

ABSTRAK

Bandara Soekarno-Hatta merupakan salah satu Bandara terbesar di Indonesia dan menurut sejarahnya merupakan Bandara utama di Indonesia. Sebagai pengelola jasa pelayanan udara baik penerbangan domestic dan internasional Bandara soekarno-hatta selalu dituntut meningkatkan Level Of Service, untuk dapat mewujudkan itu semua maka salah satu alternatif yang ingin direncanakan adalah dengan membuat rancangan modifikasi panel kontrol peralatan sewage treatment plant berbasis PLC di bandara Soekarno-Hatta, peralatan sewage treatment plant merupakan tempat daur ulang limbah cair (air kotor) yang berasal dari pesawat udara dan seluruh pembuangan yang ada di area bandara baik air side maupun land side agar tidak menimbulkan kerusakan atau pencemaran lingkungan dan layak untuk di alirkan ke sungai area luar bandara menjadi air layak buang.

Berdasarkan data observasi lapangan beberapa kendala sering terjadi di bagian kontrol dan pompa, selain sistemnya yang konvensional, back-up kontrol masih belum terpasang pada system mengingat operasional kerja sistem pengolahan limbah yang terus menerus selama 24 jam, sehingga dengan upgrade kontrol menjadi sistem PLC diharapkan saat melokalisir trouble dan kegiatan maintenance peralatan menjadi lebih efektif dan effisien serta dengan ditambahkan kontrol back-up berupa timer saat terjadi permasalahan pada kontrol utama, operasional pompa tetap dapat berjalan atau tidak OFF.

Dengan menggunakan sistem kontrol sesuai rancangan ini maka continuitas sistem pengolahan air limbah dari seluruh area Bandara dapat berjalan dan beroperasi tanpa henti, Sehingga dapat lebih mempermudah kegiatan maintenance peralatan dan sesuai dengan peraturan dari Kementerian Lingkungan Hidup (KEMENLH) tentang baku mutu pengolahan air limbah, bahwa hasil pengolahan air limbah yang dibuang atau dialirkan ke sungai tidak mencemari lingkungan.

ABSTRACT

Soekarno-Hatta Airport is one of the largest airports in Indonesia and according to history is the main airport in Indonesia. As the manager of air services both domestic and international, Soekarno-Hatta Airport is always required to increase Level Of Service, to be able to realize it all, one of the alternatives that is planned is to make a design modification of PLC control panel sewage treatment plant at Soekarno-airport Hatta, sewage treatment plant equipment is a place to recycle liquid waste (dirty water) originating from aircraft and all discharges that exist in the airport area both air side and land side so as not to cause damage or environmental pollution and feasible to flow to the river area outside the airport becomes water worth wasting.

Based on field observation data, several obstacles often occur in the control and pump, besides the conventional system, back-up control is not installed in the system considering the continuous operation of the sewage treatment system for 24 hours, so that by upgrading the control to PLC system, it is expected when localize trouble and equipment maintenance activities to be more effective and efficient and by adding back-up controls in the form of timers when main control problems occur, the pump operation can still run.

By using a control system according to this design, the continuity of wastewater treatment systems from all areas of the airport can run and operate without stopping, so that it can facilitate equipment maintenance activities and in accordance with the regulations of the Ministry of Environment (KEMENLH) regarding the quality standards of wastewater treatment, that the results of processing wastewater which is disposed or flowed into the river does not pollute the environment.

MERCU BUANA