ANTI CONDENSATION LINEAR SLOTS DIFFUSER AND BAR GRILLE IN AIR CONDITIONER

This invention relates to a method and material for anti-condensation by temperature control in air conditioner. And then, the method is to have a structure in the air-conditioner's outlet with as follows:

a. 90% of Flame Retardant (WPC)Wood Plastic Composite which comprises :
   - about ~~15%~~35% to about ~~65%~~45% by weight wood powder compounds.
   - about 35% to about ~~85%~~45% by weight thermoplastic ~~risin~~resin.
   - about 0.55 to about 15% by weight halogenated unsymmetrical higher alkyl bisphenoxy alkane compounds.
   - about 0.5% to about 10% by weight enhancing agent.

   And

b. 10% of Flame ~~Redardant~~ Retardant Rubber Insulation.
   -100 parts by weight of a synthetic rubber of polyolefin type.
   -10 to 40 parts by weight of an organopolysiloxane ~~risin~~ resin formed from monofuctional siloxane units represented by the formula R3SiO0.5, in which R is a hydrogen atom, a substituted or unsubsituted monovalent hydrocarbon group, and tetrafunctional siloxane units of the formula SiO2 in a molar ratio in the range from 0.6/1.0 to 2.0/1.0.
   - from 5 to 30 parts by weight of aluminium hydroxide or magnesium hydroxide.

Instead of th normal material of 98% aluminium and 2% metal

The mothod and material could be used to control the temperatura difference between the air -conditioner's outside and inside to anti-condense the water into water drops in the outlet's of air-conditoner.

The method and material has the feature such as reducing the temperature difference which causes deposition of moisture. This invention can reduct the surface temperatura difference dramatically, for example, the outside temperature is between 25 to 28degrees, the temperature of the air-conditioner is 16 degrees, the condensation will appear due to the air outlet of the air-conditioner will be controlled between 21 to 23 degrees by using the invention's method and material, which close to the outside temperature, the water condensation will be avoided.

The main object of this invention is to provides a solution to solve all condensation problem on air-conditiner's grilles and diffusers permanently.

Accordingly, this invention provides a material with special surface for moisture condensation in the outlet of air-conditioner.

Another feature is that the material is durable, no destroy in the long working period and anti -fire permanently.

For example, A control experiment can be demonstrated by the normal method and material of air-conditioner outlets, making by 98% alluminium and 2% metal in the figures of 1N,2N,3N,4N, compared with the invention's method and material by:

a. 90% of Flame Retardant (WPC)Wood Plastic Composite which comprises :
- about ~~15%~~35% to about ~~65%~~45% by weight wood powder compounds.
- about 35% to about ~~85%~~45% by weight thermoplastic ~~risin~~resin.
- about 0.55 to about 15% by weight halogenated unsymmetrical higher alkyl bisphenoxy alkane compounds.
- about 0.5% to about 10% by weight enhancing agent.

And

b. 10% of Flame ~~Redardant~~ Retardant Rubber Insulation.
-100 parts by weight of a synthetic rubber of polyolefin type.
-10 to 40 parts by weight of an organopolysiloxane ~~risin~~ resin formed from monofuctional siloxane units represented by the formula R3SiO0.5, in which R is a hydrogen atom, a substituted or unsubsituted monovalent hydrocarbon group, and tetrafunctional siloxane units of the formula SiO2 in a molar ratio in the range from 0.6/1.0 to 2.0/1.0.
- from 5 to 30 parts by weight of aluminium hydroxide or magnesium hydroxide.

as the figures 1,2,3,4, by the xame place, same time, same environment of normal one with the invented one, for working 100 hours, nomal air-conditioner can be referred to "A", the invented one can be referred to "B", the result is as follows :,

	Figures 1,2,3,4	Figures 1N,2N,3N,4N
Time	100 hours	100 hours
Water quantity	0	600ml to 800ml
Depreciation of material	90% of VOgrade Wood Plastic Composite 10% of Flame Redardant Rubber Insulation	98% aluminium 2% metal
The inside temperature	16C	16C

The water quantity is reduced to 600ml to 800ml.

The above is one of examples to show how to implement the invention in the industrial uses to anti-condensation of moisture or water drop in the outlet of air-conditiner.

CLAIMS

1. A method ~~and materail~~ for ~~anti~~ preventing condensation ~~in~~on an air-conditioner outlet, ~~by temperature control~~ the method comprising:

forming a structure for the air-conditioner outlet from a material comprising Flame Retardant Wood Plastic Composite (WPC) and Flame Retardant Rubber Insulation, and

controlling the composition of the material to control a difference between an air-conditioner outlet temperature and an outside temperature.

2. The method of claim 1, wherein controlling the composition of the material comprises using approximately 90% Flame Retardant Wood Plastic Composite (WPC) and approximately 10 % Flame Retardant Rubber Insulation.

~~2~~3.The method of claim 1 or 2, wherein the ~~material is combined by :~~

~~a. 90% of~~ Flame Retardant ~~(WPC)~~Wood Plastic Composite (WPC)~~which~~ comprises :

- about ~~15%~~35% to about ~~65%~~45% by weight wood powder compounds;~~,~~
- about 35% to about ~~85%~~45% by weight thermoplastic ~~risin~~resin;~~,~~
- about 0.55 to about 15% by weight halogenated unsymmetrical higher alkyl bisphenoxy alkane compounds; and~~,~~
- about 0.5% to about 10% by weight enhancing agent.

~~And~~

4. The method of any of the preceding claims, wherein the

~~b. 10% of~~ Flame ~~Redardant~~Retardant Rubber Insulation~~.~~ comprises:

-100 parts by weight of a synthetic rubber of polyolefin type;~~,~~

-10 to 40 parts by weight of an organopolysiloxane ~~risin~~ resin formed from monofuctional siloxane units represented by the formula R3SiO0.5, in which R is a hydrogen atom, a substituted or unsubsituted monovalent hydrocarbon group, and tetrafunctional siloxane units of the formula SiO2 in a molar ratio in the range from 0.6/1.0 to 2.0/1.0; and~~.~~

- from 5 to 30 parts by weight of aluminium hydroxide or magnesium hydroxide.

5. The method of any of the preceding claims, wherein the structure comprises grilles or diffusers.

6. An air-conditioner outlet comprising:

a structure forming the air-conditioner outlet, the structure being formed from a material comprising Flame Retardant Wood Plastic Composite (WPC) and Flame Retardant Rubber Insulation,

wherein the composition of the material is controlled to control a difference between an air-conditioner outlet temperature and an outside temperature.

7. The air-conditioner outlet of claim 6, wherein the material comprises approximately 90% Flame Retardant (WPC)Wood Plastic Composite and approximately 10 % Flame Retardant Rubber Insulation.

8.The air-conditioner outlet of claim 6 or 7, wherein the Flame Retardant Wood Plastic Composite (WPC)comprises :

- about 35% to about 45% by weight wood powder compounds;
- about 35% to about 45% by weight thermoplastic resin;
- about 0.55 to about 15% by weight halogenated unsymmetrical higher alkyl bisphenoxy alkane compounds; and
- about 0.5% to about 10% by weight enhancing agent.

9. The air-conditioner outlet of any of claims 6-8, wherein the Flame Retardant Rubber Insulation comprises:

-100 parts by weight of a synthetic rubber of polyolefin type;

-10 to 40 parts by weight of an organopolysiloxane resin formed from monofuctional siloxane units represented by the formula R3SiO0.5, in which R is a hydrogen atom, a substituted or unsubsituted monovalent hydrocarbon group, and tetrafunctional siloxane units of the formula SiO2 in a molar ratio in the range from 0.6/1.0 to 2.0/1.0; and

- from 5 to 30 parts by weight of aluminium hydroxide or magnesium hydroxide.

10. The air-conditioner outlet of any of claims 6-9, wherein the structure comprises grilles or diffusers.

~~3. The method as herein described above and illustrated in the accompanying drawings.~~

ABSTRACT

ANTI CONDENSATION LINEAR SLOTS DIFFUSER AND BAR GRILLE IN AIR CONDITIONER

This invention relates to a method and material for anti-condensation by temperature control in air-conditiner. And then, the method is to have a structure in the air-conditioner's outlet with 90% of Flame Retardant (WPC)Wood Plastic Composite and 10% of Flame ~~Redardant~~ Retardant Rubber Insulation instead of the normal meterial of the normal material of 98% aluminium and 2% metal. The method and material could be used to control the temperature difference between the air-conditiner's outside and inside to anti-condense the water into water drops in the outlet's of air-conditioner by forming the water into the surface of the material.

Figure 5