CLAIMS

1. A shot sleeve for use in a die cast assembly comprising:

a shot sleeve body extending along an axis and having a bore for receiving a plunger; and

an insert secured at a shot end of said shot sleeve body,

wherein said insert extends over only a limited circumferential portion of said shot end of said shot sleeve body.

2. The shot sleeve as set forth in claim 1, wherein said insert is secured by a threaded member into said shot sleeve body.

3. The shot sleeve as set forth in claim 1, wherein said insert defines a portion of said bore of said shot sleeve.

4. A shot sleeve for use in a die cast assembly comprising:

a shot sleeve body extending along an axis and having a bore for receiving a plunger; and

an insert secured at a shot end of said shot sleeve body,

wherein said insert is secured by a threaded member into said shot sleeve body.

5. The shot sleeve as set forth in claim 1, wherein said insert defines a portion of said bore of said shot sleeve.

6. A shot sleeve for use in a die cast assembly comprising:

a shot sleeve body extending along an axis and having a bore for receiving a plunger; and

an insert secured at a shot end of said shot sleeve body,

wherein said insert defines a portion of said bore of said shot sleeve, and

wherein a first distance is defined from a forward face on a plunger which is to be utilized with said shot sleeve to a rearward end of a chamfer on said plunger, and said insert defines said portion of said bore for a second distance from said shot end inwardly into said bore, with said second distance being greater than said first distance.

7. The shot sleeve as set forth in claim 1, wherein said shot sleeve body is formed of a first material and said insert is formed of a second material, with said first material having a lesser thermal conductivity than said second material, and said second material being more resistant to high temperatures than said first material.

8. The shot sleeve as set forth in claim 7, wherein said first material is steel.

9. The shot sleeve as set forth in claim 8, wherein said second material is at least one of a nickel or nickel alloy, tungsten, tantalum, tungsten alloy, and tantalum alloy.

10. A die cast assembly comprising:

a moveable mold portion and a fixed mold portion, and a shot sleeve secured within said fixed mold portion;

the shot sleeve having a shot sleeve body extending along an axis, and a bore receiving a plunger that is movable along the axis; and

an insert secured at a shot end of said shot sleeve, with the shot end facing one of the movable and fixed mold portions,

wherein said insert extends over only a limited circumferential portion of said shot end of said shot sleeve.

11. The die cast assembly as set forth in claim 11, wherein said insert is secured by a threaded member into said shot sleeve body.

12. The die cast assembly as set forth in claim 11, wherein said insert defines a portion of said bore of said shot sleeve.

13. A die cast assembly comprising:

a moveable mold portion and a fixed mold portion, and a shot sleeve secured within said fixed mold portion;

the shot sleeve having a shot sleeve body extending along an axis, and a bore receiving a plunger that is movable along the axis; and

an insert secured at a shot end of said shot sleeve, with the shot end facing one of the

movable and fixed mold portions

wherein said insert defines a portion of said bore of said shot sleeve, and

wherein a first distance is defined from a forward face on a plunger which is to be utilized with said shot sleeve to a rearward end of a chamfer on said plunger, and said insert defines said portion of said bore for a second distance from said shot end inwardly into said bore, with said second distance being greater than said first distance.

14. The die cast assembly as set forth in claim 11, wherein said shot sleeve body being formed of a first material and said insert being formed of a second material, with said first material having a lesser thermal conductivity than said second material, and said second material being more resistant to high temperatures than said first material.

15. The die cast assembly as set forth in claim 14, wherein said first material is steel.

16. The die cast assembly as set forth in claim 15, wherein said second material is at least one of a nickel or nickel alloy, tungsten, tantalum, tungsten alloy, and tantalum alloy.

CLAIMS

1. A shot sleeve for use in a die cast assembly comprising:

a shot sleeve body extending along an axis and having a bore for receiving a plunger; and

an insert secured at a shot end of said shot sleeve body,

wherein said insert extends over only a limited circumferential portion of said shot end of said shot sleeve body.

2. The shot sleeve as set forth in claim 1, wherein said insert is secured by a threaded member into said shot sleeve body.

3. The shot sleeve as set forth in claim 1, wherein said insert defines a portion of said bore of said shot sleeve.

4. A shot sleeve for use in a die cast assembly comprising:

a shot sleeve body extending along an axis and having a bore for receiving a plunger; and

an insert secured at a shot end of said shot sleeve body,

wherein said insert is secured by a threaded member into said shot sleeve body.

5. The shot sleeve as set forth in claim 1, wherein said insert defines a portion of said bore of said shot sleeve.

6. A shot sleeve for use in a die cast assembly comprising:

a shot sleeve body extending along an axis and having a bore for receiving a plunger; and

an insert secured at a shot end of said shot sleeve body,

wherein said insert defines a portion of said bore of said shot sleeve, and

wherein a first distance is defined from a forward face on a plunger which is to be utilized with said shot sleeve to a rearward end of a chamfer on said plunger, and said insert defines said portion of said bore for a second distance from said shot end inwardly into said bore, with said second distance being greater than said first distance.

7. The shot sleeve as set forth in claim 1, wherein said shot sleeve body is formed of a first material and said insert is formed of a second material, with said first material having a lesser thermal conductivity than said second material, and said second material being more resistant to high temperatures than said first material.

8. The shot sleeve as set forth in claim 7, wherein said first material is steel.

9. The shot sleeve as set forth in claim 8, wherein said second material is at least one of a nickel or nickel alloy, tungsten, tantalum, tungsten alloy, and tantalum alloy.

10. A die cast assembly comprising:

a moveable mold portion and a fixed mold portion, and a shot sleeve secured within said fixed mold portion;

the shot sleeve having a shot sleeve body extending along an axis, and a bore receiving a plunger that is movable along the axis; and

an insert secured at a shot end of said shot sleeve, with the shot end facing one of the movable and fixed mold portions,

wherein said insert extends over only a limited circumferential portion of said shot end of said shot sleeve.

11. The die cast assembly as set forth in claim 10, wherein said insert is secured by a threaded member into said shot sleeve body.

12. The die cast assembly as set forth in claim 11, wherein said insert defines a portion of said bore of said shot sleeve.

13. A die cast assembly comprising:

a moveable mold portion and a fixed mold portion, and a shot sleeve secured within said fixed mold portion;

the shot sleeve having a shot sleeve body extending along an axis, and a bore receiving a plunger that is movable along the axis; and

an insert secured at a shot end of said shot sleeve, with the shot end facing one of the

movable and fixed mold portions

wherein said insert defines a portion of said bore of said shot sleeve, and

wherein a first distance is defined from a forward face on a plunger which is to be utilized with said shot sleeve to a rearward end of a chamfer on said plunger, and said insert defines said portion of said bore for a second distance from said shot end inwardly into said bore, with said second distance being greater than said first distance.

14. The die cast assembly as set forth in claim 13, wherein said shot sleeve body being formed of a first material and said insert being formed of a second material, with said first material having a lesser thermal conductivity than said second material, and said second material being more resistant to high temperatures than said first material.

15. The die cast assembly as set forth in claim 14, wherein said first material is steel.

16. The die cast assembly as set forth in claim 15, wherein said second material is at least one of a nickel or nickel alloy, tungsten, tantalum, tungsten alloy, and tantalum alloy.