

known as "black" and also "white" oils namely both unrefined and refined.

We claim:

- 1. A sampler for sampling liquid flowing in a pipeline, said sampler comprising:
 - a pump assembly situated within the flowing liquid for pumping the liquid under pressure;
 - sampling means connected to said pump assembly to provide a sample of said liquid; and
 - drive means to operate said pump assembly, said drive means including driven means including a propeller mounted within said flowing liquid to be driven by the flowing liquid, said drive means including a shaft extending from the propeller into a housing outside the pipeline;
 - said drive means being coupled to said driven means such that a rate of providing liquid samples is proportional to a rate at which the liquid is flowing in the pipeline;
 - whereby the flowing liquid drives the driven means which in turn drives the drive means and the pump assembly.
- 2. A sampler as claimed in claim 1 in which the housing mounts a variable reduction gearbox, the output of the reduction gearbox being connected to drive a camshaft, the camshaft being connected to drive a shaft which extends down to the pump assembly and thereby operates the pump assembly.
- 3. A sampler as claimed in claim 2, in which there are provided a plurality of pump assemblies and sampling means whereby a plurality of separate samples of said liquid may be collected.
- 4. A sampler as claimed in claim 1 in which the pump assembly includes a liquid inlet, whereby liquid within the pipeline may flow into the pump assembly, and check valves to eject liquid out of the pipeline to the sampling means under the control of the camshaft.
- 5. A sampler as claimed in claim 4, in which there are provided a plurality of pump assemblies and sampling means whereby a plurality of separate samples of said liquid may be collected.
- 6. A sampler as claimed in claim 1 in which there are provided three pump assemblies to provide three separate samples of said liquid.
- 7. A sampler as claimed in claim 1 including a columnar member for insertion into the pipeline through a side aperture, and a plate means to close the side aperture.
- 8. A sampler as claimed in claim 7, in which there are provided a plurality of pump assemblies and sampling

means whereby a plurality of separate samples of said liquid may be collected.

- 9. A sampler as claimed in claim 1, in which there are provided a plurality of pump assemblies and sampling means whereby a plurality of separate samples of said liquid may be collected.
- 10. A sampler for sampling liquid flowing in a pipeline, said sampler comprising:
 - a plurality of pump assemblies situated within the flowing liquid;
 - a sampling means connected to each of said pump assemblies to provide a sample of said liquid;
 - drive means to operate said pump assemblies, said drive means including driven means including a propeller mounted within said flowing liquid to be driven by the flowing liquid, the drive means including a shaft extending from the propeller into a housing outside the pipeline;
 - whereby flowing liquid drives the driven means which in turn drives the drive means which in turn sequentially activates each of the pump assemblies.
- 11. A sampler as claimed in claim 10 in which the housing mounts a variable reduction gearbox, the output of the reduction gearbox being connected to drive a camshaft, the camshaft being connected to drive a shaft which extends down to the pump assemblies and thereby operates the pump assemblies.
- 12. A sampler as claimed in claim 11 in which each of the pump assemblies includes a liquid inlet, whereby liquid within the pipeline may flow into each of the pump assemblies, and check valves to eject liquid out of the pipeline to the sampling means under the control of the camshaft.
- 13. A sampler as claimed in claim 10 including a columnar member for insertion into the pipeline through a side aperture, and a plate means to close the side aperture.
- 14. A sampler as claimed in claim 10 in which the housing mounts a variable reduction gearbox, the output of the reduction gearbox being connected to drive a camshaft, the camshaft being connected to drive a shaft which extends down to the pump assemblies and thereby operates the pump assemblies.
- 15. A sampler as claimed in claim 14 in which each of the pump assemblies includes a liquid inlet, whereby liquid within the pipeline may flow into each of the pump assemblies, and check valves to eject liquid out of the pipeline to the sampling means under the control of the camshaft.

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