CLAIMS

1. A die casting system, comprising:

a shot tube plunger; and

a tip portion connected to said shot tube plunger, wherein said tip portion includes an inner flange and a lip portion circumferentially disposed about said inner flange, and a recess is circumferentially disposed between said lip portion and said inner flange.

2. The system as recited in claim 1, wherein said lip portion includes a radially inner wall and said inner flange includes a radially outer wall and said recess extends between said radially inner wall and said radially outer wall.

3. The system as recited in claim 2, wherein said radially inner wall and said radially outer wall are angled relative to a floor of said recess.

4. The system as recited in claim 1, wherein said inner flange and said lip portion are concentric about a longitudinal axis of said tip portion.

5. The system as recited in claim 1, wherein said inner flange includes an outermost surface that extends in a first plane that is axially offset from a second plane of an outermost surface of said lip portion.

6. The system as recited in claim 5, wherein said first plane is axially offset from said second plane in a direction that extends from a rear face toward a front face of said tip portion.

7. The system as recited in claim 1, wherein said recess is positioned radially inwardly from an outer peripheral surface of said tip portion.

8. The system as recited in claim 1, wherein said tip portion is cylindrical shaped.

9. The system as recited in claim 1, wherein said tip portion is at least partially hollow and establishes an internal cooling chamber.

10. The system as recited in claim 1, wherein said lip portion extends between an outer peripheral surface of said tip portion and a radially inner wall.

11. The system as recited in claim 1, wherein said lip portion is circumferentially disposed about a front face of said tip portion.

12. A die casting system, comprising:

a die including at least one die element that defines a die cavity;

a shot tube in fluid communication with said die cavity;

a shot tube plunger moveable within said shot tube to communicate a charge of material into said die cavity, and

a tip portion connected to said shot tube plunger and having a front face, a rear face and an outer peripheral surface that extends between said front face and said rear face, wherein a lip portion circumferentially extends about said front face of said tip portion and establishes a recess at a radially inward position from said outer peripheral surface of said tip portion.

13. The system as recited in claim 12, wherein said recess is circumscribed by said lip portion.

14. The system as recited in claim 12, wherein said lip portion includes a radially inner wall and an inner flange includes a radially outer wall and said recess extends between said radially inner wall and said radially outer wall.

15. The system as recited in claim 12, wherein said lip portion extends between said outer peripheral surface and a radially inner wall of said lip portion.

16. The system as recited in claim 12, wherein said recess circumferentially extends about said front face and in a direction that extends from said front face toward said rear face.

17. The system as recited in claim 12, wherein said die casting system is a vacuum die casting system.

18. A method of providing a tip portion of a shot tube plunger, comprising:

circumferentially positioning a lip portion about an inner flange of the tip portion; and

positioning a recess between the lip portion and the inner flange.

19. The method as recited in claim 18, wherein the step of positioning the recess includes positioning the recess between a radially inner wall of the lip portion and a radially outer wall of the inner flange.

20. The method as recited in claim 18, wherein the step of positioning the recess includes positioning the recess radially inwardly from an outer peripheral surface of the tip portion.

CLAIMS

1. A die casting system, comprising:

a shot rod;

a shot tube plunger connected to said shot rod; and

a tip portion separate from and connected to said shot tube plunger, wherein said tip portion includes an inner flange and a lip portion circumferentially disposed about said inner flange, and a recess is circumferentially disposed between said lip portion and said inner flange.

2. The system as recited in claim 1, wherein said lip portion includes a radially inner wall and said inner flange includes a radially outer wall and said recess extends between said radially inner wall and said radially outer wall.

3. The system as recited in claim 2, wherein said radially inner wall and said radially outer wall are angled relative to a floor of said recess.

4. The system as recited in claim 1, wherein said tip portion is connected to an end face of said shot tube plunger.

5. The system as recited in claim 4, wherein said tip portion includes a front face and a rear face, said rear face facing toward said end face of said shot tube plunger.

6. The system as recited in claim 1, wherein said tip portion is threadably received onto a protruding member of said shot tube plunger.

7. The system as recited in claim 2, wherein said radially inner wall and said radially outer wall are transverse to a longitudinal axis of said shot tube plunger.

8. The system as recited in claim 1, wherein said shot rod extends between said shot tube plunger and a mechanism for moving said shot tube plunger.

9. The system as recited in claim 1, wherein said tip portion includes a front face, a rear face and an outer peripheral surface that extends between said front face and said rear face.

10. The system as recited in claim 9, wherein said lip portion is circumferentially disposed about said front face.