ABSTRACT

HOPPER FOR POWDER BED FUSION ADDITIVE MANUFACTURING

A hopper for powder bed fusion additive manufacturing, the hopper comprising: a recoater having a volume for holding powder metal therein; the recoater having a dispensing opening for depositing therethrough powder metal from the volume, a divider dividing the volume into a first compartment and a second compartment and dividing the dispensing opening into a first opening portion and a second opening portion; and a first roller arranged in parallel with a second roller, the first roller provided at the first opening portion and the second roller provided at the second opening portion, a longitudinal axis of the first roller being perpendicular to direction of movement of the hopper during powder metal deposition; wherein rotation of the first roller and rotation of the second roller dispenses a first powder metal and a second powder metal from the first compartment and the second compartment respectively through the first opening portion and the second opening portion respectively, and wherein the first roller and the second roller are configured to rotate selectably and independently of each other.

Fig. 2