TAR AND TOXIC COMPOUND REDUCING FILTERS IN TOBACCO SMOKE FROM A FIBROUS ROD

PATENTED TECHNOLOGY

CONTACT DETAILS:

Research Results Transfer Office-OTRI
University of Alicante
Tel.: +34 96 590 99 59
Email: areaempresas@ua.es
http://innoua.ua.es

ABSTRACT

The *Institute of Chemical Process Engineering* of the University of Alicante has developed a filter that reduces tars and toxic compounds in tobacco smoke by up to 75%.

This filter is characterised by one or more tapers arranged between the end that is in contact with the column of tobacco smoke and the end that is in contact with the smoker's mouth. These tapers selectively condense the noxious products without altering the aroma and taste of the tobacco, keeping the sensory perceptions experienced by the smoker intact. This technology is characterised by the fact that it can be easily implemented in conventional filter cigarette manufacturing machines for large-scale production.

The technology is patent protected. Companies interested in acquiring this technology for worldwide commercial exploitation are being sought.

TECHNOLOGY ADVANTAGES AND INNOVATIVE ASPECTS

ADVANTAGES OF THE TECHNOLOGY

The main **advantages** are listed below:

1) Inhaled tars and toxic compounds are significantly reduced. Depending on the final configuration of the filter, **the reduction can vary between 50-75%** (much higher percentages than other solutions currently available on the market).

2) The taste and aroma of the tobacco is not modified.

3) The **sensory perceptions** experienced by the smoker **are maintained**.

4) It allows **continuous manufacturing**.

5) It can be industrialised on a **large scale**.

6) Allows to **reduce manufacturing costs.**

7) The filter can be **assembled directly in conventional cigarette machines** that use filters.

8) The process is **fully automatable**.

9) The manufacturing process is **very fast**.

10) The materials used are **environmentally friendly**.

11) The raw materials used are commercially available and readily available.

12) Comfort of use for the smoker.

INNOVATIVE ASPECTS OF THE TECHNOLOGY

1. Thanks to the cylindrical and elongated fibrous rod, **it can be easily implemented in conventional continuous cigarette manufacturing machines**, obtaining as a final product **cigarettes assembled** with the filters described in the present invention.

2. Each narrowing facilitates condensation and thus the **selective reduction of tars and inhaled toxic compounds**.

3. Not only the tapers themselves, but the shape of the tapers influences the results obtained in the reduction of tars and other toxic compounds.

4. Each taper has a cross-section that has been optimised to **maximise the retention of tars and toxic compounds** present in tobacco smoke (between 50-75%) without altering the organoleptic properties and the pleasant sensation of the smoking process.

MARKET APPLICATIONS

The present invention falls within the technical field of **cigarette filters**, specifically filters designed for the condensation of substances harmful to health in order to reduce tars and other toxic compounds inhaled by the smoker.

This technology can also be included in the technical field of machines and processes for manufacturing such **tobacco filters**.

The present invention enables the manufacture of a fibrous rod with tapers that allows the above-described filters to be **assembled and manufactured continuously in conventional cigarette machines using filters**.

COLLABORATION SOUGHT

Companies interested in acquiring this technology for **commercial exploitation** are sought:

- Patent licensing agreements.
- Development of new applications.
- Agreements on technology and knowledge transfer.

Company profile sought:

- Manufacturers of conventional filter cigarette manufacturing machines.
- Manufacturers of cigarette filter machines.
- Manufacturers of punching machines for the tobacco industry.