

PRE-SINTERED PREFORM BALL FOR BALL-CHUTE WITH HOLLOW MEMBER THEREIN
FOR INTERNAL COOLING OF TURBINE COMPONENT

ABSTRACT

A ball (160) for a ball-chute (130) in a turbine component (100), the turbine component (100), and a method of using the ball (160), are provided. A ball (160) may include a ball body (162) made of a pre-sintered preform (PSP) material. The ball body (162) has an opening (164) defined therethrough having a first cross-sectional area. A hollow member (170) is fixed within the opening (164) defined through the ball body (162). The hollow member (170) has a second cross-sectional area smaller than the first cross-sectional area of the opening (164), and is made of a material having a melt temperature higher than a melt temperature of the PSP material. The method includes positioning the ball (160) and brazing the ball (160) in place. The hollow member (170) maintains fluid communication through the ball (160) after the brazing, and allows customized metering of the coolant flow therethrough.

[Figure 3]