CLAIMS

1. Application of carbon nanotubes on agglomerates of ore fines to increase the mechanical strength, comprising:

dispersing carbon nanotubes into a matrix by mechanical mixing or using ultrasonic processor;

performing a mechanical mixture with the ore; and

agglomerating.

2. A process for the preparation of ore agglomerates having high mechanical strength, comprising:

dispersion of carbon nanotubes into a matrix;

preparation of said mixture;

pelletizing or briquetting or extruding;

screening the pellets/briquettes;

drying; and

screening.

3. The process of claim 2 wherein the matrix comprises at least a binding agent.

4. The process of claim 3 wherein the binding agent is liquid sodium silicate.

5. The process of claim 2 wherein the dispersion of the carbon nanotubes is performed by mechanical mixtures or by using ultrasonic processor equipment, the pelletizing is done by disc or drum, and the drying occurs in conveyor belt furnace between at temperatures around 150 to 200°C.

CLAIMS

1. A method of applying carbon nanotubes on agglomerates of ore fines to increase the mechanical strength, comprising:

dispersing carbon nanotubes into a matrix by mechanical mixing or using ultrasonic processor;

performing a mechanical mixture with the ore; and

agglomerating the mixture.

2. A process for the preparation of ore agglomerates having high mechanical strength, comprising:

dispersing carbon nanotubes into a matrix to form a mixture;

preparing said mixture;

pelletizing or briquetting or extruding the mixture to form pellets or briquettes;

screening the formed pellets or briquettes;

drying the pellets or briquettes; and

screening the dried pellets or briquettes.

3. The process of claim 2 wherein the matrix comprises at least a binding agent.

4. The process of claim 3 wherein the binding agent is liquid sodium silicate.

5. The process of claim 2 wherein the dispersion of the carbon nanotubes is performed by mechanical mixtures or by using ultrasonic processor equipment, the pelletizing is done by disc or drum, and the drying occurs in conveyor belt furnace between at temperatures around 150 to 200°C.