(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :04/09/2017

(21) Application No.201721031291 A
(43) Publication Date : 22/09/2017

(54) Title of the invention : ZERO VAPOR LOSS INTEGRATED CRYOGEN PHASE SEPARATOR

(51) International classification	:F25D 3/00
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

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(57) Abstract :
This invention relates to the construction of a zero vapor loss cryogenic phase separator (1) that separates the cryogenic liquid (4) from the cryogenic vapor (5) state. It delivers the liquid cryogen and along with eliminating the loss of the vapor cryogen when used in the cryogenic cooling. This consists of an inner chamber (2) which holds the cryogenic fluid (3) two phase mixture that is surrounded by vacuum housing (13) in order to prevent heat loss; an inlet port (8) at the top side connected with an inlet pipe (10) so as to receive the cryogen from the liquid nitrogen source; inlet pipe is contained with a solenoid valve; a baffle plate (6) with baffle holes (7) so that the cryogenic liquid (4) can maintain the level inside, that is installed on the base of the inner chamber so as to reduce the turbulence and obtain laminar flow at the outlet pipe (11) that contains a solenoid valve emerging from outlet port (9); two bleed ports (12) that are drilled on the top of the inner chamber (2) so as to install pressure gauge and safety valve.

No. of Pages : 15 No. of Claims : 10