

Conflux

Intelligent Heating
Technology from Sweden

Press information

Technology of tomorrow

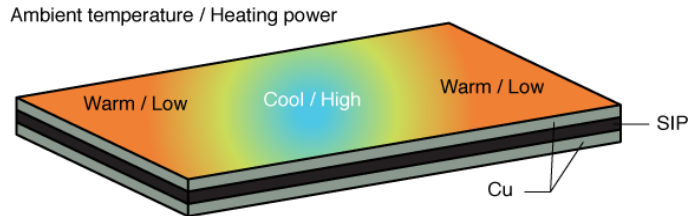
Conflux, a Swedish High-Tech-Research and Production company located in Kista near the capital Stockholm, has revolutionized the heating technology during the past years and has initiated a new age of heat production with its patented inventions.

Some years ago polymeric substances have turned out to be the materials of the future: Special Polymer Compounds allow the warming energy to be delivered exactly where and when it is needed. This increases the energy efficiency considerably and reduces energy losses at the same time.

„We combine innovative conductive polymer technology with a revolutionary design“, explains Arnulf von Zedtwitz-Liebenstein, CEO of the company since June 2007. “Thus our customers receive already today the technology of tomorrow.”

The aim of the Research and Production Company is to ensure that through continuous work and quality control **Conflux** products meet the highest quality standards of the customers.

Conflux patents



Pointwise self-regulation to varying ambient temperatures.

With its patented innovations **Conflux** has succeeded in clearly taking over the technological leadership in the field of heating/polymer technology worldwide.

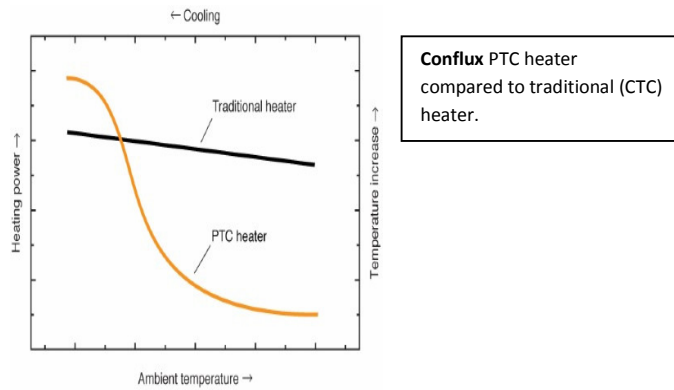
SIP and **ZPZ** are the key elements of the **Conflux** products.

SIP – Superimposed Impedance Polymer– is a patented, electrically conductive polymer compound with an intrinsic PTC characteristic.

PTC – Positive Temperature Coefficient – refers to materials that experience an increase in electrical resistance when their temperature is raised.

The **ZPZ** foil is an electric, self-regulating heating element based on the intelligent **SIP** compound. The ZPZ designed, three-layered structure consists of two copper sheets separated by a SIP core. The SIP and ZPZ features ensure optimized energy consumption by saving power for when and where you need it.

Both technologies and materials – **SIP** and **ZPZ foil** are patented.



Successful applications

An example illustrates the possibilities of application of the **Conflux** technology: A water pipe is led through different kinds of ground materials. This can be water, stone, earth etc. Coldness will affect these ground materials in different matters and the materials will affect the water pipe to different extents. Thanks to the **ZPZ foil** and the pointwise self-regulation the heating effect will be optimized to the area where it is needed.

The **ZPZ foil** can be used in the field of electronics as low voltage heating element, in winter sports (e.g. snowmobiles), in medical technology, telecom industry, the transportation of sensitive goods, in building and construction as well as for the heating of pet baskets and blankets.

A further example of application: A telecom company intends to replace a heating technology based on constant heating with a more efficient solution. With the **ZPZ foil** the need of regulatory and safety-circuitry will be decreased. Therefore **Conflux** is the cheaper, safer and more environmentally friendly alternative.

Many Advantages

A comparison between different heating technologies clearly shows the unique character of **Conflux** products with regard to technology, economy and ecology: No matter if the **PTC** functions work as **ZPZ foil** or in ceramic the self-regulation, temperature limiting and

rapid warm-up are guaranteed. Further the **ZPZ foil** provides pointwise self-regulation, pointwise temperature limiting, 100% surface coverage and is functionally independent of form.

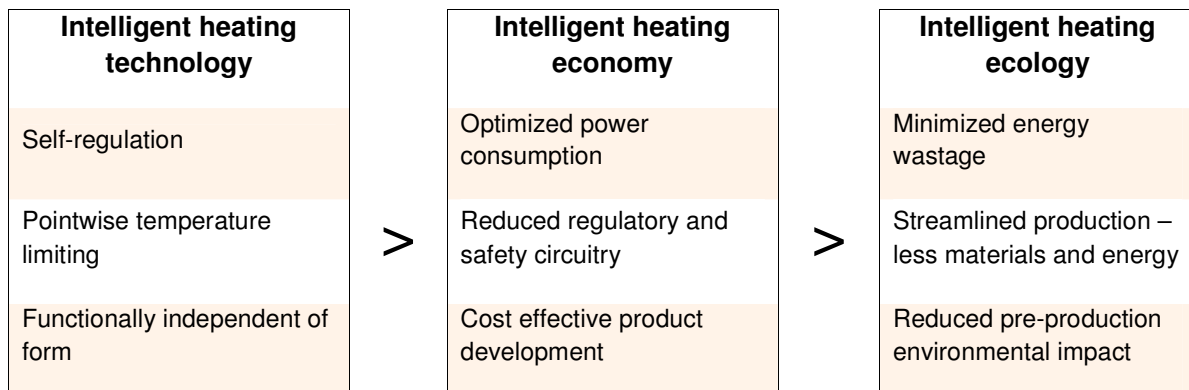
No other traditional heating element features even one of these advantages.

In addition to this the intelligent heating technology from **Conflux** offers economic advantages. The energy wastage is minimized, the regulatory, safety and control systems can be reduced and the possibilities of cost effective product development.

Not only economic but also ecological benefits

The concept of intelligent heating technology not only encompasses technology with economy but is also interesting from an ecological point of view. **Conflux** products minimize energy wastage; ensure an efficient production with less materials and energy thus reducing negative impacts on the environment.

Intelligent Heating Technology



Comparison of heating technologies on the market

	PTC heater			Constant heater
	ZPZ	PTF	Ceramic	Etched foil
Self-regulation	✓	✓	✓	✗
Pointwise self-regulation	✓	✗	✗	✗
Temperature limiting	✓	✓	✓	✗
Pointwise temperature limiting	✓	✗	✗	✗
100% surface coverage	✓	✗	✗	✗
Rapid warm-up	✓	✓	✓	✗
Functionally independent of form	✓	✗	✗	✗

How it started

A group of innovative, curious, courageous and visionary people gathered together in 1995 to establish the company **Conflux**. The aim was very ambitious right from the beginning. The founders of the company were determined to revolutionize the heating industry with their intelligent concept.

Two main innovations enable to optimize the energy consumption: **SIP Compound** and **ZPZ-foil**.

Top management

In June 2007 Arnulf von Zedtwitz-Liebenstein resumed the position of CEO at **Conflux**. The Manager with Austrian/German family background looks back to more than 20 years of experience in international business entrepreneurship. Zedtwitz-Liebenstein has held leading positions in marketing and sales at both large and small companies within business disciplines, such as it-telecom, strategic outsourcing and product development.

Before moving to **Conflux**, Zedtwitz-Liebenstein was Sales Director at Xerox, before that he worked for EHPT (Ericsson Hewlett-Packards Telecommunication), Funai and Granibo AB.

Corporate Responsibility

As there is no longer any doubt that the climate change is caused by anthropogenic influence, **Conflux** makes a contribution to environmental protection not only with its products. "For us at **Conflux** the environment is a natural and important part of our everyday work and we always strive to improve that.", CEO Arnulf von Zedtwitz-Liebenstein points out.

The company exclusively uses wind- and water powered electricity in their production facility. Thus 1350 kg carbon dioxide is saved per year.

All in all the company succeeded in consuming only three times the energy of an average Swedish household.

Further in the offices **Conflux** uses the latest non-toxic, waste minimizing solid ink printing technologies which during its normal lifetime generates only 10,5 kg instead of 204 kg waste.

Furthermore **Conflux** is a committed sponsor of the World Wide Fund for Nature (WWF).

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