CLAIMS

1. A method of waste melting treatment performed by charging waste into a waste melting furnace, thermally decomposing and burning the waste, and melting a pyrolysis combustion residue to produce a melt, comprising:

the biomass molding step of providing a biomass molded article containing volatile components by 50 weight percent or more and having a property suppressing pyrolysis and combustion of the volatile components until the biomass molded article reaching a lower section of the waste melting furnace after having been charged into the waste melting furnace,

the high temperature fire grate forming step of forming a high temperature fire grate with coal coke in the lower section of the melting furnace by charging the coal coke into the waste melting furnace at a minimum supply quantity required for forming a high temperature fire grate securing combustion gas rising and passing through the high temperature fire grate and the melt falling and passing therethrough with voids created between lumps of coke,

the biomass molded articles falling step of, after the biomass molded article provided in the biomass molding step having been charged into the waste melting furnace, causing the biomass molded article to fall and reach the high temperature fire grate while suppressing pyrolysis and combustion of the volatile components of the biomass molded article, and

the pyrolysis combustion residue melting step of melting the pyrolysis combustion residue, using the heat generated by burning the coal coke, and the volatile components and fixed carbon of the biomass molded article with the high temperature fire grate.

2. The method of waste melting treatment according to claim 1, wherein the biomass molding step provides a biomass molded article having a surface which is dense and free from pores.

~~3. The method of waste melting treatment according to claim~~ 1 or 2, wherein the biomass molding step performs heating a biomass raw material at a temperature of 115 to 230 °C while pressure molding it.

4. The method of waste melting treatment according to any one of claims 1 to 3, wherein the biomass molding step provides a biomass molded article as a prismatic body one side of which has a length of 50 mm or longer, or a cylindrical body having ~~a diameter of 50 mm or larger and a length of 50 mm or longer.~~

Replaced by New Claims 1 to 4.

CLAIMS

1. A method of waste melting treatment performed by charging waste into a waste melting furnace, thermally decomposing and burning the waste, and melting a pyrolysis combustion residue to produce a melt, comprising:

the biomass molding step of providing a biomass molded article containing volatile components by 50 weight percent or more and having a property suppressing pyrolysis and combustion of the volatile components until the biomass molded article reaching a lower section of the waste melting furnace after having been charged into the waste melting furnace,

the high temperature fire grate forming step of forming a high temperature fire grate with coal coke in the lower section of the melting furnace by charging the coal coke into the waste melting furnace at a minimum supply quantity required for forming a high temperature fire grate securing combustion gas rising and passing through the high temperature fire grate and the melt falling and passing therethrough with voids created between lumps of coke,

the biomass molded articles falling step of, after the biomass molded article provided in the biomass molding step having been charged into the waste melting furnace, causing the biomass molded article to fall and reach the high temperature fire grate while suppressing pyrolysis and combustion of the volatile components of the biomass molded article, and

the pyrolysis combustion residue melting step of melting the pyrolysis combustion residue, using the heat generated by burning the coal coke, and the volatile components and fixed carbon of the biomass molded article with the high temperature fire grate.

2. The method of waste melting treatment according to claim 1, wherein the biomass molding step performs heating a biomass raw material at a temperature of 115 to 230 °C while pressure molding it.

3. The method of waste melting treatment according to any one of claims 1 or 2, wherein the biomass molding step provides a biomass molded article as a prismatic body one side of which has a length of 50 mm or longer, or a cylindrical body having a diameter of 50 mm or larger and a length of 50 mm or longer.

4. A method for reducing the quantity consumed of coal coke to be supplied to a shaft furnace type waste gasification melting furnace, forming a high temperature fire grate in the furnace lower section by coal coke, and thermally decomposing and burning the waste, and melting a pyrolysis combustion residue to produce a melt, comprising:

the biomass molding step of providing a biomass molded article containing volatile components by 50 weight percent or more and having a property suppressing pyrolysis and combustion of the volatile components until the biomass molded article reaching a lower section of the waste melting furnace after having been charged into the waste melting furnace,

the biomass molded articles falling step of, after the biomass molded article provided in the biomass molding step having been charged into the waste melting furnace, causing the biomass molded article to fall and reach the high temperature fire grate while suppressing pyrolysis and combustion of the volatile components of the biomass molded article,

the pyrolysis combustion residue melting step of melting the pyrolysis combustion residue, using the heat generated by burning the coal coke, and the volatile components and fixed carbon of the biomass molded article with the high temperature fire grate, and

the high temperature fire grate forming step of forming a high temperature fire grate with coal coke in the lower section of the melting furnace by charging the coal coke into the waste melting furnace at a minimum supply quantity required for forming a high temperature fire grate securing combustion gas rising and passing through the high temperature fire grate and the melt falling and passing therethrough with voids created between lumps of coke.