

## ABSTRAK

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Judul Skripsi : EVALUASI PERANCANGAN SISTEM POMPA TRANSFER  
*BYPASS* UNTUK DISTRIBUSI AIR BERSIH RUMAH  
BERTINGKAT DENGAN STANDAR NASIONAL INDONESIA  
(SNI)

Distribusi air bersih pada bangunan rumah bertingkat memerlukan sistem yang mampu menjaga kontinuitas suplai dan tekanan pelayanan sesuai standar. Penelitian ini bertujuan mengevaluasi perancangan sistem pompa transfer dengan *bypass line* berdasarkan Standar Nasional Indonesia (SNI). Metode evaluasi dilakukan melalui perhitungan hidrolika sistem dan pengukuran tekanan serta debit aktual. Hasil analisis menunjukkan kebutuhan debit rencana sebesar 39,6 liter per menit dengan Total Dynamic Head (TDH) sebesar 28,38 meter. Kesimpulan sistem pompa transfer dengan *bypass line* mampu memberikan distribusi tekanan dan debit yang lebih stabil dibandingkan sistem gravitasi, sehingga dinilai layak dan efektif diterapkan pada bangunan rumah bertingkat.

**Kata kunci:** distribusi air bersih, pompa transfer, *bypass line*, *Total Dynamic Head*, Standar Nasional Indonesia.

## ***ABSTRACT***

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Judul Skripsi : *EVALUATION OF TRANSFER PUMP SYSTEM DESIGN WITH A BYPASS LINE FOR CLEAN WATER DISTRIBUTION IN MULTI-STORY RESIDENTIAL BUILDINGS BASED ON INDONESIAN NASIONAL STANDARDS*

*Clean water distribution in multi-story residential buildings requires a system capable of maintaining supply continuity and service pressure in accordance with applicable standards. This study evaluates the design of a clean water distribution system using a transfer pump with a bypass line based on Indonesian National Standards (SNI). The evaluation is conducted through hydraulic calculations and field measurements of pressure and flow rate. The results indicate a planned water demand of 39.6 liters per minute and a Total Dynamic Head (TDH) of 28.38 meters. The transfer pump system with a bypass line provides more stable pressure and flow distribution than the conventional gravity system, making it feasible for multi-story residential buildings.*

**Keywords:** *clean water distribution, transfer pump, bypass line, Total Dynamic Head, Indonesian National Standards.*