Claims:

1. An ~~emulsion breaking~~ additive composition for breaking emulsion, and simultaneously inhibiting and controlling polymerization of a polymerizable material, wherein the composition comprises~~comprising~~:

   (a) amino hexanoic acid selected from the group comprising: 6-amino hexanoic acid, an acid salt of 6-amino hexanoic acid, a sodium salt of 6-amino hexanoic acid, or a mixture thereof [compound-A]; and

   (b) borohydride selected from the group comprising: sodium borohydride, potassium borohydride, lithium borohydride, ammonium salt of borohydride, sodium triisopropoxy borohydride, or a mixture thereof [compound-B].

~~2. The emulsion breaking additive composition as claimed in **claim 1**, wherein the amino hexanoic acid is preferably 6-amino hexanoic acid.~~

~~3. The emulsion breaking additive composition as claimed in **claim 1 or 2**, wherein the borohydride is preferably sodium borohydride ($NaBH_4$).~~

~~4~~2. The ~~emulsion breaking~~ additive composition as claimed in ~~any one of the preceding~~ **claims ~~1 to 3~~**, wherein the polymerizable material is selected from a material having tendency to get polymerized on heating, on condensation, or on cracking.

~~5~~3. The ~~emulsion breaking~~ additive composition as claimed in ~~any one of the preceding~~ **claims ~~1~~ 1 or claim 2 ~~to 4~~**, wherein the polymerizable material is a polymer formed on aldol condensation, preferably on aldol condensation of acetaldehyde.

~~6~~4. The ~~emulsion breaking~~ additive composition as claimed in any one of the preceding **claims 1 to ~~5~~ 3**, wherein the ammonium salt of borohydride is selected from the group comprising: tetramethylammonium borohydride, and tetraethylammonium borohydride.

~~7~~5. A method for breaking emulsion, and simultaneously inhibiting and controlling polymerization of a polymerizable material, wherein the method comprises a step of treating the polymerizable material with an additive composition, wherein the additive composition comprises:

   (a) amino hexanoic acid selected from the group comprising: 6-amino hexanoic acid, an acid salt of 6-amino hexanoic acid, a sodium salt of 6-amino hexanoic acid, or a mixture thereof [compound-A]; and

(b) borohydride selected from the group comprising: sodium borohydride, potassium borohydride, lithium borohydride, ammonium salt of borohydride, sodium triisopropoxy borohydride, or a mixture thereof [compound-B];

~~8. The method as claimed in **claim 7**, wherein the amino hexanoic acid is preferably 6-amino hexanoic acid.~~

~~9. The method as claimed in **claim 7 or 8**, wherein the borohydride is preferably sodium borohydride ($NaBH_4$).~~

~~10~~6. The ~~use~~ method as claimed in ~~any one of the preceding~~ **claim~~s 7 to 9~~ 5**, wherein the amino hexanoic acid and the borohydride are preferably added in a one step process as a blend or a mixture in the polymerizabale material.

~~11~~7. The method as claimed in ~~any one of the preceding~~ **claim~~s 7 to 10~~ 5 or 6**, wherein the emulsion is formed between a hydrocarbon and caustic.

~~12~~8. The method as claimed in any one of the preceding **claims 5 to 7 ~~to 11~~**, wherein the polymerizable material is selected from a material having tendency to get polymerized on heating, on condensation, or on cracking.

~~13~~9. The method as claimed in any one of the preceding **claims 5 to 8 ~~7 to 12~~**, wherein the polymerizable material is a polymer formed on aldol condensation, preferably on aldol condensation of acetaldehyde.

~~14~~10. Use of an additive composition for breaking the emulsion, and simultaneously for inhibiting and controlling polymerization of a polymerizable material, wherein the ~~method~~ use comprises a step of adding the additive composition to the polymerizable material, wherein the additive composition comprises:

(a) amino hexanoic acid selected from the group comprising: 6-amino hexanoic acid, an acid salt of 6-amino hexanoic acid, a sodium salt of 6-amino hexanoic acid, or a mixture thereof [compound-A]; and

(b) borohydride selected from the group comprising: sodium borohydride, potassium borohydride, lithium borohydride, ammonium salt of borohydride, sodium triisopropoxy borohydride, or a mixture thereof [compound-B].

~~15. The use as claimed in **claim 14**, wherein the amino hexanoic acid is preferably 6-amino hexanoic acid.~~

~~16. The use as claimed in **claim 14 or 15**, wherein the borohydride is preferably sodium borohydride ($NaBH_4$).~~

~~17~~11. The use as claimed in ~~any one of the preceding~~ **~~claims 14 to 16~~ claims 10**, wherein the amino hexanoic acid and the borohydride are preferably added in a one step process as a blend or a mixture in the polymerizabale material.

~~18~~12. The use as claimed in ~~any one of the preceding~~ **~~claims 14 to 17~~ claims 10 or 11**, wherein the emulsion is formed between a hydrocarbon and caustic.

~~19~~13. The use as claimed in any one of the preceding **~~claims 14 to 18~~ claims 10 to 12**, wherein the polymerizable material is selected from a material having tendency to get polymerized on heating, on condensation, or on cracking.

~~20~~14. The use as claimed in any one of the preceding **~~claims 14 to 19~~ claims 10 to 13**, wherein the polymerizable material is a polymer formed on aldol condensation, preferably on aldol condensation of acetaldehyde.

~~21~~15. Use of an additive composition for preventing fouling, wherein the method comprises a step of adding the additive composition to the polymerizable material, wherein the additive composition comprises:

(a) amino hexanoic acid selected from the group comprising: 6-amino hexanoic acid, an acid salt of 6-amino hexanoic acid, a sodium salt of 6-amino hexanoic acid, or a mixture thereof [compound-A]; and

(b) borohydride selected from the group comprising: sodium borohydride, potassium borohydride, lithium borohydride, ammonium salt of borohydride, sodium triisopropoxy borohydride, or a mixture thereof [compound-B].

~~22. The use as claimed in **claim 21**, wherein the amino hexanoic acid is preferably 6-amino hexanoic acid.~~

~~23. The use as claimed in **claim 21 or 22**, wherein the borohydride is preferably sodium borohydride ($NaBH_4$).~~

~~24~~16. The use as claimed in ~~any one of the preceding~~ **~~claims 21 to 23~~ claims 15**, wherein the emulsion is formed between a hydrocarbon and caustic.

~~25~~17. The use as claimed in ~~any one of the preceding~~ **~~claims 21 to 24~~ claims 15 or 16**, wherein the polymerizable material is selected from a material having tendency to get polymerized on heating, on condensation, or on cracking.

~~26~~18. The use as claimed in any one of the preceding **~~claims 21 to 25~~ claims 15 to 17**, wherein the polymerizable material is a polymer formed on aldol condensation, preferably on aldol condensation of acetaldehyde.

~~27~~19. The use as claimed in any one of the preceding **claims ~~21 to 26~~ 15 to 18**, wherein the fouling is formed by polymerization of a polymerizable material in a basic solution.

~~28~~20. The use as claimed in **claim ~~27~~ 19**, wherein the basic solution is in contact with a gaseous stream or a liquid hydrocarbon stream.

~~29~~21. The use as claimed in **claim ~~28~~ 20**, wherein the gaseous stream and the liquid hydrocarbon stream is an effluent from a hydrocarbon cracking operation.

~~30~~22. The use as claimed in any one of the preceding **claims ~~21 to 29~~ 15 to 21**, wherein the amino hexanoic acid and the borohydride are preferably added in a one step process as a blend or a mixture in the polymerizabale material.