

SUSTAINABILITY AND ENVIRONMENTAL PROTECTION

Andritz technologies fulfill highest environmental standards worldwide

Sustainability and environmental protection are integral parts of Andritz's corporate policy. The principles are reflected in the daily work of Andritz employees as well as in the management principles and systems.

Andritz is committed to sustainable development – meeting the needs of the present without compromising the ability of future generations to fulfill their goals. There are three fundamental pillars for sustainable development: economic growth, ecological balance, and social progress. Only businesses living up to their economic, environmental and social responsibilities can be sustainable.

Sustainability is an important strategic success factor. By offering customers state-of-the-art technologies and efficient solutions which minimize waste and environmental pollution, Andritz contributes to environmental protection and the conservation of natural resources. Sustainable thinking is, therefore, an important element in Andritz's R&D programs.

The Company's actions regarding sustainability were recognized by the inclusion of Andritz in the VOENIX sustainability index. This index, created by the Austrian VBV-Pensionskasse AG, names the companies listed on the Vienna Stock Exchange that are leaders in social and ecological sustainability.

Andritz helps to achieve ecological balance and economic growth through the following:

- Collaborating with customers and research institutions to better understand the requirements for sustainability and aligning Andritz's business processes with these requirements.
- Developing products that reduce or eliminate waste from manufacturing processes.
- Developing products which move from costly end-of-pipe solutions to approaches that prevent pollution in the first place.
- Operating its business in a socially responsible manner.
- Giving preference to suppliers that share these commitments to economic, environmental and social stewardship.

Andritz is committed to working with customers on a continuous improvement basis to promote sustainable management of the Earth's natural resources. The following are some examples of Andritz's activities targeted on and contributing to sustainable development in the economic, social and environmental areas:

Economic sustainability

Corporate Governance

Andritz complies with the newly revised Austrian Corporate Governance Code and aims to meet its provisions. It regards the Code as an essential means to implement responsible management and control of Andritz.

Risk Management

As a globally operating Group, Andritz is subject to certain general as well as industry-specific risks. Andritz has made it a priority to leverage measures of active risk management related to the nature of industries and businesses in which the company engages. A management steering committee focuses on the identification of major risks and the implementation of counter-measures if necessary.

Quality Management

The Quality Management System practiced at Andritz is one of the core elements of success. The objective is perfectly summarized under the motto "Do it right the first time." The definition of quality at Andritz is not limited to the products but extends to workplace safety and business process management. The quality of suppliers is continuously monitored. Continuous improvement and optimization in every key area is a core principle for Andritz and integrated in the specific continuous goal-setting processes.

Environmental sustainability

The Andritz Group is committed to promoting environmental protection and conserving natural resources. Due to the standardization of the core processes, all plants and systems delivered to different Andritz customers around the world comply with the highest environmental standards. This is essential as most countries have implemented comprehensive and stringent environmental constraints, such as mandatory environmental impact assessments.

In the **Pulp & Paper Business Area**, for example, the effective use of resources is one of the basic conditions for sustainable production. Andritz developments in yield improvement, reduction of chemical consumption in bleaching, water savings, waste recycling, and energy efficiency contribute markedly to sustainability. For example, the process of making pulp and paper requires large volumes of water. In the last 20 years, technologies developed by Andritz have reduced the amount of water required to produce a ton of pulp or paper by 60%. Another example is the recycling of chemicals. Andritz systems help customers recover and reuse up to 99% of the chemicals used in making pulp. This protects the environment and leads to essential cost savings for the customers.

In 2004, Andritz successfully completed the chemical recovery plant – one of the world's largest – at UPM-Kymmene's Wisaforest mill, Finland. In spite of the fact that pulp production at the mill increased by about 200,000 t/a, fossil carbon dioxide emissions were reduced to being almost non-existent, and the electricity generated from black liquor combustion (by-products of the pulping process) satisfies the requirements of all production plants in the mill area. Thus, the technologies developed by Andritz help customers to further reduce emissions and to maximize electricity production.

In the **Rolling Mills and Strip Processing Lines Business Area**, several processes have been developed which reduce or even eliminate emissions of substances harmful to the environment. Andritz systems are designed to maximize the use of, and to recycle, such materials as rinse waters, rolling emulsions, and pickling acids. For example, Andritz developed a special process for recycling the electrolyte used in electrolytic pickling. The process eliminates the hexavalent chromium formed during the pickling operation. The development of the "no-rinse" coater enables the application of chemicals to the steel strip to be carried out in a closed chemical fluid circuit, thus preventing contamination of the environment.

The **Environment and Process Business Area** supplies complete process lines which convert liquid sewage sludge into granulate. With a calorific value of approximately 10 to 13 MJ/kg, this granulate can be used as a substitute for fossil fuels in heat and power generation systems, reducing CO₂ emissions. With its own optimization of the combined drying / incineration process of using dried granulate as fossil fuel and the energy generated in the incineration process as heat for the drying process, a self-sustaining reduction of CO₂ is achieved.

The **Feed Technology Business Area** is the world market leader for plants and systems for the production of environmentally-friendly biofuel pellets out of renewable fuel materials. Andritz equipment is used to produce biofuel pellets from wood, peat, and agricultural by-products. In this way, highly valuable fuels are generated from surplus materials, which would otherwise have to be disposed of. Andritz also supplies pelleting equipment for industrial and household waste, which offers an environmentally-friendly alternative to fossil fuels in heating power plants.

The **Hydraulic Machines Business Area** has been providing hydropower plants with modern equipment and extensive services for more than 130 years now. Hydropower is the leading source of renewable energy, supplying the world with about one-fifth of its electricity. It is clean, leaves behind no waste and, unlike the combustion of fossil fuel, neither emits pollutants nor dangerous greenhouse gases.

Social sustainability

Health and Safety

Employees' health and safety at work are major concerns for Andritz. The Company sets numerous measures for the protection of the staff, not only to maintain the human resources but also to live up to the social responsibility vis-à-vis the individual person.

Investing in people

Andritz strongly believes that corporate success depends upon the Company's staff. Consequently, Human Resources management is a top priority. Andritz management invests significant efforts and funds in the development and wellbeing of employees. A new management training program ("Management Challenge") has been implemented in the Group with great success. International and local courses offer training in areas such as leadership skills, change project management, and conflict resolution.

Information policy and education

Andritz takes pride in its efforts for the environment. Accordingly, an active information policy ensures that communications and dialogues with the authorities, stakeholders, neighboring citizens, and the general public are based on transparency and trust. One example of Andritz's information activities is the annual "Waste Management Report" for the Graz site. The aspects of ecology are an integral element of the training and education programs for the Andritz staff.

Staff involvement is another success factor for Andritz. Employees are encouraged to contribute their knowledge and experience. One instrument is the "Suggestion for Improvement" area in the Andritz intranet implemented at a number of sites.

A major challenge for Andritz has been the integration of newly-acquired companies. Great importance is placed upon measures to integrate leadership staff and employees in such cases.

Cooperation with the various works councils is another principle for Andritz. All relevant issues are being resolved in close collaboration with the worker representatives.

Andritz also substantially invests in the attraction of highly qualified personnel. The cooperation with universities is one activity to support the recruiting efforts.