

# TOBACCO

## INTERNATIONAL

tobaccointernational.com

The authority  
on the tobacco  
industry since 1886

March 2019

## *Industrial Odor Control* *Riedel Filtertechnik* *Offers a* *Solution*



DAVID & GOLIATH  
STORY OF ALTRIA'S  
ACQUISITION  
OF JUUL

THE PLACE OF  
RECESS FILTERS IN  
THE HISTORY OF  
CIGARETTES

THE CRISIS AHEAD  
ON THE U.S.  
TOBACCO ROAD

CAN AMERICAN  
COOPERATIVES  
COME TO THE  
RESCUE?



## A Solution for Industrial Odor Control

*Called 'COPLAS Clean,' it is an advanced technology for industrial air and gas treatment. Staff Report*

Controlling odors is becoming increasingly important. On the one hand, strict laws on odor emissions are being issued in more and more countries and jurisdictions.

At the same time, it has also become easier for residents to file complaints with local authorities, leading to stricter terms and controls on the odor emissions of manufacturers who are, in turn, having to invest more in special Tec combustion or scrubbing all have distinct disadvantages for plant operators.

German filtration technology spe-

cialist Riedel filtertechnik has developed a solution for industrial odor control designed especially for the modern manufacturer, says Lars Kuekenshoener, Product Manager at Riedel. "Called 'COPLAS clean,' it is an advanced technology for industrial air and gas treatment. It is flexible, modular and uses no water or chemicals."

Some compounds have such low odor detection thresholds that people would smell them even when a single droplet is mixed with the water of an Olympic swimming pool," Kuekenshoener muses.

Cold Plasma Treatment (CPT) is an innovative technology used for industrial air and gas treatment that eliminates odor molecules.

"The exhaust of a tobacco manufacturer does not only consist of a single compound," Kuekenshoener says. "It is, rather, a cocktail of hundreds of different compounds in the lower points per million or even points per billion range that mix to finally create a specific smell."

Traditional technical solutions for odor control, such as bio filtration, thermal post-combustion or scrubbing all have distinct disadvantages for plant operators.

"They either have a large footprint; they consume significant amounts of water, chemicals and gas; and they often produce and/or consume a lot of waste," he says. "At Riedel, our intention was to develop a solution that provides maximum odor reduction without the need for water and chemicals or the production of waste."

The result is the COPLAS clean technology, which Riedel says is already working to reduce industrial odors at customer sites.

"COPLAS clean utilizes the effect of cold plasma for creating reactive oxygen species that can eliminate odor emissions simply through the application of energy," says Kuekenshoener. "It is not directly installed in the exhaust airstream, but in a bypass which is connected to the ducting with a custom-designed T-adapter."

Essentially, the exhaust air is then treated with plasma-enriched air so that organic pollutants are oxidized, says Kuekenshoener.

"Ambient air, which consists of oxygen, enters the Plasma Reactor Cylinders whereby highly Reactive Oxygen Species are formed. These radicals are injected into the exhaust air stream for high-speed oxidation and odor abatement without the use of any water, chemicals or waste."

## EQUIPMENT

Riedel's COPLAS clean mobile unit.



Because of its small footprint on the factory floor and its modular design, says Kuekenshoener, the COPLAS clean technology can easily be integrated into existing production processes and can therefore overcome the disadvantages of traditional odor control systems.”

The technology has also been designed with flexibility in mind. Factory managers can achieve not only easy integration at existing plants, but also adaptability to production-related fluctuations in the volume of airflow that needs to be treated.

In describing the system's modular performance, Kueken-

shoener explains that the heart of the COPLAS clean system are specially designed Plasma Reactor Cylinders.

Flexibility and modularity are two key requirements of manufacturers in today's tobacco industry overcoming the disadvantages of traditional odor control systems.

The history of the general principle of cold-plasma goes back a little more than 20 years. Today, systems and technologies that utilize cold plasma are in use in a number of different industries, such as for the development of medical devices, but also solutions for exhaust treatment. Lars Kuekenshoener and his colleagues at Riedel Filtertechnik have now harnessed the technology for tobacco. Kuekenshoener

“It is important to remember,” he began, “that the term cold-plasma only describes a plasma state that has certain physical characteristics. But it does not stand for a specific quality.”

A project team with experts from different disciplines was formed for analyzing the most important process parameters and for identifying suitable components for the system.

“In addition to the engineers here at Riedel, the team was joined by an internationally recognized expert,” says Kuekenshoener. “In effect, it was the combining of competences and putting together the right team that enabled us to develop and create a next-generation cold plasma system.”

Kuekenshoener is proud, for instance, that the company was able to increase the plasma discharge frequency from 400 Hz to 30.000 Hz. “This enabled us to create radicals that are more reactive and to achieve a more energy efficient odor reduction capacity per kW.”

He concludes that the COPLAS clean system “provides advantages in terms of safety and handling; but also in terms of flexibility, efficiency and uptime when compared to old generation plasma technologies.”



**Riedel Filtertechnik GmbH, Westring 83, D-33818 Leopoldshöhe, Germany, Tel: +49 5202 992-0, Fax: +49 5202 992-150, Web: riedel-filtertechnik.com.**

Cigar Manufacturers



# FENIX

The right choice for on-line weight measurement & control

Measure Monitor Control



Isatec Ltd. introduces the latest version of their widely accepted FENIX control and information system for cigar making machines. The FENIX system has successfully evolved over 20 years to meet the increasing quality and information demands of the international cigar manufacturing industry. Using a third party Microwave sensor for on-line measurement of cigar density and moisture, FENIX controls the weight of cigar rods up to 14.5mm diameter.

With FENIX systems installed worldwide on a variety of cigar makers, Isatec continues to be the right choice for on-machine control and information systems.

- Improves Productivity
- Real-Time Information at your fingertips

### FENIX Support Services

Isatec Ltd. are renowned for excellent support of its products. For the new generation of Fenix systems, our team of experienced software and hardware engineers will continue to enhance our reputation.

Contact Us  
Tel: +44 (0) 1494 792602  
Fax: +44 (0) 1494 792608  
Email: [info@isatec.co.uk](mailto:info@isatec.co.uk)  
[www.isatec.co.uk/fenix](http://www.isatec.co.uk/fenix)

Isatec Ltd, Watermeadow House, Watermeadow, Chesham, Buckinghamshire, HP5 1LF, UK

### The overall goal

BTGCA does all of this to achieve our overall goals:

- To promote, foster and encourage the business of marketing tobacco;
- To minimize speculation and waste in its production and marketing;
- To stabilize tobacco markets, and
- To handle cooperatively and collectively the problems of the tobacco grower.

### Could hemp help?


Several grower members of the cooperative have turned to hemp as an alternate crop with the latest farm bill removing it from the controlled substance list.

Hemp farmers will now be able to buy crop insurance, apply for loans and grants, and write off their business expenses on their taxes like any other farmer.

In addition to legalizing the growth and production of domestic hemp, this new law gives each state the opportunity to have oversight responsibility.

And hemp farmers and researchers will now be eligible for competitive federal grants as well.

Tobacco companies have begun investing in the hemp, vaping and cannabis industries.

But burley tobacco continues to be a viable crop in the world market, one that contributes to the global economy for the farmers who continue to grow it and supports many farm families. 



The grower cooperatives in the United States store tobacco their grower members can't immediately sell in facilities like this BTGCA warehouse in Cynthiana, Ky.

## ODOR ABATEMENT OF PRIMARY EXHAUST AIR



### COPLAS clean

- ▶ easy integration
- ▶ modular design
- ▶ no use of water or chemicals
- ▶ adjustable power from 0-100%

#### Riedel Filtertechnik GmbH

Westring 83  
33818 Leopoldshöhe  
Germany  
phone +49 5202 992-0  
sales@riedel-filtertechnik.com



[riedel-filtertechnik.com](http://riedel-filtertechnik.com)