

ABSTRACT

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Laser nozzle having an internal mobile element and an external cover

10 A laser nozzle comprising a nozzle body (1) comprising a first axial housing (5) comprising a first outlet orifice (11) located in a front face (1a) of the nozzle body (1); a movable element (2) arranged in the first axial housing (5) of the nozzle body (1), comprising a front portion (2a) forming a skirt and an axial passage (4) having a second outlet orifice (12) emerging from said front portion (2a) forming a skirt; and an elastic element (8) arranged in the first axial housing (5), between the nozzle body (1) and the movable element (2).

15 According to the invention, the movable element (2) is able to move translationally in the first axial housing (5) in the direction of the first outlet orifice (11) under the effect of a gaseous pressure exerted on the movable element (2), and the elastic element (8) exerts an elastic return force on the movable element (2) tending to oppose the translational movement in the first axial housing (5) in the direction of the first outlet orifice (11). Furthermore, the nozzle

20 furthermore comprises an external cover (13) forming a sleeve around all or some of the nozzle body (1). Focusing head and associated laser cutting apparatus. Laser beam cutting process employing a nozzle according to the invention, a laser focusing head according to the invention or an apparatus according to the invention.

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Figure 2A