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(54) Roller.

(57) A roller for a roller towel dispenser mechanism has a frictional coating containing carborundum grit bonded to its surface by means of a two part epoxy varnish. A varnish coating is first sprayed on the roller which is then coated with the grit and a further coating of varnish, the whole arrangement then being cured.

EP 0 138 595 A2

ROLLER

The present invention relates to a roller and more particularly to a roller for a roller towel dispenser mechanism. In such mechanisms a towel is arranged to pass between two rollers and to be moved by means of a mechanism for rotating one or both of the rollers. To provide a driving engagement between the towel and the surfaces of the rollers, it is known to provide a frictional covering for the roller surfaces by bonding thereto a pre-cut, waterproof, paper-backed emery strip by means of a solvent-based or other adhesive. The strip is wound spirally onto the roller.

A disadvantage of the above arrangement is that the quality of and, in particular, the degree of friction provided by commercially-available emery strips is variable. Accordingly some emery strips do not provide a satisfactory grip on the towel. In addition a problem arises in applying waterproof, paper backed emery strips in that if these are not very well coated, the corners can start to lift, thereby necessitating rejection in the field.

The present invention seeks to overcome or reduce at least one of the above problems.

According to a first aspect of the present invention there is provided a method of providing a roller with a frictional coating, characterised in that the roller is coated with an adhesive or varnish material and a coating of particulate material is then applied.

Preferably, a further coating of an adhesive or varnish material is then applied, and the coating is cured.

Preferred materials are a two part epoxy varnish and a carborundum grit.

According to a second aspect of the present invention there is provided a roller having a frictional coating, characterised in that the roller comprises a particulate material bonded to the surface of the roller by means of an adhesive or varnish material.

An advantage of a roller in accordance with the invention is that a firm frictional drive may be imparted to a web passing over the roller. In addition the frictional properties of the roller are more consistent than with existing rollers. Furthermore the problems of the coating lifting off from the roller are avoided.

The roller is preferably for use in a roller towel dispenser mechanism.

A preferred embodiment of the present invention will now be described by way of example only.

In accordance with this embodiment a carborundum grit is bonded directly to the surface of a plastics or steel roller by the following method.

1. The roller is spray coated with a two part epoxy varnish of desired consistency.

2. The roller is then coated with carborundum grit by passing through a fluidised bed, spraying the grit, rolling the roller into a tray of grit, or other means until the varnish coating is saturated with grit. The

particle size of the grit is selected in accordance with the requirements of the particular application.

3. A final sealing of varnish (two part epoxy) of thinner consistency than the first is sprayed over the carborundum coating.

4. The epoxy varnish with grit sealed in is then either cured at room temperature for 24 hours or at 60°C for one hour, or at such temperature and for a particular length of time to ensure complete permanent (under normal atmospheric conditions) holding to the roller.

The above-described embodiment provides a roller with a coating which can firmly drive a towel engaging its surface. In addition the frictional properties of the coated roller are more consistent than with conventional frictional rollers.

The coating may be applied to the driving and/or take-up rollers of a towel dispenser mechanism, and can be applied to one or both rollers of each pair. Although the use of a two part epoxy has been disclosed, any suitable varnish or adhesive may be used and different materials may be used for the initial and final coatings. Moreover any suitable grit or other particulate material may be used as well as or in addition to carborundum grit. The preferred size used is 60 grit, but the range can be from 40 to 80. The roller may be used to drive webs or sheets of other materials, including paper, in a wide range of applications.

Claims

1. A method of providing a roller with a frictional coating characterised in that the roller is coated with an adhesive or varnish material and a coating of particulate material is then applied.

2. A method according to claim 1, wherein the roller is then subjected to a further coating of adhesive or varnish material.

3. A method according to claim 1 or 2, wherein the coatings are then cured.

4. A method according to any preceding claim, wherein the varnish material comprises a two part epoxy varnish.

5. A method according to any preceding claim, wherein the particulate material comprises carborundum grit.

6. A method according to claim 5 wherein the grit size is in the range 40 to 80.

7. A roller having a frictional coating, characterised in that the roller comprises a particulate material bonded to the surface of the roller by means of an adhesive or varnish material.

8. A roller towel dispenser mechanism comprising a roller as claimed in claim 7.