CLAIMS

1. Method for handling a slag pot or ladle comprising an inner wall and an outer wall, said method comprising the steps of

a) collecting a slag in said slag pot or ladle of a pyro-metallurgical tool,

b) transporting said slag pot or ladle from said pyro-metallurgical tool to a slag drop-off site, typically a landfill,

c) emptying of said pot or ladle at said slag drop-off site, typically at the landfill in order to eliminate the slag that it contains,

d) spraying of a mineral suspension onto said inner wall of said slag pot or ladle, prior to at least one step of said collecting of said slag, in such a way as to line said inner wall with a mineral layer, and

e) putting into service of said slag pot or ladle lined with said mineral layer for the purpose of collecting slag a),

characterised in that said mineral layer is a thin layer lined on the inner wall, having a layer thickness between 0.1 and 5 mm, preferably between 0.15 and 3 mm, more preferably between 0.2 and 2 mm, in particular between 0.5 and 1 mm and in that said mineral suspension comprises an aqueous phase, a mineral phase and possibly additives, said mineral suspension has a carbon hydrate content between 0.2 and 3%, preferably between 0.4 and 2%, more preferably between 0.5 and 1.5%, more advantageously between 0.5% and 1% by weight in relation to the total weight of said mineral suspension.

2. Method according to claim 1, wherein said mineral phase contains calcium particles, chosen from the group comprised of slaked lime, decarbonated dolomite at least partially slaked, lime and mixtures thereof.

3. Method according to claim 1 or claim 2, wherein said mineral suspension contains a calcium particle slurry containing calcium particles between 20 and 60% by weight in relation to the weight of said calcium particle slurry.

4. Method according to claim 3, wherein said calcium particles in the calcium particle slurry of said aqueous phase have an average particle size d_{50} between 1.5 µm and 10 µm.

5. Method according to any of claims 1 to 4, wherein said carbon hydrate is chosen in the group comprised of disaccharides, sorbitol, monosaccharides, oligosaccharides, xylose, glucose, galactose, fructose, mannose, lactose, maltose, glucuronic acid, gluconic acid, erythritol, xylitol, lactitol, maltitol, dextrins, cyclodextrins, inulin, glucitol, uronic acid, rhamnose, arabinose, erythrose, threose, ribose, allose, trehalose, galacturonic acid, and mixtures thereof.

6. Method according to any of claims 1 to 5, wherein said carbon hydrate is chosen in the group comprised of disaccharides, sorbitol and mixtures thereof.

7. Method according to any of claims 1 to 6, wherein said mineral suspension comprises one or several additives chosen in the group of dispersants, fluidising additives and mixtures thereof, in particular polycarbonates or polyacrylates or polyphosphonates.

8. Method according to any of claims 2 to 7, wherein said calcium particle slurry has a viscosity between 0.1 Pa.s and 2 Pa.s.

9. Method according to any of claims 2 to 8, wherein said calcium particles of the calcium particle slurry have a particle size d_{97} between 7 and 100 μm.

10. Method according to any of claims 1 to 9 wherein said mineral suspension containing a calcium particle slurry is a lime slurry containing particles of slaked lime at a content between 20 and 60% by weight in relation to the weight of said lime slurry, wherein said lime slurry has a reactivity expressed in the form of a dissolving time t(90%) greater than 0.1 s in particular greater than 0.2 s and less than 10 s, in particular less than 5 s.

11. Use of a mineral suspension for lining an inner wall of a slag pot or of a slag ladle with a mineral layer, wherein said mineral suspension is sprayed and has a content in carbon hydrate between 0.2 and 3% preferably between 0.4 and 2%, more preferably between 0.5 and 1.5%, more advantageously between 0.5% and 1% by weight, in relation to the total weight of said mineral suspension.

12. Use of a mineral suspension according to claim 11, wherein said mineral layer has a layer thickness between 0.1 and 5 mm, preferably between 0.15 and 3 mm, more preferably between 0.2 and 2 mm, in particular between 0.5 and 1 mm.

13. Use of a mineral suspension according to claim 11 or 12, wherein said mineral suspension contains calcium particles, chosen from the group comprised of slaked lime, decarbonated dolomite at least partially slaked, lime and mixtures thereof and wherein the mineral layer is a layer of calcium particles.

14. Use of a mineral suspension according to any of claims 11 to 13, wherein said mineral suspension contains a calcium particle slurry containing calcium particles between 20 and 60% by weight in relation to the weight of said calcium particle slurry.

15. Use of a mineral suspension according to any of claims 11 to 14, wherein said calcium particles in the calcium particle slurry of said mineral suspension have an average particle size d_{50} between 1.5 μm and 10 μm.

16. Use of a mineral suspension according to any of claims 11 to 15, wherein said carbon hydrate is chosen in the group comprised of disaccharides, sorbitol, monosaccharides, oligosaccharides, xylose, glucose, galactose, fructose, mannose, lactose, maltose, glucuronic acid, gluconic acid, erythritol, xylitol, lactitol, maltitol, dextrins, cyclodextrins, inulin, glucitol, uronic acid, rhamnose, arabinose, erythrose, threose, ribose, allose, trehalose, galacturonic acid, and mixtures thereof.

17. Use of a mineral suspension according to any of claims 11 to 16, wherein said carbon hydrate is chosen in the group comprised of disaccharides, sorbitol and mixtures thereof.

18. Use of a mineral suspension according to any of claims 11 to 17, wherein said calcium particle slurry has a viscosity between 0.1 Pa.s and 2 Pa.s.

19. Use of a mineral suspension according to any of claims 11 to 18, wherein said calcium particles of the calcium particle slurry have a particle size d_{97} between 7 and 100 µm.

20. Use of a mineral suspension according to any of claims 11 to 19, wherein said mineral suspension comprises one or several additives chosen in the group of dispersants, fluidising additives and mixtures thereof, in particular polycarbonates or polyacrylates or polyphosphonates.