

CASE STUDY

O.P. JINDAL TPS 4x250 MW

STATION-TO-STATION MANUAL TRANSFER FAILURE ON 18/10/2007

Reference

Event recorded on 18.10.07 during ABT changeover from station (RLSR04 I/C) to station (RLSR05 TIE) .

Observation

RLSR05 TIE closed and then tripped after 60ms approx.

Remarks

Electrically, the bus transfer (breaker trip and close operations) happened normally. However the breaker failed to latch after closing and tripped immediately after closing. Reference is drawn to similar event of breaker not latching observed during commissioning. Mechanical trip (eg emergency trip) may be operative on the breaker – the mechanical adjustments of which may have got disturbed.

Recommendations

Breaker maintenance and detailed check-up for trip-close operations. Repeated (10's to 100) trip/close operation on the breaker should be carried out under maintenance to check for repetitive nature of this problem.

Annexure

Fig 1: STS Oscillography – Breaker Operation Plot

This shows Tie Breaker turning ON (NO/NC contact changeover) and tripping within 60 ms.

Fig 2: STS Oscillography – Voltage Waveform Plot

This shows Station Bus PT getting charged from Alternate Station Bus through successful fast transfer, and then getting disconnected – resulting in spin-down characteristics of the bus.

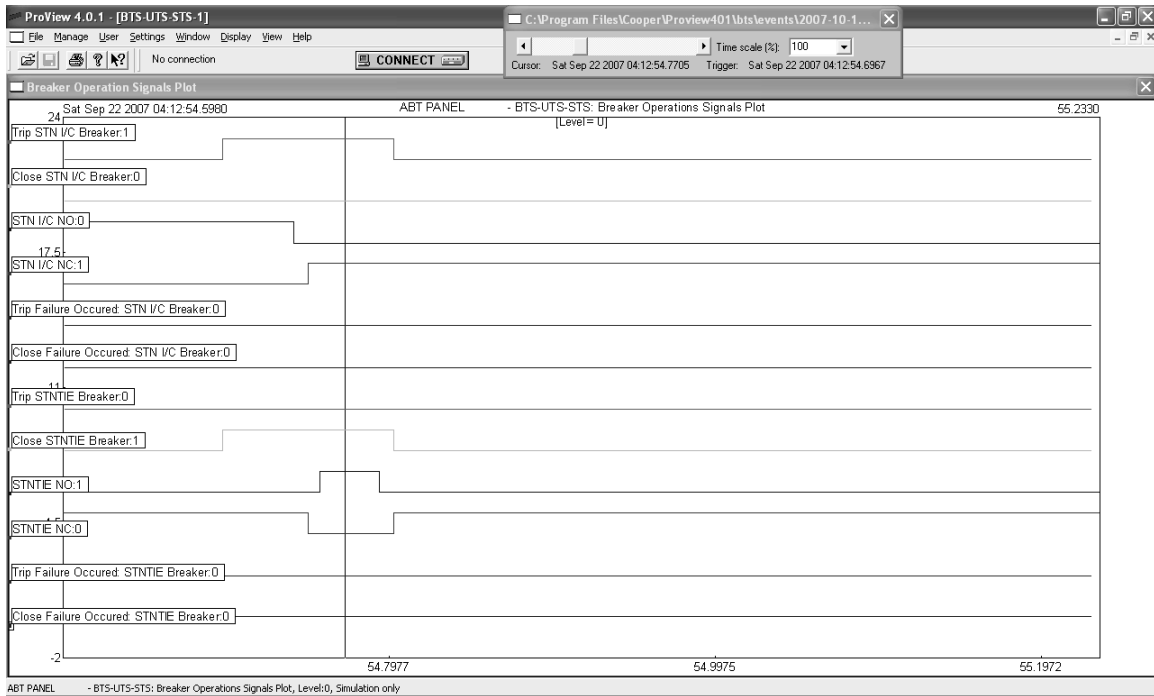


Fig 1: STS Oscillography – Breaker Operation Plot

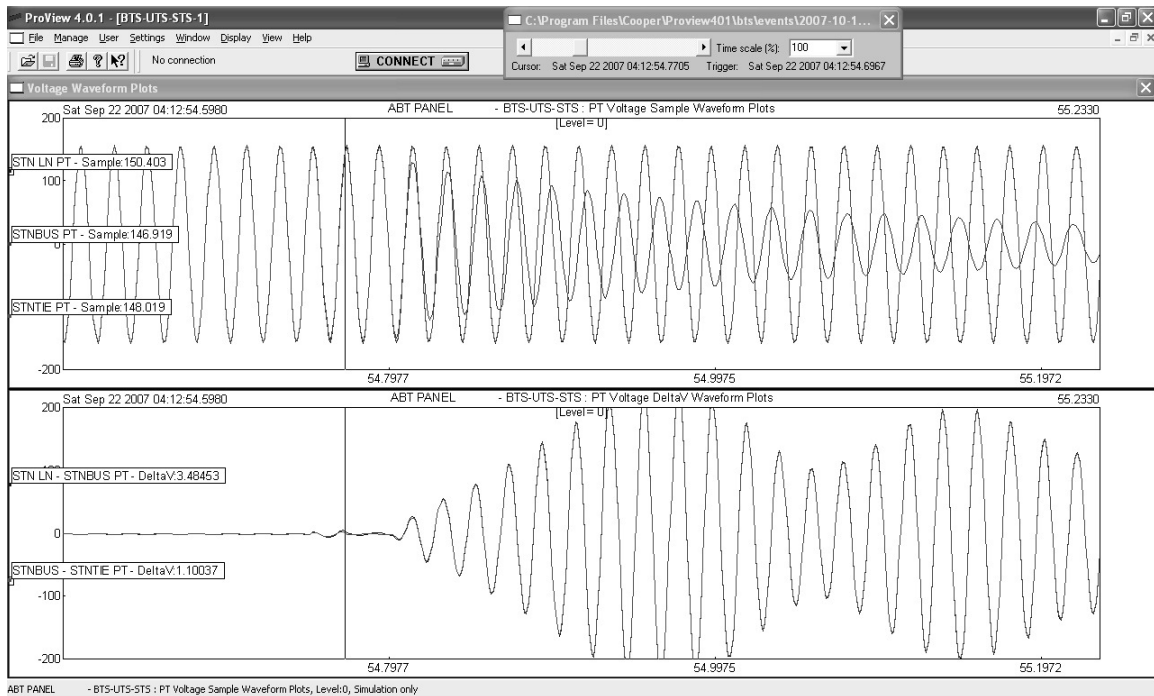


Fig 2: STS Oscillography – Voltage Waveform Plot