

Title (en)

AREA OF INTERSECTION BETWEEN A HIGH-PRESSURE CHAMBER AND A HIGH-PRESSURE DUCT

Title (de)

VERSCHNEIDUNGSBEREICH ZWISCHEN EINER HOCHDRUCKKAMMER UND EINEM HOCHDRUCKKANAL

Title (fr)

ZONE D'INTERSECTION ENTRE UNE CHAMBRE HAUTE PRESSION ET UN CANAL HAUTE PRESSION

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Application

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Abstract (en)

[origin: US2010116251A1] The invention relates to an area of intersection between a high-pressure chamber and a high-pressure duct. To increase the strength in the area of intersection, it is possible to round the area of intersection. The area of intersection includes at least one planar area or an area that is curved markedly less than the remaining area of intersection. The planar area may also be embodied as only nearly planar. The high-pressure chamber and the high-pressure duct are also called functional chambers. By means of the planar or nearly planar area, an intersection geometry is created, in which tensile stresses of the functional chambers that occur upon subjection to pressure are not superimposed directly and add up as they do in conventional intersection geometries. By means of the planar area in the area of intersection, it is attained that in the intersection geometry of the invention, under pressure, local pressure stresses or markedly reduced tensile stresses occur in an inner wall of the high-pressure chamber and are then superimposed with the tensile stresses in an inner wall of the high-pressure duct. Since with the intersection geometry of the invention, a tensile stress has only a reduced tensile stress or in the best case a pressure stress superimposed on it, the total is less and hence the maximum stress that occurs is reduced markedly.

IPC 8 full level

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