diameter of the cylinder and have a length of from about 0.5 mm to about 1.5 mm.

There is still a need for a tobacco-containing aerosol-generating substrate for use in heated smoking articles of the type described above that is capable of producing a sensorially acceptable aerosol, but that also has a sufficiently high resistance to combustion to substantially avoid combustion or pyrolytic degradation thereof during use of the heated smoking article.

~~According to the invention, there is provided~~Herein disclosed is a strand of homogenised tobacco material comprising an aerosol former characterised in that the strand has a mass to surface area ratio of at least about 0.09 mg/mm^2 and an aerosol former content of between about 12% and about 25% by weight on a dry (no water) weight basis.

According to a first aspect of the invention, there is provided a strand of homogenised tobacco material comprising at least one aerosol former having a mass to surface area ratio of at least 0.09 mg/mm^2, an aerosol former content of between 12% and 25% by weight and a density of between 1100 mg/cm^3 and 1450 mg/cm^3.

As used herein, the term “strand” denotes a strip, shred, filament, rod or other elongate element.

As used herein, the term ‘length’ denotes the dimension in the longitudinal direction of strands of homogenised tobacco material according to the invention.

As used herein, the term ‘transverse dimension’ denotes a dimension substantially perpendicular to the longitudinal direction of strands of homogenised tobacco material according to the invention.

As used herein, the term “homogenised tobacco material” denotes a material formed by agglomerating particulate tobacco. To help agglomerate the particulate tobacco, homogenised tobacco material may comprise one or more intrinsic binders (that is, tobacco endogenous binders), one or more extrinsic binders (that is, tobacco exogenous binders) or a combination thereof. Alternatively, or in addition, homogenised tobacco material may comprise other additives including, but not limited to, aerosol-formers, flavourants, plasticisers, humectants, tobacco and non-tobacco fibres, fillers, aqueous and non-aqueous solvents and combinations thereof. Strands of homogenised tobacco material according to the invention have an aerosol former content of between about 12% and about 25% by weight on a dry (no water) weight basis.

According to the invention there is also provided use of a strand of homogenised tobacco material according to the invention in an aerosol-generating substrate of a smoking article.

According to the invention, there is further provided an aerosol-generating substrate for a smoking article comprising a plurality of strands of homogenised tobacco material according to the invention.

As used herein, the term “aerosol-generating substrate” denotes a substrate capable of releasing volatile compounds upon heating to generate an aerosol.

It will be appreciated that aerosol-generating substrates according to the invention may have different shapes and sizes depending upon, for example, the type of smoking article in which they are intended to be used. Aerosol-generating substrates according to the invention may be substantially three-dimensional. For example, aerosol-generating substrates according to the invention may be bricks, plugs, or tubes comprising a plurality of strands of homogenised tobacco

material according to the invention. Alternatively, aerosol-generating substrates according to the invention may be substantially two-dimensional. For example, aerosol-generating substrates according to the invention may be mats or sheets comprising a plurality of strands of homogenised tobacco material according to the invention.

As used herein, the term “plurality of strands of homogenised tobacco material” denotes any number of strands of homogenised tobacco material capable of releasing sufficient volatile compounds upon heating to generate a sensorially acceptable aerosol. For example, aerosol-generating substrates ~~according to the invention~~ may comprise between about 20 strands and about 150 strands of homogenised tobacco material according to the invention.

According to the invention, there is also provided a smoking article comprising: a heat source; and an aerosol-generating substrate according to the invention.

As described further below, the mass to surface area ratio and aerosol former content of strands of homogenised tobacco material according to the invention in combination advantageously prevent localisation of heat transferred to aerosol-generating substrates according to the invention from the heat sources of heated smoking articles according to the invention during use thereof. This advantageously avoids aerosol-generating substrates according to the invention reaching temperatures required for combustion or pyrolytic degradation of strands of homogenised tobacco material according to the invention therein.

In use, aerosol-generating substrates in heated smoking articles may be heated by: conductive heat transfer, when the aerosol-generating substrate is in direct contact with the heat source or a heat-conducting element of the heated smoking article; by radiative heat transfer; and by convective heat transfer, when air heated by the heat source passes over the aerosol-generating substrate.

Without wishing to be bound by theory, convective heat transfer is considered to have a high potential to overheat homogenised tobacco material locally during drawing of hot air there through, and so may result in combustion or pyrolytic degradation of an aerosol-generating substrate comprising homogenised tobacco materials during use of a heated smoking article.

Strands of homogenized tobacco material according to the invention are advantageously capable of withstanding different modes of heat transfer, including convective heat transfer, due to their high mass to surface area ratio and aerosol former content.

The mass to surface area ratio is calculated by dividing the mass of the strand of homogenised tobacco material by the geometric surface area of the strand of homogenised tobacco material in accordance with the following equation:

$$\frac{\text{mass of strand of homogenised tobacco material (mg)}}{\text{surface area of strand of homogenised tobacco material (mm}^2\text{)}}$$

Strands of homogenised tobacco material according to one embodiment of the invention have a mass to surface area ratio of at least about 0.09 mg/mm^2. Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a mass to surface area ratio of at least about 0.1 mg/mm^2. More preferably, strands of homogenised tobacco material ~~according to the invention~~ have a mass to surface area ratio of at least about 0.12 mg/mm^2.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a mass to surface area ratio of less than or equal to about 0.25 mg/mm^2.

The high mass to surface area ratio of at least 0.09 mg/mm^2 of strands of homogenised tobacco material ~~according to the invention~~ provides an increase in the mass available to be heated per unit surface area, which results in an increased ability to assimilate energy per unit surface area. In use, this ensures a lower local increase in temperature in response to heat transfer, and so advantageously delays strands of homogenised tobacco material according to the invention from reaching a temperature required for combustion or pyrolytic degradation thereof.

In addition, the high mass to surface area ratio of at least 0.09 mg/mm^2 of strands of homogenised tobacco material according to the invention restricts the availability of oxygen within the strands required for combustion thereof. In use, this also advantageously delays strands of homogenised tobacco material according to the invention from reaching a temperature required for combustion or pyrolytic degradation thereof in response to heat transfer.

Strands of homogenised tobacco material ~~according to the invention~~ having a mass to surface area ratio of at least about 0.09 mg/mm^2 thus exhibit improved resistance to combustion compared to strands of homogenised tobacco having a lower mass to surface area ratio.

To assess resistance to combustion, visual confirmation of combustion may be obtained by the observation of combustion spots (white ashes against the dark tobacco) on the surface of strands of homogenised tobacco material after heating. This allows a qualitative ranking of the resistance to combustion of strands of homogenised tobacco material.

In addition, a semi-quantitative determination of combustion may be obtained through measurement of the isoprene content of the aerosol generated by strands of homogenised tobacco material in response to heating. The isoprene content of the aerosol may be measured by suitable techniques know in the art such as, for example, gas chromatography.

Isoprene is a pyrolysis product of isoprenoid compounds present in tobacco, for example in certain tobacco waxes, and can be present in the aerosol only if the strands of homogenised tobacco material are heated to a temperature substantially higher than that required to generate an aerosol. Thus, isoprene yield can be taken as representative of the amount of homogenised tobacco material that is “over heated”.

Factors that affect the mass to surface ratio of a strand of homogenised tobacco material are the morphology (that is, the shape and dimensions) of the strand and the density of the homogenised tobacco material.

The density of homogenised tobacco material determines the mass of a body of homogenised tobacco material of given volume and the packing efficiency of a given surface area of homogenised tobacco material.

The density of a homogenised tobacco material is normally largely determined by the type of process used for the manufacture thereof. A number of reconstitution processes for producing homogenised tobacco materials are known in the art. These include, but are not limited to: paper-making processes of the type described in, for example, US-A-5,724,998; casting processes of the type described in, for example, US-A-5,724,998; dough reconstitution processes of the type described in, for example, US-A-3,894,544; and extrusion processes of the type described in, for example, in GB-A-983,928.

Typically, the densities of homogenised tobacco materials produced by extrusion processes and dough reconstitution processes are greater than the densities of homogenised tobacco materials produced by casting processes. The densities of homogenised tobacco materials produced by extrusion processes can be greater than the densities of homogenised tobacco materials produced by dough reconstitution processes.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a density of at least about 1100 mg/cm^3.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a density of about 1500 mg/cm^3 or less, more preferably of about 1450 mg/cm^3 or less, most preferably of about 1375 mg/cm^3 or less.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a density of between about 1100 mg/cm^3 and about 1500 mg/cm^3, more preferably of between about 1100 mg/cm^3 and about 1450 mg/cm^3, most preferably of between about 1125 mg/cm^3 and about 1375 mg/cm^3.

The density of a strand of homogenised tobacco material according to the invention is determined by: measuring the mass and dimensions of the strand of homogenised tobacco material using suitable precision scale instruments; calculating the volume of the strand of homogenised tobacco material from the dimensions thereof; and dividing the mass of the strand of homogenised tobacco material by the volume of the strand of homogenised tobacco material.

The mass to surface area ratio of homogenised tobacco materials may be adjusted by altering the shape and dimensions thereof.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a length of at least about 2 mm, more preferably of at least about 5 mm.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a length of less than about 15 mm. For example, strands of homogenised tobacco material ~~according to the invention~~ may have a length between about 5 mm and about 15 mm.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a minimum transverse dimension of at least about 0.1 mm, more preferably of at least about 0.2 mm.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a maximum transverse dimension of about 1.5 mm or less, more preferably of about 1.3 mm or less.

The length of strands of homogenised tobacco material according to the invention is advantageously at least three times the maximum transverse dimension thereof. This enhances the cohesiveness of the strands and so facilitates formation of two and three dimensional aerosol-generating substrates comprising a plurality of strands of homogenised tobacco material according to the invention.

Preferably, the length of strands of homogenised tobacco material according to the invention is at least five times the maximum transverse dimension thereof. More preferably, the length of strands of homogenised tobacco material according to the invention is at least ten times the maximum transverse dimension thereof.

Preferably, the length of strands of homogenised tobacco material according to the invention is less than or equal to about twenty times the maximum transverse dimension thereof.

Preferably, strands of homogenised tobacco material according to the invention are of substantially square transverse cross-section, substantially rectangular transverse cross-section or substantially circular transverse cross-section.

Preferably, strands of homogenised tobacco material according to the invention are substantially cylindrical.

Strands of homogenised tobacco material ~~according to the invention~~ of substantially square cross-section or substantially rectangular cross-section preferably have a transverse cross-section of W x T, wherein W is the width of the strand and is between about 0.5 mm and about 1.5 mm, more preferably between about 0.7 mm and about 1.1 mm, most preferably between about 0.8 mm and about 1.0 mm, and T is the thickness of the strand and is between about 0.2 mm and about 0.6 mm, more preferably between about 0.3 mm and about 0.5 mm, most preferably between about 0.4 mm and about 0.5 mm when expressed to one decimal place.

Strands of homogenised tobacco material ~~according to the invention~~ of substantially circular cross-section preferably have a diameter of between about 0.25 mm and about 0.8 mm.

Strands of homogenised tobacco material ~~according to the invention~~ have an aerosol former content of between about 12% and about 25% by weight. In use, the high aerosol former content of between about 12% and about 25% by weight strands of homogenised tobacco material ~~according to the invention~~ facilitates production of a sensorially acceptable aerosol from the strands of homogenised tobacco material in response to heat transfer.

As well as facilitating production of a sensorially acceptable aerosol, the high aerosol former content of between about 12% and about 25% by weight of strands of homogenised tobacco

material according to the invention also advantageously delays combustion and pyrolytic degradation of the strands of homogenised tobacco material due to its latent heat of vaporisation.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have an aerosol former content of at least about 15% by weight on a dry (no water) weight basis.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have an aerosol former content of about 22% by weight or less, more preferably of about 20% by weight or less on a dry (no water) weight basis.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have an aerosol former content of between about 15% and about 25% by weight. For example, strands of homogenised tobacco material ~~according to the invention~~ may have an aerosol former content of between about 15% and about 22% by weight or between about 18% and about 22% by weight on a dry (no water) weight basis. In other embodiments, strands of homogenised tobacco material ~~according to the invention~~ may have an aerosol former content of between about 15% and about 20% by weight or between about 18% and about 20% by weight on a dry (no water) weight basis.

The aerosol former may be any suitable known compound or mixture of compounds that, in use, facilitates formation of a dense and stable aerosol and that is substantially resistant to thermal degradation at temperatures typically produced within the aerosol-generating means of heated smoking articles during use thereof. Suitable aerosol formers are well known in the art and include, but are not limited to: polyhydric alcohols such as, for example, triethylene glycol, 1,3-butanediol, propylene glycol and glycerine; esters of polyhydric alcohols such as, for example, glycerol mono-, di- or triacetate; aliphatic esters of mono-, di- or polycarboxylic acids such as, for example, dimethyl dodecanedioate and dimethyl tetradecanedioate; and combinations thereof.

Preferably, the aerosol former is one or more polyhydric alcohols. Most preferably, the aerosol former is glycerine.

In use, the increased ability to assimilate energy per unit surface area of strands of homogenised tobacco ~~according to the invention~~ resulting from the combination of their high mass to surface area ratio of at least 0.09 mg/mm^2 and their high aerosol former content of between about 12% and about 25% by weight results in lower local increases of temperature within aerosol-generating substrates ~~according to the invention~~ in response to heat transfer from a heat source. Strands of homogenised tobacco material according to the invention are thereby advantageously delayed or prevented from reaching temperatures required for combustion or pyrolytic degradation thereof during use of smoking articles according to the invention.

Strands of homogenised tobacco material according to the invention may be formed using known reconstitution processes of the type previously described above.

For example, in one embodiment, strands of homogenised tobacco material according to the invention of substantially square cross-section or substantially rectangular cross-section may be formed by casting, rolling, calendering or extruding a mixture comprising particulate tobacco and at

least one aerosol former to form a sheet of homogenised tobacco material having an aerosol former content of between about 12% and about 25% by weight and then shredding the sheet of homogenised tobacco material into individual strands having a mass to surface area ratio of between about 0.09 mg/mm^2 and about 0.25 mg/mm^2.

In an alternative embodiment, strands of homogenised tobacco material according to the invention of substantially square cross-section, substantially rectangular cross-section or substantially circular cross-section may be formed by extruding a mixture comprising particulate tobacco and at least one aerosol former to form continuous lengths of homogenised tobacco material having an aerosol former content of between about 12% and about 25% by weight and then cutting the continuous lengths of homogenised tobacco material into individual strands having a mass to surface area ratio of between about 0.09 mg/mm^2 and about 0.25 mg/mm^2.

When strands of homogenised tobacco material according to the invention are formed by an extrusion process, conventional single or twin-screw extruders may be used in the extrusion process.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a tobacco content of at least about 50% by weight, more preferably of at least about 65% by weight on a dry (no water) weight basis. In use, strands of homogenised tobacco material according to the invention having a high tobacco content advantageously generate aerosols with enhanced tobacco flavour.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a tobacco content of about 88% or less by weight, more preferably of about 75% or less by weight on a dry (no water) weight basis.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have a tobacco content of between about 40% and about 85% by weight, more preferably of between about 50% and about 75% by weight on a dry (no water) weight basis.

Strands of homogenised tobacco material according to the invention may comprise particulate tobacco obtained by grinding or otherwise comminuting one or both of tobacco leaf lamina and tobacco leaf stems. Alternatively, or in addition, strands of homogenised tobacco material according to the invention may comprise one or more of tobacco dust, tobacco fines and other particulate tobacco by-products formed during, for example, the treating, handling and shipping of tobacco.

Preferably, strands of homogenised tobacco ~~according to the invention~~ are formed from particulate tobacco having a particle size of between about 40 microns and about 500 microns.

Strands of homogenised tobacco material according to the invention may further comprise one or more flavourants. Suitable flavourants are known in the art and include, but are not limited to, menthol, spearmint, peppermint, eucalyptus, vanilla, cocoa, chocolate, coffee, tea, spices (such as cinnamon, clove and ginger), fruit flavourants and combinations thereof.

Preferably, strands of homogenized tobacco ~~according to the invention~~ have a flavourant content of about 10% by weight or less.

The one or more flavourants may be added to particulate tobacco before, during or after agglomeration of the particulate tobacco to form strands of homogenised tobacco material according to the invention.

For example, when strands of homogenised tobacco material according to the invention are formed by an extrusion process, one or more flavourants may be added to a mixture of particulate tobacco and at least one aerosol former before, during or after extrusion of the mixture.

Alternatively or in addition to one or more flavourants, strands of homogenised tobacco material according to the invention may further comprise other additives conventionally included in known homogenised tobacco materials. Such additives include, but are not limited to, humectants, plasticisers, binders, non-tobacco fibres and mixtures thereof.

Preferably, strands of homogenised tobacco material according to the invention are substantially free of extrinsic binders (that is, tobacco exogenous binders). However, it will be appreciated that strands of homogenised tobacco material according to the invention may comprise one or more extrinsic binders if desired. Suitable extrinsic binders for inclusion in strands of homogenised tobacco material according to the invention are known in the art and include, but are not limited to: cellulosic binders such as, for example, hydroxypropyl cellulose, carboxymethyl cellulose, hydroxyethyl cellulose, methyl cellulose and ethyl cellulose; gums such as, for example, xanthan gum, guar gum, arabic gum and locust bean gum; polysaccharides such as, for example, starches, organic acids, such as alginic acid, conjugate base salts of organic acids, such as sodium-alginate, agar and pectins; and combinations thereof.

Preferably, strands of homogenised tobacco material ~~according to the invention~~ have an extrinsic binder content of less than about 3 % by weight, more preferably of less than about 0.5 % by weight, most preferably of less than about 0.1% by weight.

Preferably, strands of homogenised tobacco material according to the invention are substantially free of non-tobacco fibers. However, it will be appreciated that strands of homogenised tobacco material according to the invention may comprise non-tobacco fibers if desired. Suitable non-tobacco fibres for inclusion in strands of homogenised tobacco material according to the invention are known in the art and include, but are not limited to, processed organic fibres such as, for example, soft-wood fibres, hard-wood fibres, jute fibres and combinations thereof. Prior to inclusion in strands of homogenised tobacco material according to the invention, non-tobacco fibres may be treated by suitable processes known in the art including, but not limited to: mechanical pulping; refining; chemical pulping; bleaching; sulfate pulping; and combinations thereof.

Preferably, strands of homogenised tobacco material according to the invention are substantially free of fillers, such as for example calcium carbonate and alumina. Eliminating the need for such fillers enables the content of components of strands of homogenised tobacco material

according to the invention that contribute to aerosol generation and flavour to be advantageously maximised.

In one preferred embodiment of the invention, the strands of homogenised tobacco material comprise only particulate tobacco, one or more aerosol formers, water and optionally one or more flavourants. Strands of homogenised tobacco material according to this preferred embodiment of the invention may, for example, have a tobacco content of between about 40% and about 85% by weight, an aerosol former content of between about 12% and about 25% by weight, a water content of between about 10% and about 20% by weight and a flavourant content of between about 0% and about 10% by weight.

According to one embodiment of the invention, there is provided an aerosol-generating substrate for a heated smoking article comprising a plurality of strands of homogenised tobacco material according to the invention, that is a plurality of individual strands of homogenised tobacco material comprising at least one aerosol former characterised in that the individual strands of homogenised tobacco material have a mass to surface area ratio of between about 0.09 mg/mm^2 and about 0.25 mg/mm^2 and an aerosol former content of between about 12% and about 25% by weight on a dry (no water) weight basis.

According to the invention there is also provided use of an aerosol-generating substrate according to the invention in a smoking article.

The plurality of individual strands of homogenised tobacco material according to the invention may or may not be aligned within the aerosol-generating substrate. Preferably, the individual strands of homogenised tobacco material according to the invention are aligned substantially parallel to one another within the aerosol-generating substrate. In use, this promotes the distribution of heat within the aerosol-generating substrate, and so advantageously reduces the likelihood of “hot spots” occurring therein that could lead to combustion or pyrolytic degradation of the strands of homogenised tobacco material.

The plurality of individual strands of homogenised tobacco material according to the invention may have the same or different composition and morphology. For example, the plurality of individual strands of homogenised tobacco material according to the invention may have the same or different mass to surface area ratio, aerosol former content, density, tobacco content, shape and dimensions.

Preferably, the individual strands of homogenised tobacco material according to the invention are of substantially uniform transverse cross-section.

Advantageously, the strands of homogenised tobacco material are circumscribed by a wrapper of, for example, paper, such as filter plug wrap. The inclusion of a suitable wrapper advantageously facilitates assembly of aerosol-generating substrates and smoking articles according to the invention.

Aerosol-generating substrates according to one embodiment of the invention may further comprise homogenised tobacco material not according to the invention. For example, aerosol-generating substrates ~~according to the invention~~ may further comprise one or more strands of homogenised tobacco material having a mass to surface area ratio of less than about 0.09 mg/mm^2 or greater than about 0.25 mg/mm^2. Alternatively or in addition, aerosol-generating substrates ~~according to the invention~~ may further comprise one or more strands of homogenised tobacco material having an aerosol former content of less than about 12% or greater than about 25% by weight on a dry (no water) weight basis.

Preferably, aerosol-generating substrates according to the invention are substantially cylindrical in shape and of substantially uniform transverse cross-section.

Preferably, aerosol-generating substrates according to the invention are of substantially circular or substantially elliptical transverse cross-section.

Aerosol-generating substrates according to the invention may be produced using known processes and equipment for forming plugs of tobacco cut filler for conventional lit-end combustible smoking articles.

Aerosol-generating substrates according to the invention are particularly suited for use in heated smoking articles of the type disclosed in WO-A-2009/022232, which comprise a combustible heat source, an aerosol-generating substrate downstream of the combustible heat source, and a heat-conducting element around and in contact with a rear portion of the combustible heat source and an adjacent front portion of the aerosol-generating substrate. In the heated smoking articles disclosed in WO-A-2009/022232, the aerosol-generating substrate extends at least about 3 mm downstream beyond the heat-conducting element.

However, it will be appreciated that aerosol-generating substrates according to the invention may also be used in heated smoking articles comprising combustible heat sources having different constructions. It will also be appreciated that aerosol-generating substrates according to the invention may be used in heated smoking articles comprising non-combustible heat sources. For example, aerosol-generating substrates according to the invention may be used in heated smoking articles comprising chemical heat sources. In addition, aerosol-generating substrates according to the invention may be used in heated smoking articles comprising electric resistive heating elements or other electrical heat sources.

~~According to the invention there is provided~~Also disclosed is a method of making a smoking article comprising: forming an aerosol-generating substrate comprising a plurality of individual strands of homogenised tobacco material comprising at least one aerosol former characterised in that the individual strands of homogenised tobacco material have a mass to surface area ratio of between ~~about~~ 0.09 mg/mm^2 and ~~about~~ 0.25 mg/mm^2 and an aerosol former content of between ~~about~~ 12% and ~~about~~ 25% by weight on a dry (no water) weight basis; and incorporating the aerosol-generating substrate in a smoking article.

According to a second aspect of the invention, there is provided a method of making a smoking article comprising: forming an aerosol-generating substrate comprising a plurality of

strands of homogenised tobacco material according to the first aspect of the invention; and incorporating the aerosol-generating substrate in a smoking article.

According to one embodiment of the invention, there is further provided a smoking article comprising a heat source and an aerosol-generating substrate comprising a plurality of individual strands of homogenised tobacco material comprising at least one aerosol former characterised in that the individual strands of homogenised tobacco material have a mass to surface area ratio of between about 0.09 mg/mm^2 and about 0.25 mg/mm^2 and an aerosol former content of between about 12% and about 25% by weight on a dry (no water) weight basis.

Preferably, the aerosol-generating substrate is located downstream of the heat source.

As used herein, the terms 'upstream' and 'front', and 'downstream' and 'rear', are used to describe the relative positions of components, or portions of components, of smoking articles according to the invention in relation to the direction of air drawn through smoking articles during use thereof.

Preferably, the heat source and the aerosol-generating substrate abut against one another.

Preferably, smoking articles according to the invention further comprise a heat-conducting element around and in contact with a rear portion of the heat source and an adjacent front portion of the aerosol-generating substrate.

Preferably, the heat source is a combustible heat source. More preferably, the heat source is a combustible carbon-based heat source.

The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a schematic cross-section of apparatus for heating aerosol-generating substrates by convective heat transfer;

Figure 2 shows strands of homogenised tobacco material having a mass to surface area ratio of 0.21 mg/mm^2 and an aerosol former content of 25% according to a first embodiment of the invention after convective heating thereof;

Figure 3 shows strands of homogenised tobacco material having a mass to surface area ratio of 0.16 mg/mm^2 and an aerosol former content of 20% according to a second embodiment of the invention after convective heating thereof;

Figure 4 shows strands of homogenised tobacco material having a mass to surface area ratio of 0.10 mg/mm^2 and an aerosol former content of 15% according to a third embodiment of the invention after convective heating thereof;

Figure 5 shows strands of homogenised tobacco material having a mass to surface area ratio of 0.11 mg/mm^2 and an aerosol former content of 15% according to a fourth embodiment of the invention after convective heating thereof;

Figure 6 shows strands of homogenised tobacco material having a mass to surface area ratio of 0.11 mg/mm^2 and an aerosol former content of 10% not according to the invention after convective heating thereof;

CLAIMS:

1. A strand of homogenised tobacco material comprising at least one aerosol former having a mass to surface area ratio of at least ~~about~~ 0.09 mg/mm^2, an aerosol former content of between ~~about~~ 12% and ~~about~~ 25% by weight and a density of between ~~about~~ 1100 mg/cm^3 and ~~about~~ 1450 mg/cm^3.

2. A strand of homogenised tobacco material according to claim 1 having a length that is at least three times the maximum transverse dimension thereof.

3. A strand of homogenised tobacco material according to claim 1 or 2 having a mass to surface area ratio of less than or equal to ~~about~~ 0.25 mg/mm^2.

4. A strand of homogenised tobacco material according to any of claims 1 to 3 having an aerosol former content of between ~~about~~ 15% and ~~about~~ 25% by weight.

5. A strand of homogenised tobacco material according to any preceding claim further comprising at least one flavourant in an amount of ~~about~~ 10% by weight or less.

6. An aerosol-generating substrate for a smoking article comprising a plurality of strands of homogenised tobacco material according to any preceding claim.

7. An aerosol-generating substrate according to claim 6 wherein the plurality of strands of homogenised tobacco material are aligned substantially parallel to one another within the aerosol-generating substrate.

8. An aerosol-generating substrate according to claim 6 or 7 having a density of between ~~about~~ 500 mg/cm^3 and ~~about~~ 1000 mg/cm^3.

9. Use of a strand of homogenised tobacco material according to any of claims 1 to 5 in an aerosol-generating substrate of a smoking article.

10. A method of making a smoking article comprising:

forming an aerosol-generating substrate comprising a plurality of strands of homogenised tobacco material according to any of claims 1 to 5; and

incorporating the aerosol-generating substrate in a smoking article.

11. A smoking article comprising:

a heat source; and

an aerosol-generating substrate according to claim 6, 7, or 8.

12. A smoking article according to claim 11 wherein the aerosol-generating substrate is located downstream of the heat source.

13. A smoking article according to claim 12 wherein the heat source is a combustible heat source.

14. A smoking article according to claim 13 further comprising:

a heat-conducting element around and in contact with a rear portion of the combustible heat source and an adjacent front portion of the aerosol-generating substrate.