CLAIMS

1. A method for scrubbing and classification of a plurality substance contained in an enclosure in a system (**100**), the method comprising the steps of:

receiving the substance to an attrition wash box (AWB) (**01**), thereby scrubbing the substance received;

discharging the scrubbed substance from the AWB (**01**) to a rinsing screen (**02**), thereby

adding a suitable amount of a pressurized water on the on the rinsing screen (**02**) for classification of at least one size of coarse washed product;

dewatering the at least one size of coarse washed product obtained and discharging it; and

recovering the at least one size of coarse washed product obtained and providing it to at least one integrated product conveyor for stock piling, wherein the integrated product conveyor is selected from a first product conveyor, a second product conveyor, and a third product conveyor;

discharging recovered water from the rinsing screen (**02**) along with all fine particles obtained to a first sump (**03**) in a slurry form to form a first slurry;

pumping the first slurry to a primary hydro-cyclone(s) (**04**) with a specified pressure through a first slurry pump (**05**) and simultaneously eliminating at least one reject from the first slurry;

discharging the fine particles obtained by a primary hydro-cyclone (**04**) from the first slurry as tailings to a split feed box (**09**);

dewatering and discharging the fine particles obtained from the tailings to a split sizing cum dewatering screen (**10**) for recovering a first fine product;

dewatering the first fine product obtained and integrating it in a fourth product conveyor (**11**) for stock piling;

discharging an underflow along with fine particles obtained from the split sizing cum dewatering screen (**10**) to a second sump (**13**) in slurry form to form a second slurry for reprocessing;

pumping the second slurry to a secondary hydro-cyclone (**14**) with a specified pressure through a second slurry pump (**15**) and simultaneously eliminating at least one reject from the second slurry;

dewatering and discharging the fine particles obtained to the split sizing cum dewatering screen (**10**) for recovering a second fine product;

recovering the second fine product obtained and integrating it in a fifth product conveyor (**12**) for stock piling;

discharging rejected ultrafine particles along with water from the primary hydro cyclone(s) (**04**) and the secondary hydro cyclone(s) (**14**).

2. The method as claimed in claim 1, wherein the substance is a material.

3. The method as claimed in claim 2, wherein the material is selected from a group consisting of a manufactured sand, crusher dust, a river sand, a glass grade sand, a frac sand, a foundry sand, a construction waste, a demolition waste and a combination thereof.

4. The method as claimed in claim 1, wherein the substance is a mineral.

5. The method as claimed in claim 4, wherein the mineral selected from is selected from a group consisting of an iron ore, a bauxite, a manganese, a coal, a lignite, a chromite, a silica sand, and combination thereof.

6. The method as claimed in claim 5, wherein the iron ore are obtained from a mining of mineral and material, a mining overburden, a stockpiled reserves, and a combination thereof.

7. The method as claimed in claim 1, wherein the substances are classified with up to five sizes.

8. The method as claimed in claim 1 and 7, wherein the substances haves particle size ranging from **0.045** mm to **100** mm.

9. A system (**100**) to perform a method for scrubbing and classification of a plurality substance contained in an enclosure, the system comprising:

an attrition wash box (AWB) (**01**) fed using the enclosure; thereby a high-pressure suitable quantity of water is added in a mixture tube of the AWB (**01**) for scrubbing the deleterious from the surface of feed substance;

a rinsing screen (**02**) of a specific deck configured to receive the scrubbed substance from the AWB (**01**) and configured to receive a suitable amount of pressurized water to classify at least one size of coarse washed product from the scrubbed substance and to discharge fine particles in a slurry form to form a first slurry;

at least one integrated product conveyor for stock piling the at least one coarse products, wherein the integrated product conveyor is selected from a first product conveyor, a second product conveyor, and a third product conveyor;

a set of primary hydro-cyclone(s) (**04**) configured to receive the first slurry through a first slurry pump (**05**) and a special type of pipeline, wherein the first slurry is pumped into the primary hydro-cyclone(s) (**04**) with a specified pressure such that the primary hydro-cyclone(s) (**04**) eliminates at least one reject from the first slurry by removing at least one fine particle as tailings;

a split feed box (**09**) configured to receive the tailings from the primary hydro-cyclone(s) (**04**) whereby the tailings are dewatered and discharged to a split sizing cum dewatering screen (**10**) that is configured to recover a first fine product from the dewatered tailings and to discharge an underflow along with fine particles in a slurry form to form a second slurry;

a fourth product conveyor (**11**) for stock piling the first fine product;

a set of secondary hydro-cyclone(s) (**14**) configured to receive the second slurry through a second slurry pump (**15**) and a special type of pipeline, wherein the second slurry is pumped into the secondary hydro-cyclone(s) (**14**) with a specified pressure such that the secondary hydro-cyclone(s) (**14**) eliminates at

least one reject from the second slurry by removing at least one fine particle as tailings;

the split sizing cum dewatering screen **(10)** configured to receive the tailings from the secondary hydro-cyclone(s) **(14)** whereby the tailings are dewatered to recover a second fine product;

a fifth product conveyor **(12)** for stock piling the second fine product; and

a programmable logic controlled motor control panel **(16)** configured to monitor the method performed by the system.

10. The system **(100)** as claimed in claim 9, wherein the rinsing screen is selected from a group consisting of a single, a double, a triple deck, and combination thereof.

11. The system **(100)** as claimed in claim 9, wherein the substance is a material.

12. The system **(100)** as claimed in claim **11**, wherein the material is selected from a group consisting of a crusher dust, a river sand, a glass grade sand, a foundry sand, a construction waste, a demolition waste and a combination thereof.

13. The system **(100)** as claimed in claim 9, wherein the substance is a mineral.

14. The system **(100)** as claimed in claim **13**, wherein the mineral is selected from is selected from a group consisting of an iron ore, a bauxite, a manganese, a coal, a lignite, a chromite, a silica sand, and combination thereof.

15. The system **(100)** as claimed in claim **14**, wherein the iron ore are obtained from a mining of mineral and material, a mining overburden, a stockpiled reserves, and a combination thereof.

16. The system **(100)** as claimed in claim 9, wherein the substances are classified with up to five sizes.

17. The system **(100)** as claimed in claim 9 and **16**, wherein the substances haves particle size ranging from 0.**045** mm to **100** mm.