

# Perancangan dan estimasi biaya sulfur recovery unit metode superclaus = Design and cost estimation sulfur recovery unit using superclaus method

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## Abstrak

Pemilihan proses Tail Gas Treatment yang tepat dan efisien menjadi permasalahan bagi pabrik pengolahan gas alam. Superclaus, salah satu proses sulfur recovery, menjawab permasalahan tersebut dengan mengeliminasi proses Tail Gas Treatment pada skema SRU konvensional. Input proses Superclaus adalah acid gas 2,54 MMSCFD dengan kandungan hidrogen sulfida mencapai 41% berhasil memperoleh kembali sulfur lebih dari 96% dan kemurnian sulfur mencapai 99,9%. Kadar H<sub>2</sub>S di gas buang dapat diturunkan hingga 0 ppm. Kapasitas produksi adalah 52,96 ton per hari. Biaya modal untuk SRU Superclaus sebesar 101,5 milyar rupiah dan biaya operasional sebesar 15,6 milyar rupiah per tahun.

.....Selection of an appropriate and cost effective Tail Gas Treatment is a challenge for natural gas plant. Superclaus, one of sulfur recovery process, able to solve this problem by eliminating Tail Gas Treatment process at SRU conventional scheme. Feed stream of Superclaus is acid gas 2.54 MMSCFD with hydrogen sulfide 41% mole able to recover sulfur more than 96% and sulfur purity reach 99.9%. Levels of H<sub>2</sub>S in flue gas can be reduced to 0 ppm. Production capacity is 52.96 tonne per day. Capital expenditure for SRU Superclaus is 101.5 billion IDR and operational expenditure is 15.6 billion IDR per year.