

Certificate No : 00234/XII/2025/048/BTS

Date : 10 December 2025

BontiStudio



CERTIFICATE OF ACCOMPLISHMENT

THIS CERTIFICATE GRANTED TO

RENDY

For participating and completing the Final Test of our Training

ELECTRICAL CONSTRUCTION & LOOP CHECKING FOR MOTOR EQUIPMENT

organized by **INUSA Construction|Engineering Training**, covering the subjects listed on the back page with score Excellent

TRAINER :

MURSYALLIM HASIBUAN

E&I ENGINEER AND INSPECTOR WITH COMPEX CERTIFICATE




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Director

Electrical Construction & Loop Checking for Motor Equipment

Overview Pekerjaan Electrical di Konstruksi

- Ruang lingkup pekerjaan electrical di proyek Oil & Gas / Power Plant
- Perbedaan konstruksi vs pre-commissioning vs commissioning
- Jenis motor & equipment yang umum dipasang di proyek

Instalasi Motor & Equipment

- Cara membaca nameplate & memahami rating motor
- Tata cara pemasangan motor di field (mounting, alignment, earthing)
- Cable routing: tray, conduit, pulling, penandaan kabel
- Termination di motor junction box + best practice di lapangan
- Mechanical completion & checklist pemasangan motor

Cable Testing & Electrical Pre-Commissioning

- IR Test / Megger Test
- Continuity & polarity test
- Torqueing & visual inspection (QC)
- Earthing test untuk motor & peralatan
- Pembuatan ITR & dokumentasi sederhana

Loop Checking Motor

- Apa itu loop electrical untuk motor (start-stop-trip-feedback)
- Membaca loop diagram & logika motor
- Proses loop check step-by-step:
- Simulasi & contoh kasus loop yang gagal (praktikal case)
- Troubleshooting umum: wrong termination, no signal, interlock error

Energization & Commissioning Motor

- Safety before energization (PTW, LOTO, isolation)
- Direction test (checking rotation)
- No-load test
- Full-load test + monitoring (current, temp, vibration)
- Protection check (OCR, GFR, NGR, thermal overload)