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## Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

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19 June 2014

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(54) Title: PROCESS OF TREATING AND RE-UTILIZING ASSORTED WASTES AND POLYMERS, AND CONSTRUCTION ELEMENT MADE THEREBY

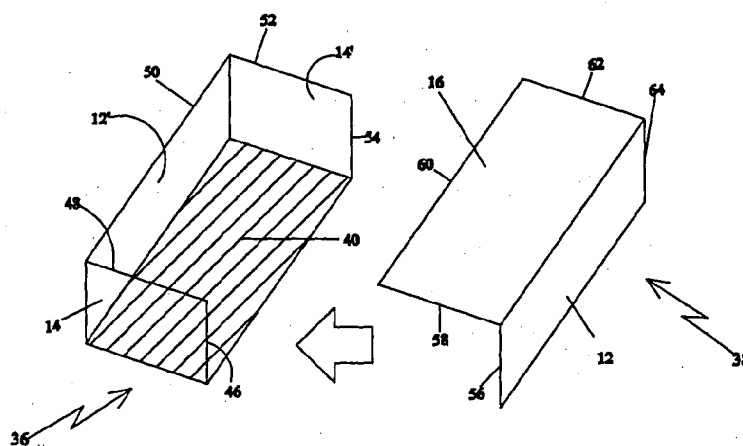


FIG. 7

(57) Abstract: Earth and Environment is facing serious hazard due to the rapid production & accumulation of Assorted Waste & Plastics (AWP), containing wastes primarily from used cars, tyres, plastics, MSW, households Industry & many others. The present methods of re-cycling or disposal are costly & inadequate. In the Process of TRAWP invention, after treatment or/ & detoxification, the AWP are reused fully as a raw material in manufacturing & construction activity (indoor & outdoors). An Assorted Waste & Plastics (AWP) Board/panel/brick/slab adapted to treat a bulk AWP material for sustainable environmental reutilization is disclosed. The Board/panel/brick/slab comprises a first part and a second part such that the first part is sequentially filled with a binder/filler material followed by filling with a AWP material. The second part is securely coupled to the first part to form the AWP Board/panel/brick/slab. A process for preparation of Assorted Waste & Plastics (AWP) Board/panel/brick/slab is also disclosed.



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## AMENDED CLAIMS

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**WE CLAIM:**

1. An Assorted Waste & Plastics (AWP) Board/panel/brick/slab (10) comprising:  
a first part (18) comprising at least two layers, wherein first layer of said at least two layers comprises assorted waste and plastic material, and wherein second layer of said at least two layers comprises a binder material; and  
a second part (20) comprising at least two panels, wherein said second part is adapted to close the first part (18) to define said AWP Board/panel/brick/slab.
2. The AWP Board/panel/brick/slab (10) as claimed in claim 1, wherein said first layer and said second layer are fixed with each other.
3. The AWP Board/panel/brick/slab (10) as claimed in claim 1, wherein the first layer is adapted to be deposited on the second layer.
4. An AWP Board/panel/brick/slab (10) comprising:  
a first part (18) comprising at least two layers, wherein first layer of said at least two layers comprises assorted waste and plastic material, and wherein second layer of said at least two layers comprises a binder material; and  
a second part (20) comprising a single panel, wherein said second part (20) is configured to close the first part to define the AWP board/panel/brick/slab.
5. A process for preparation of AWP Board/panel/brick/slab (10) adapted to treat a bulk AWP material for sustainable environmental reutilization, the process comprising steps of:
  - a) forming a first part (18) and a second part (20) of the AWP Board/panel/brick/slab from suitable material;
  - b) categorizing the AWP material;
  - c) filling a binder/filler material in a predefined proportion inside the first part (18) of the AWP Board/panel brick/slab (10);
  - d) filling the categorized AWP material in a pre-defined sequence and proportion inside the first part (18) of the AWP Board/panel brick/slab (10);
  - e) allowing the binder material to settle, expand, cure and harden partially for a predefined amount of time;

f) closing the first part (18) with the second part of predefined size to form the AWP Board/panel/brick/slab (10);

g) preparing outer surfaces of the AWP Board/panel/brick/slab (10) by corrugating with furrows or punch marks;

h) coating the AWP Board/panel/brick/slab (10) with a coating material; and

i) laminating with Paint or rubber material for aesthetics and corrosion prevention.

6. The process for preparation of the AWP Board/panel/brick/slab (10) as claimed in claim 5, wherein the suitable material for forming the first part (18) and the second part (20) is selected from one or more of following mild steel, bronze, aluminium, metal, wood, plastic, PVC, alloys, composites, clay, cement, fiberglass and combination thereof.

7. The process for preparation of the brick (10) as claimed in claim 5, wherein the binder material is selected from a group of epoxy resin, mortar mix, silicone sealant, reactive acrylics, polyurethanes adhesives, Reactive Hot Melt Polyurethanes (RHMUs), cynoacrylates, polyvinyl acetates, hydrocarbon rubber based sealants, glue and cement with gravel, sand and coarse aggregates.

8. The process for preparation of the brick (10) as claimed in claim 5, wherein the proportion of the binder material is about 20-40% of the first part (18) of the AWP Board/panel/brick/slab (10).

9. The process for preparation of the Board/panel/brick/slab (10), as claimed in claim 5, wherein the time required for the binder material to settle, expand, cure and harden partially is about 5-6 hours.

10. The process for preparation of the Board/panel/brick/slab (10), as claimed in claim 5, wherein the proportion of the AWP material is about 60-80% of the first part of the AWP Board/panel/brick/slab (10).

11. The process for preparation of the Board/panel/brick/slab (10), as claimed in claim 5, wherein the coating material is selected from one or more of the following enamel paint, rubber coating, anti oxidizing primer paint or any other surface treatment (s).

12. The process for preparation of the AWP Board/panel brick/slab (10) as claimed in claim 5, wherein the Board/panel/brick/slab is adapted to be corrugated with furrows or punch marks for enamel painting followed by rubber lamination.