ORTISEI, S. CRISTINA, SELVA AND CASTELROTTO**

Expansion of the Pontives wastewater treatment plant. Delivery and upgrade of the gas motor

system, gas meter, ventilation fans, waste meter Eng.

Location of Execution: Ortisei (BZ)

Year of Execution: 2002 - 2003

Project: Studio Dr. Eng. Antonio Ianeselli

* **ECOCENTER SpA**

Expansion of the Ponte Nova wastewater treatment plant. Measures to optimise nitrification capacity. Upgrade of slab ventilators.

Location of Execution: Ponte Nova (BZ)

Year of Execution: 2002

Project: EcoCenter SpA

* **VAL BADIA SEWAGE CONSORTIUM**

Expansion of the "Sompunt" wastewater treatment plant. Upgrade of the pre-treatment and condensation station.

Location of Execution: Baida (BZ)

Year of Execution: 2002

Project: ARA Pustertal SpA – Dr. Eng. Konrad Engl

* **CITIS Srl**

Expansion of the "Capo Verde" wastewater treatment plant in Sanremo (IM). Construction of supply and exhaust air treatment systems using crossflow cleaners.

Location of Execution: Sanremo (IM)

Year of Execution: 2002

Project: Municipality of Sanremo

* **ECOCENTER SpA**

Expansion of the Municipality of Merano's wastewater treatment plant. Construction of a sludge drainage system using a high-capacity decanter centrifuge.

Location of Execution: Sinigo (BZ)

Year of Execution: 2002

Project Ecocenter SpA

* **LOWER VAL ISARCO SEWAGE SYNDICATE**

Expansion of the Municipality of Chiusa's "Zargenbach" wastewater treatment plant. Cloudy water tank equipment from the sludge drainage and various upgrades to portions of the plant.

Location of Execution: Barbiano (BZ)

Year of Execution: 2002

Project Studio Dr. Eng. Pfeifer

* **LOWER VAL ISARCO SEWAGE SYNDICATE**

Expansion of the Municipality of Bressanone's wastewater treatment plant. Construction of a third purification line and upgrading of the two existing lines with phosphate precipitation, simultaneous de-nitrification and nitrification systems. Expansion of the sludge handling and sedimentation racks.

Location of Execution: Bressanone (BZ)

Year of Execution: 2002 - 2005

Project: Studio Dr. Eng. Walther Grandi
Studio Dr. Eng. Mario Valdemarin

* **ECOCENTER SpA**

Construction of a provisional sludge drainage system for the Municipality of Merano's wastewater treatment plant. Installation of three leased drainage centrifuges in the sludge containers.

Location of Execution: Sinigo (BZ)

Year of Execution: 2001

Project: Ecocenter SpA

* **GIES CONSORTIUM FOR WASTEWATER TREATMENT, BRONZOLO**

Expansion of wastewater treatment plant. Measures to optimise nitrification. Hydraulic systems and recirculation.

Location of Execution: Bronzolo (BZ)

Year of Execution: 2001

Project: Studio Dr. Eng. Walter Grandi

* **MUNICIPALITY OF SARENTINO**

Expansion of wastewater treatment system. Rack system with spiral-sieve with integrated screening press, rainwater tanks and various additional works.

Location of Execution: Sarentino (BZ)

Year of Execution: 2001

Project: Studio Eng. Siegfried Seehauser

* **MUNICIPALITY OF APPIANO**

Expansion of the Monticolo wastewater treatment plant. Rack system with snail-sieve with integrated screening press, activated sludge tank equipment with compression station, runoff recovery system for agriculture.

Location of Execution: Monticolo (BZ)

Year of Execution: 2001

Project: Studio Eng. Rauch and Gabalin

* **GIES CONSORTIUM FOR WASTEWATER TREATMENT, BRNZOLO**

Adjustment of the wastewater treatment plant to new fire protection standards.

Location of Execution: Bronzolo (BZ)

Year of Execution: 2001

Project: Per. Ind. Dorian Caselli

* **GIES CONSORTIUM FOR WASTEWATER TREATMENT, BRNZOLO**

Expansion of wastewater treatment plant. Pre-treatment and compensation tanks for the VOG Company's wastewater, including accessories.

Location of Execution: Bronzolo (BZ)

Year of Execution: 2000 – 2001

Project: Studio Dr. Eng. Mario Valdemarin

Studio Dr. Eng. Walther Grandi

* **ECOCENTER SpA**

Expansion of the sludge drainage system with high-pressure wire presses and sludge silos for drainage.

Location of Execution: Bolzano (BZ)
Year of Execution: 2000 – 2002
Project: Arch-Ing-Service Srl
AI Engeneering Srl
TBF Toscano-Bernardi-Frey AG

* **MUNICIPALITY OF CASTELROTTO**

Expansion of the wastewater treatment plants at Siusi and Castelrotto. Renovation of the rack system through installation of a spiral sieve with integrated screening press. Exhaust air filtering using a biofilter.

Location of Execution: Castelrotto (BZ)
Year of Execution: 1999 - 2000
Project: Dr. Eng. Horst Zipperle

* **GIES CONSORTIUM FOR WASTEWATER TREATMENT, BRNZOLO**

Expansion of the wastewater treatment plant. Expansion of sewage densification and drainage using band-pass filters and wire presses. Expansion of the compressor station of the activated sludge tank, and related work.

Location of Execution: Bronzolo (BZ)
Year of Execution: 1999 – 2001
Project: Studio Dr. Eng. Mario Valdemarin
Studio Dr. Eng. Walther Grandi

* **MUNICIPALITY OF TIRES**

Construction of a solar sewage sludge drying system for the Municipality of Tires's wastewater treatment plant. Forcing house, systems and remote monitorEng.

Location of Execution: Tires (BZ)
Year of Execution: 1999
Project: Studio H&T – Dr. Eng. Martin Weis

* **MUNICIPALITY OF NATURNO**

Expansion of the wastewater treatment plant. Mechanical sludge densification, hydraulic system using high-grade steel spiral conduits, mixer in de-nitrification tanks, plus related work.

Location of Execution: Naturno (BZ)

Year of Execution: 1998 - 1999

Project: Studio Dr. Eng. Horst Zipperle

* **IPRONA SpA**

Construction of a wastewater pre-treatment system, including conduiting and hydraulic system.

Location of Execution: Lana (BZ)

Year of Execution: 1997

Project: Atzwanger SpA

* **MUNICIPALITY OF FUNES**

Replacement of the fine rack system with a spiral-sieve with integrated screening press, and delivery of an activated sludge tank ventilation system.

Location of Execution: S. Pietro / Funes (BZ)

Year of Execution: 1997

Project: Studio Dr. Eng. Darpà

* **MUNICIPALITY OF SAN GENESIO**

Complete construction of a compact wastewater treatment plant at the town of Valas.

Location of Execution: San Genesio (BZ)

Year of Execution: 1997

Project: Studio Dr. Eng. Vieider

* **MUNICIPALITY OF MERANO**

Construction of the sanitation, heating and ventilation systems with exhaust air treatment using biofilters at Merano's wastewater treatment plant.

Location of Execution: Merano (BZ)

Year of Execution: 1997 – 2000
Project: Passer Engineering Studio
Studio Dr. Eng. Gretzer

* **MUNICIPALITY OF FORTEZZA**

Construction of a sewage water hydraulic system at the main sewer of Fortezza-Aicha.

Location of Execution: Fortezza (BZ)
Year of Execution: 1996
Project: Studio Dr. Eng. Mario Valdemarin

* **CONSTRUCTION COUNCIL, MUNICIPALITY OF BOLZANO**

Construction of the wastewater treatment plant for the consortium of the Municipalities of San Candido and Sesto in the Val Pusteria (BZ), including various portions of the mechanical equipment, water and sludge lines.

The system comprised an activated sludge purification plant with upstream de-nitrification and simultaneous phosphate precipitation, anaerobic sludge treatment and a combined heat and power unit using biogas motors. The system was completely covered to minimise the influence of very low winter temperatures (as extreme as -30°C) and achieve better integration within a highly touristed area. The exhaust air is treated and cleaned.

Capacity: 28.000 PEQ
Location of Execution: Prato Drava / San Candido (BZ)
Year of Execution: 1996 – 1998
Project: Studio Dr. Eng. Aichner
Studio Dr. Eng. Castlunger
Studio Dr. Eng. Kirchebner

* **WIPPTAL SEWAGE SYNDICATE**

Construction of the anaerobic sewage treatment plant, its biogas lines with energy recovery through biogas motors, grit chamber/grease trap system, simultaneous phosphate precipitation with metering system, de-nitrification and activated sludge tank equipment, anaerobic sludge treatment and combined heat and power unit using biogas motors.

Capacity: 30.000 PEQ

Location of Execution: Vipiteno (BZ)
Year of Execution: 1996 – 2001
Project: Studio Dr. Eng. Pardeller
Studio Dr. Eng. Kuster & Hager

* **ZIPPERLE SpA**

System for the chemical-physical preliminary purification of wastewater from the fruit processing industry.

Capacity: 150.000 PEQ
Location of Execution: Merano (BZ)
Year of Execution: 1995 – 1996
Consultant: Acqua Consult
Project: Atzwanger SpA
Passavant Werke AG

* **ZIPPERLE SpA**

Pilot system for the chemical-physical preliminary purification of wastewater from the fruit processing industry.

Location of Execution: Merano (BZ)
Year of Execution: 1994
Consultant: Acqua Consult Engineering Studio

* **MUNICIPALITY OF RENON**

Expansion of the wastewater treatment plant of Soprabolzano in the Municipality of Renon. Delivery and installation of a grit chamber/grease trap and sludge activation systems, as well as other mechanical equipment.

Location of Execution: Soprabolzano (BZ)
Year of Execution: 1994 – 1995
Project: Studio H&T – Dr. Eng. Martin Weis

* **VAL BADIA SEWAGE CONSORTIUM**

Wastewater pump station for the Municipality of Pedraces.

Location of Execution: Pedraces (BZ)
Year of Execution: 1994 – 1995
Project: Studio Dr. Eng. Clara

* **CONSTRUCTION COUNCIL, MUNICIPALITY OF BOLZANO**

Supply and Installation of a portion of the mechanical equipment for the mid-Val Pusteria wastewater treatment plant. Work comprised an activated sludge treatment system with upstream de-nitrification and simultaneous phosphate precipitation, anaerobic sludge processing and a combined heat and power unit using biogas motors. Because of its location in a highly touristed area, as well as very low winter temperatures, the plant was built within an underground cave.

Capacity: 130.000 PEQ
Location of Execution: San Lorenzo di Sebato (BZ)
Year of Execution: 1994 – 1995
Project: Studio Dr. Eng. Castlunger
Studio Dr. Eng. Kuster & Hager

* **CONSTRUCTION COUNCIL, MUNICIPALITY OF BOLZANO**

Enlargement of the wastewater treatment system for Bolzano. Delivery and installation of mechanical equipment. Building of the exhaust air system, flotation plant for the turbid water treatment.

Capacity: 200.000 PEQ
Location of Execution: Bolzano (BZ)
Year of Execution: 1993 – 1994
Project: Studio Dr. Eng. Mario Valdemarin
Studio Dr. Eng. Walther Grandi

* **LOWER VAL ISARCO SEWAGE SYNDICATE**

Construction of the anaerobic sludge treatment plant with biogas energy recovery and sludge drainage systems. Construction of the exhaust air treatment system. The project comprised a wastewater treatment system with a percolating filter, anaerobic sludge treatment and a combined heat and power unit using biogas motors.

Capacity: 40.000 PEQ
Location of Execution: Chiusa (BZ)
Year of Execution: 1993 – 1994
Project: Studio Dr. Eng. Pfeifer
Ingenieurbüro Passer

* **MUNICIPALITY OF BOLZANO**

Expansion of the Municipality of Bolzano's wastewater treatment system. Sewage sludge drainage facility for the activated sludge plant with anaerobic sludge treatment.

Capacity: 110.000 PEQ
Location of Execution: Bolzano (BZ)
Year of Execution: 1991
Project: Atzwanger SpA