

(57) **Abrégé(suite)/Abstract(continued):**

consists of, among other things, eliminating the in-line electric generator and substitute it with peripheral electro-magnetic coupling device, attached to the runner tip from inside and surrounding the energy converter housing from outside. The energy converter electric brushless circuits and winding must be totally sealed from water, using new sealing techniques and shall be also electrically isolated as well. The energy converter allows extracting energies from undercurrents with large frequency and voltage ranges.

