CLAIMS

1. 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,
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; and
wherein said tip portion is threadably received onto a protruding member of said shot tube plunger.

2. The system as recited in claim 1, wherein said recess is circumscribed by said lip portion.

3. The system as recited in claim 2, wherein said lip portion extends between said outer peripheral surface and a radially inner wall of said lip portion.

4. The system as recited in claim 2, wherein said recess circumferentially extends about said front face and in a direction that extends from said front face toward said rear face.

5. The system as recited in claim 2, wherein said die casting system is a vacuum die casting system.

6. 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,
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; and
wherein said lip portion is circumferentially disposed about an inner flange of said tip portion, and 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, the first plane being offset from the second plane in a direction that extends from said rear face toward said front face.

7. 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,
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; and
wherein said tip portion is at least partially hollow and establishes an internal cooling chamber.

8. The system as recited in claim 2, wherein said tip portion is made of steel, steel alloys, copper, or copper alloys.