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ABSTRACT OF THE INVENTION

METHOD AND APPARATUS FOR PRODUCING A PURIFIED LIQUID

The present invention provides generally a method and apparatus for purifying a liquid. More particularly, purification of a bulk liquid is performed by introducing a liquid stream to a purification vessel, which comprises both a distillation chamber for forming a purified vapor and an annular chamber for collecting a purified liquid that is condensed from the purified vapor. A refrigerant system provides thermodynamic efficiency in the purification method by directing waste heat generated in one part of the refrigerant system for heating duty in another part of the refrigerant system. The method and apparatus can be applied to producing purified carbon dioxide, nitrous oxide, ammonia and fluorocarbons.

Fig. 1