

Strategi peningkatan kapasitas daya pembangkit listrik tenaga panas bumi (PLTP) liquid dominated system di Jawa Barat, Indonesia: optimasi penggunaan waste brine untuk binary bottoming system dari pembangkit listrik tenaga panas bumi eksisting = The strategy of making up power capacity on liquid dominated geothermal power plant in West Java Indonesia optimizing the use of waste brine for binary bottoming system of the existing geothermal power plant

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Abstrak

Penelitian yang dilakukan berfokus pada simulasi perencanaan perancangan suatu sistem pembangkit listrik tenaga panas bumi bottoming unit pada wilayah kerja panas bumi dengan existing brine temperature berkisar antara 1720C hingga 1750C dengan brine mass flow rate senilai 264,6 kg/s perancangan tersebut dititikberatkan terhadap pertimbangan kinerja teknis dan aspek keekonomian pembangunan sistem pembangkit tersebut. Dalam keberlangsungannya penelitian berikut berupaya memberikan gambaran mengenai aplikasi sistem pembangkit binary cycle yang antara lain terbagi menjadi simulasi aplikasi organic rankine cycle simulasi aplikasi kalina cycle.

.....This research is focused on simulating the design planning of a geothermal power plant system bottoming unit in the geothermal working area which existing brine temperature ranging from 1720C to 1750C with brine mass flow rate of 264.6 kg s. The design is focused on technical performance considerations compared economical aspects of the development of the generating system. In its continuation, the following research attempts to provide an overview of the application of binary cycle generation system, which is divided into organic rankine cycle application simulation and calina cycle application simulation.