

ABSTRACT

AUTOMATED BI-CASTING

Example systems include a vacuum chamber enclosing a pouring cup and a platform configured to support a casting assembly. The casting assembly is configured to hold a plurality of joinable components and a mold defining at least one mating groove configured to join at least two joinable components of the plurality of joinable components when occupied with a metal or an alloy. Each respective mating groove is fluidically connected to a respective surface opening of a plurality of surface openings defined by the mold. The pouring cup and the respective surface opening are movable relative to each other by moving at least one of the pouring cup or the platform supporting the casting assembly to substantially align the pouring cup with the respective surface opening. The pouring cup is configured to pour a respective volume of molten metal or alloy in at least two surface openings.

FIG. 1