

# Electrical Test Laboratory

## Traction Substation

### Test Sheet



SUBSTATION:

DATE:

**MAIN/AUX TRANSFORMER PROTECTION****TRAFOGAURD T100**LIST OF AVAILABLE ADJUSTMENTS

- \*SET NOMINAL TRFO CURRENT, ITN (30% - 100%) OF IN1 RATED CT PRIMARY CURRENT
- \*SET INSTANTANEOUS OVERCURRENT TRIP LEVEL, 1>> (200% - 500%) OF IT 400%
- \*SET INVERSE – TIME CURVE CURRENT THRESHOLD, 1> (100% - 400%) OF IT 200%
- \*SET INVERSE – TIME CURVE TIME MULT.KT (10MIN – 60MIN) NB: 30MIN

**EXAMPLE:**

CT RATIO 150/5

NOMINAL EXPECTED CT PRIMARY CURRENT ITN = 105AMP (FULL LOAD OF TRAFO)

THUS ITN/IN1 = 105/150

= 70%

**ITN SETTING = 70%**

**NOTE:** AFTER THE SYSTEM IS ENERGISED, 105 AMP IN THE CT PRIMARY CIRCUIT NOW CORRESPOND TO A 100% READING WHEN THE CONTINUOUS IT DISPLAY IS SELECTED. INDICATING FULL LOAD CURRENT.

200% WILL TRIP OCB/SF6 IN 1800 SEC

300% WILL TRIP OCB/SF6 IN 118 SEC

400% WILL TRIP OCB/SF6 IN 30 MILLISECONDS

**TEST AND CALIBRATION OF TRAFOGAURD T100**

| CT RATIO | R PHASE | Y PHASE | B PHASE |
|----------|---------|---------|---------|
| MARKED   |         |         |         |
| MEAS.    |         |         |         |

**ITN SETTING**

|   |
|---|
| *FULL LOAD OF TRAFO = AMP                   |
| *CT RATIO =                                 |
| *ITN = F/L DEVIDED BY CT PRIMARY TIMES 100% |
| <b>THUS ITN=</b> = %                        |

**SETTINGS**

|                 |
|-----------------|
| KT = 30 MINUTES |
| I>> = 400%      |
| I> = 200%       |

**BITT SWITCHES**

|                          |
|--------------------------|
| 1 = OFF                  |
| 2 = OFF (STANDARD CURVE) |
| 3 = ON (30 MILLISECONDS) |
| 4 – 8 = OFF              |

**TEST RELAY BY PRIM/SEC INJECTION AS FOLLOWS:**

| 300%     | R PHASE | Y PHASE | B PHASE |
|----------|---------|---------|---------|
| TIME:    | S       | S       | S       |
| TRIP OCB |         |         |         |

| 400%     | R PHASE | Y PHASE | B PHASE |
|----------|---------|---------|---------|
| TIME:    | M/S     | M/S     | M/S     |
| TRIP OCB |         |         |         |

TESTED BY: \_\_\_\_\_