

POWDER FEEDING NOZZLE, ASSEMBLY AND METHOD FOR LASER AIDED ADDITIVE MANUFACTURING

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ABSTRACT

An inner nozzle portion for a powder feeding nozzle is provided capable of being coaxially arranged within an outer nozzle portion of the powder feeding nozzle, the inner nozzle portion including: an upper section having a plurality of defined shapes on a surface thereof configured to manipulate a stream of powder flowing across said surface of the upper section; and a lower section having a substantially flat conical surface for forming a channel between said substantially flat conical surface and an inner surface of the outer nozzle portion when the inner nozzle portion is coupled to the outer nozzle portion, the inner nozzle portion being in communication with a powder inlet for receiving the stream of powder to flow across the surface of the upper section through the channel and towards a powder discharge outlet of the channel. There is also provided a powder feeding nozzle including the inner nozzle portion being coaxially arranged within the outer nozzle portion, an assembly and a method for laser aided additive manufacturing including the powder feeding nozzle

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FIG. 2