7. The process of claim 1, wherein the relationship between the temperature of the second polymer composition at the outlet of the vessel (Tf) and the crystallization temperature of the first semi-crystalline polymer (Tc1) satisfies the formula $Tc1-30 \leq Tf \leq Tc1 + 60$.

8. The process of claim 1, wherein the vessel further comprises:

a. at least one vacuum port and at least one stirrer shaft port;

b. a stirrer shaft passing through the at least one stirrer shaft port, wherein the stirrer shaft has an external portion outside of the vessel and an internal portion extending into the vessel, the internal portion of the stirrer shaft comprising an agitating means;

c. a stirrer shaft seal associated with each stirrer shaft port for sealing against the stirrer shaft; and

d. at least one motor located outside the vessel for rotating the stirrer shaft.

~~9. A system for pelletizing a polymer composition comprising:~~

~~a. a vessel having a polymer inlet for introducing a first polymer composition to the vessel and a polymer outlet for discharging a second polymer composition;~~

~~b. a devolatizing region within the vessel having a solvent outlet for removing solvent from the first polymer composition to form the second polymer composition;~~

~~c. a stirrer shaft passing longitudinally through the vessel for agitating the contents of the vessel;~~

~~d. a motor located outside the vessel for rotating the stirrer shaft; and~~

~~e. a pelletizer for pelletizing the second polymer composition upon exiting the vessel; wherein~~

~~the first polymer composition comprises a semi-crystalline polymer and a solvent, the second polymer composition comprises the semi-crystalline polymer and less than 1 wt% solvent, the temperature of the second polymer composition at the outlet of the vessel is lower than the temperature of the first polymer composition at the inlet of the vessel, and the conditions within the devolatizing region of the vessel are such that a vacuum is maintained to facilitate removal of at least a portion of the solvent from the first polymer composition by evaporation.~~

~~10. The system of claim 9, wherein the temperature of the second polymer composition at the outlet of the vessel is at least about 10°C lower than the temperature of the first polymer composition at the inlet of the vessel.~~

~~11. The system of claim 9, further comprising a polymer discharge screw located between the polymer outlet of the vessel and the pelletizer.~~

~~12. The system of claim 9, wherein the pelletizer is an underwater pelletizer.~~

~~13. The system of claim 9, wherein the relationship between the temperature of the second polymer composition at the outlet of the vessel (Tf) and the first crystallization temperature of the semi-crystalline polymer (Tc1) satisfies the formula Tf ≤ Tc1 + 60.~~

~~14. The system of claim 13, wherein the relationship between the temperature of the second polymer composition at the outlet of the vessel (Tf) and the crystallization temperature of the semi-crystalline polymer (Tc1) satisfies the formula Tc1-30 ≤ Tf ≤ Tc1 + 60.~~

~~15. The system of claim 9, wherein the semi-crystalline polymer has an Mw from about 10,000 to about 200,000.~~

~~16. The system of claim 9, wherein the heat of fusion of the semi-crystalline polymer is from about 5 to about 70 J/g.~~

~~17. The system of claim 9, wherein the semi-crystalline polymer comprises propylene.~~

~~18.~~9. A process for the production of polymer pellets comprising:

a. providing a devolatizer having an inlet and an outlet;

b. providing a polymer composition comprising a semi-crystalline polymer and a solvent to the inlet of the devolatizer;

c. conveying the polymer composition through the devolatizer from the inlet to the outlet;

d. maintaining the temperature and pressure within the devolatizer such that a vacuum is created sufficient to remove at least a portion of the solvent from the polymer composition by evaporation and such that the temperature of the polymer composition at the outlet of the devolatizer is lower than the temperature of the polymer composition at the inlet of the devolatizer;

e. removing the polymer composition from the outlet of the devolatizer; and

f. pelletizing the polymer composition.

~~19.~~10. The process of claim ~~18~~ 9, wherein the relationship between the temperature of the polymer composition at the outlet of the vessel (Tf) and the first crystallization temperature of the semi-crystalline polymer (Tc1) satisfies the formula Tf ≤ Tc1 + 60.

~~20.~~11. The process of claim ~~18~~ 9, wherein the temperature of the polymer composition at the outlet of the devolatizer is at least about 10°C lower than the temperature of the polymer composition at the inlet of the devolatizer.

~~21.~~12. The process of claim ~~18~~ 9, wherein the polymer composition at the outlet of the vessel comprises less than 1 wt% solvent.

22.13. The process of claim ~~18~~ 9, wherein the polymer composition is pelletized in an underwater pelletizer.

23.14. The process of claim ~~18~~ 9, wherein the semi-crystalline polymer comprises propylene and has an Mw from about 10,000 to about 200,000, a melting point from about 30°C to about 110°C, and a heat of fusion from about 5 to about 70 J/g.

24.15. The process of claim ~~23~~ 14, wherein the semi-crystalline polymer is a copolymer of propylene and ethylene, a copolymer of propylene and hexene, or a mixture thereof.

25.16. The process of claim ~~18~~ 9, wherein the viscosity of the polymer composition at the outlet of the devolatizer is from about 5,000 to about 500,000 cP.