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(54) Title (EN): SUBMERSIBLE PUMP HAVING A TWO-STEP CONTROL HYDRAULIC VALVE

(54) Title (FR): POMPE IMMERSIBLE AYANT UNE SOUPAPE HYDRAULIQUE À COMMANDE EN DEUX ÉTAPES

(57) Abstract:

(EN): A submersible pump includes a pump valve configured to switch the pump between first and second states in which a piston is respectively extended and retracted. The pump valve includes first and second components that reciprocate between corresponding first and second positions. The pump is in the first state when both components are in their corresponding first position. The pump is in the second state when both components are in their corresponding second position. Neither the valve nor the pump is hydraulically locked at any time during normal operation.

(FR): L'invention porte sur une pompe immerisible qui comprend une soupape de pompe configurée pour commuter la pompe entre un premier et un second état dans lesquels un piston est respectivement étendu et rétracté. La soupape de pompe comprend des premier et second composants qui vont et viennent entre des première et seconde positions correspondantes. La pompe est dans le premier état lorsque les deux composants sont dans leur première position correspondante. La pompe est dans le second état lorsque les deux composants sont dans leur seconde position correspondante. Ni la soupape, ni la pompe, ne sont verrouillées hydrauliquement à n'importe quel moment lors d'un fonctionnement normal.

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Declarations:

Declaration made as applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate

Declaration made as applicant's entitlement, as at the international filing date, to claim the priority of the earlier application, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii))