LIFTING BLS POWER SUPPLIES

ENGINEERING NOTE

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Scope

This note describes BLS power supplies lifting techniques and provides stress calculations for lifting plate and handles' bolts.

BLS power supply weight is about 120 Lbs, with the center of gravity shifted toward the right front side. A lifting plate is used to attach a power supply to a crane or a hoist.

Calculations

Stress calculations show that safety factors for lifting plate are 12.9 (vs. 5 required) for ultimate stress and 5.7 (vs. 3 required) for yield stress. Safety factor for shackle bolt thread shear load is 37, and safety factor for bolts that attach handles is 12.8.