

ABSTRACT

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Laser nozzle having an external mobile element

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The invention relates to a nozzle for laser cutting, comprising a nozzle body (1) comprising a first axial passage (5); an external cover (13) comprising an axial housing (7), the nozzle body (1) being arranged at least partially in said axial housing (7); a movable element (3) comprising a second axial passage (4) and a front portion (3a) forming a skirt, said movable element (3) being arranged between the external cover (13) and the nozzle body (1) and being translationally movable in the axial housing (7) of the external cover (13); and an elastic element (8) arranged in the axial housing (7), between the external cover (13) and the nozzle body (1). According to the invention, the movable element (3) is able and designed to move translationally in the axial housing (7) in the direction of the first outlet orifice (14) under the effect of a gaseous pressure of said assistance gas (23), said pressure being applied in said axial housing (7) and exerted on said movable element (3), said elastic element (8) exerting an elastic return force on the movable element (3) tending to oppose the translational movement of the movable element (3). Associated laser head and apparatus. Laser cutting process employing such a nozzle.

Figure 2