associated apparatus and method including the powder feeding nozzle, which overcome, or at least ameliorate, the above-mentioned problems of the conventional art.

SUMMARY

According to a first aspect of the present invention, there is provided an inner nozzle portion for a powder feeding nozzle capable of being coaxially arranged within an outer nozzle portion of the powder feeding nozzle, the inner nozzle portion comprising:

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, wherein

the upper section comprises a recessed portion, and the plurality of defined shapes is arranged on the recessed portion, and

the recessed portion has a generally concave profile and extends circumferentially around the upper section.

Preferably, the plurality of defined shapes comprises a plurality of protrusions.

Alternatively, the plurality of defined shapes comprises a plurality of holes, each hole configured for supporting a protrusion such that the protrusion protrudes from the surface of the upper section.

~~Preferably, the upper section comprises a recessed portion, and the plurality of defined shapes is arranged on the recessed portion.~~

~~Preferably, the recessed portion has a generally concave profile and extends circumferentially around the upper section.~~

Preferably, the lower portion has a generally conical profile having a narrower tip portion at the powder discharge outlet.