dispersion. Usually partly oxidized polyethylene wax dispersions are applied. With this additional coating on glass containers surface a long-lasting protection is provided, consisting in scratch resistance and prevention of scuffing of glass surfaces during filling and transportation.

[009] Glass containers can be recycled and reused. If reused, such returnable glass containers are collected, cleaned and refilled.

[010] The cleaning step of returnable glass containers includes usually caustic washing. During the caustic washing the cold end coating but also the hot end coating are gradually eroded. Unprotected bare glass surface is exposed after a few cycles and scuffing begins. Therefore a protective coating can be re-applied after washing and before refilling. However the adhesion of the protective coating on the surface of the glass container could be much less than the initial cold end coating.

[011] Furthermore it could happen that a majority or large parts of the cold end coating or protective coating are not washed of completely during caustic washing. The still present coating residues yields to unpleasant surface aspect after recycling of the returnable glass containers especially after several recycling steps, when new coating is applied on residues or layer of former coating.

[012] Sometimes a coating is applied that only hides the scuffing of the returnable glass containers.

[013] There is still the need for more efficient glass treatment and glass treatment process and glass coating for returnable glass containers.

[014] An objective of the present disclosure is to increase the life time of returnable glass containers.

[015] An objective is to provide a coating composition that provides a protective coating on glass containers and especially returnable glass containers.

[016] An objective is to provide a coating composition that provides a lubricating coating on glass containers and especially returnable glass containers.

[017] Another objective of the present disclosure is to provide a coating composition that is washed of completely during the washing step of the returnable containers.

[018] Still another objective of the present disclosure is to provide a coating composition that once applied, resists to the treatment of the recycled containers until they leave the filling plant.

[019] Still an additional objective is to provide a process for applying a coating composition that is washed off completely during the washing step of the returnable containers and that resists to the treatment of the recycled containers until they leave the filling plant.

[BACKGROUND OF THE INVENTION]Prior art

[020] The document US 4,803,099 describes a modified polyethylene, methods for its preparation and methods for finishing the external surfaces of glass containers. The modified polyethylene is suitable for cold-end coating of glass. The modified polyethylene comprises acid amide groups.

[021] The document GB 1,049,717 describes also a lubricous coating for glass. The coating composition comprises a reaction product of polyvinyl alcohol, an emulsified polyethylene and an acid compound.

[022] The document GB discloses a lubricity coating for plastics coated glass articles. The coating comprises an ionic copolymer of an alpha-olefin and an alpha,beta-ethylenically unsatured carboxylic acid.

[023] The document WO2004/049219 discloses a protective coating applying method for returnable glass containers. The protective coating is a paraffin based coating.

[024] None of the cited prior art discloses a coating composition comprising the wax compound (W1) that has a melting point below 85°C, in particular below 83°C, especially as coating for glass containers.

[Summary]

[024a] In an aspect, there is provided a coating composition suitable for glass containers said coating composition comprises a wax compound (W1) characterized in that the wax compound (W1) has a melting point below 85°C, preferably below 83°C.

[025] Surprisingly it has been discovered that a coating composition comprising wax compound (W1) having a melting point below 85°C, in particular below 83°C, provides a protective coating on glass

containers, that is completely washed of during cleaning of glass containers.

[026] Surprisingly it has been discovered that a coating composition comprising wax compound (W1) having a melting point below 85°C, in particular below 83°C, provides a lubricating coating on glass containers and especially returnable glass containers.

[027] Surprisingly it has been discovered that a coating composition comprising wax compound (W1) having a melting point below 85°C, in particular below 83°C, provides a coating on the glass containers that is washed of completely during the washing step of the returnable containers and that resists to the treatment of the recycled containers until they leave the filling plant.

[027a] In another aspect, there is provided a process for coating glass containers, said process comprises the steps of:

i) applying the coating composition as defined above on the surface of a glass container,

characterized in that the coating composition is applied in form of an aqueous dispersion.

[028] Surprisingly it has been discovered that a process for applying a coating composition in form of an aqueous dispersion on the surface of a glass container with coating composition comprising wax compound (W1) having a melting point below 85°C, in particular below 83°C, provides a process for applying a coating composition that is washed off completely during the washing step of the returnable containers and that resists to the treatment of the recycled containers until they leave the filling plant.

[028a] In another aspect, there is provided the use of the coating composition as defined above for returnable glass containers.

[Detailed description of the invention]

[029] In an example of the present disclosure relates to a coating composition suitable for glass containers said coating composition comprises a wax compound (W1) characterized in that the wax compound (W1) has a melting point below 85°C in particular below 83°C.

[030] In another example of the present disclosure relates to a coating composition for glass containers said coating composition comprises a wax compound (W1) characterized in that that the wax compound (W1) has a melting point below 85°C in particular below 83°C.

[031] In another example of the present disclosure relates to a process for applying a coating composition on the surface of glass containers said coating composition comprises a wax compound (W1) characterized in

that that the wax compound (W1) has a melting point below 85°C, in particular below 83°C, said coating composition is applied in form of an aqueous dispersion.

[032] In another example of the present disclosure relates to the use of a coating composition for lubricating the surface of glass containers said coating composition comprises a wax compound (W1) characterized in that the wax compound (W1) has a melting point below 85°C in particular below 83°C.

[033] By saying that a range is from x to y in the present invention, it is meant that the upper and lower limit of this range are included, equivalent to at least x and up to y.

[034] By saying that a range is between x and y in the present invention, it is meant that the upper and lower limit of this range are excluded, equivalent to more than or above x and less than or below y.

[035] **With regard to the coating composition of** the present invention, **it comprises wax compound (W1)** that is a low melting point wax in comparison to the partly oxidized polyethylene waxes usually used. The wax compound (W1) can be pure or mixture of wax compounds, as long as the mixture is possessing the melting point as given below and preferably the melting point and saponification number as given below.

[036] The melting point of the wax compound (W1) is expressed as drop melting point. The melting point is evaluated as drop melting point according to ISO 6244:1982. Preferably the melting point of the wax compound (W1) is below 85°C. More preferably the melting point of the wax compound (W1) is below 84°C, still more preferably below 83°C, even still more preferably below 82°C, advantageously below 81°C and more advantageously below 80°C.

[037] More preferably the melting point of the wax compound (W1) is above 60°C. Still more preferably the melting point of the wax compound (W1) is above 61°C, even still more preferably above 62°C, even still more preferably above 63°C, advantageously above 64°C and more advantageously above 65°C.