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(54) ASYMETRIC CONSUMABLES FOR A PLASMA ARC TORCH

(57) A torch tip assembly of a plasma arc torch is provided for delivering a diffused stream of plasma arc in a gouging operation. The assembly comprises a nozzle including a nozzle body defining a central longitudinal axis extending between a proximal end and a distal end. A nozzle exit orifice of the nozzle body defines at least a bore for conducting the plasma arc therethrough. The assembly also comprises a counter bore feature, disposed relative to the distal end the nozzle body, fluidly connected to the bore and located distally relative to the bore. At least one of the bore or the counter bore feature has a non-circular cross-sectional shape in a plane perpendicular to the longitudinal axis. The non-circular cross-sectional shape is configured to enable a second non-circular cross-sectional shape in the plasma arc that diffuses the plasma arc.

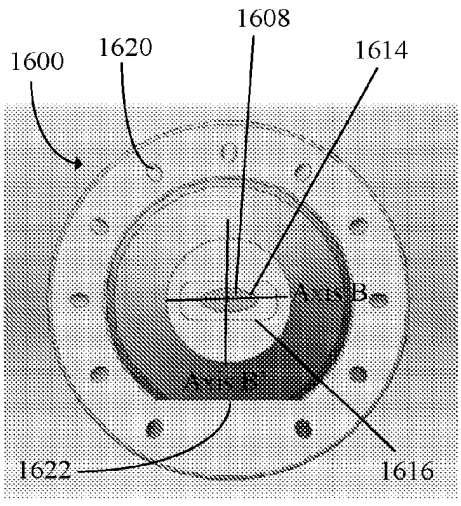

FIG. 16a

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EUROPEAN SEARCH REPORT

Application Number
EP 23 21 6691

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	4 April 2024	Crescenti, Massimo

CATEGORY OF CITED DOCUMENTS

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