the inventors have accomplished the invention based on the finding that when a coating including a specific intermediate coating layer and a specific top coating layer is formed on the outdoor side surface of a metal roof of an existing architectural structure, the level of the noise of raindrops falling on the metal roof can be kept low, and the temperature increase during direct solar irradiation can also be suppressed.

[0013]

Thus, the invention is directed to:

1. a method of forming a coating, comprising:

forming an intermediate coating layer on an outdoor side surface of a metal roof of an existing architectural structure, wherein the intermediate coating layer comprises a dispersion of 30 to 300 parts by weight of inorganic particles in 100 parts by weight of a resin matrix derived from a reaction product of a urethane prepolymer and an acrylic polyol and has a thickness of 50 to 1,000 μm; and

forming a top coating layer on the intermediate coating layer, wherein the top coating layer contains an infrared reflecting powder and/or an infrared transmitting powder, and water has a contact angle of 70° or less on the coating formed, wherein

the inorganic particles are at least one kind selected from the group consisting of heavy calcium

carbonate, precipitated calcium carbonate, kaolin, talc, clay, argil, china clay, barium sulfate, barium carbonate, silica sand, silica stone, diatom earth, titanium oxide, zinc oxide, and aluminum oxide. ~~including:~~

~~forming an intermediate coating layer on the outdoor side surface of a metal roof of an existing architectural structure, wherein the intermediate coating layer includes a dispersion of 30 to 300 parts by weight of inorganic particles in 100 parts by weight of a resin matrix derived from a urethane prepolymer and has a thickness of 50 to 1,000 μm; and~~

~~forming a top coating layer on the intermediate coating layer, wherein the top coating layer contains an infrared reflecting powder and/or an infrared transmitting powder, and water has a contact angle of 70° or less on the coating formed; and~~

2. a coating structure obtained by the coating forming method according to item 1.

CLAIMS

1. A method of forming a coating, comprising:

forming an intermediate coating layer on an outdoor side surface of a metal roof of an existing architectural structure, wherein the intermediate coating layer comprises a dispersion of 30 to 300 parts by weight of inorganic particles in 100 parts by weight of a resin matrix derived from a urethane prepolymer and has a thickness of 50 to 1,000 μm; and

forming a top coating layer on the intermediate coating layer, wherein the top coating layer contains an infrared reflecting powder and/or an infrared transmitting powder, and water has a contact angle of 70° or less on the coating formed.

2. A coating structure obtained by the coating forming method according to claim 1.

CLAIMS

1. A method of forming a coating, comprising:

forming an intermediate coating layer on an outdoor side surface of a metal roof of an existing architectural structure, wherein the intermediate coating layer comprises a dispersion of 30 to 300 parts by weight of inorganic particles in 100 parts by weight of a resin matrix derived from a reaction product of a urethane prepolymer and an acrylic polyol and has a thickness of 50 to 1,000 μm; and

forming a top coating layer on the intermediate coating layer, wherein the top coating layer contains an infrared reflecting powder and/or an infrared transmitting powder, and water has a contact angle of 70° or less on the coating formed, wherein

the inorganic particles are at least one kind selected from the group consisting of heavy calcium carbonate, precipitated calcium carbonate, kaolin, talc, clay, argil, china clay, barium sulfate, barium carbonate, silica sand, silica stone, diatom earth, titanium oxide, zinc oxide, and aluminum oxide.

2. The coating forming method according to claim 1, wherein the inorganic particles have an average particle size of 0.1 to 100 μm.

3. The coating forming method according to claim 1 or 2, wherein the inorganic particles with an average particle size of 0.5 to 100 μm are contained in an amount of 50% by weight or more based on the total amount of the inorganic particles.

4. A coating structure obtained by the coating forming method according to any one of claims 1 to 3.