## Test Case 1.2

Validated Requirements

17: Event due to HV equipment cover open - MCM (Functional Requirement)

27: Display Traction Converter DC Link discharged (Functional Requirement)

273: Display Traction Converter DC Link charged (Functional Requirement)

Description

Check if TCMS generates a diagnostic message when any traction converter box cover is opened. Shows on VDU the status of each Traction Converter DC Link (charged / discharged)

Categories

|  |  |
| --- | --- |
| Formal Test | Yes |
| Execution Environment | Lab |
| V-Level | System |
| Function Group | Power Supply |
| Regression | No |
| Automated | No |
| Single Unit Operation Applicability | Yes |
| Multiple Unit Operation Applicability | No |

Pre-Condition

1. Train is in TS4

Test Case Design

|  |  |  |
| --- | --- | --- |
| No | Action | Expected Result |
| 1 | Make sure:  All Traction Converters report that Traction Converter DC Link status is charged. All Traction Converters box cover are closed. | On the VDU of active cab, verify that:  TCMS displays that status of all Traction Converters DC Link is "CHARGED" on the HMI.  TCMS does NOT generate any diagnostic message "High Voltage equipment cover open in the train".  On the VDU, Traction Converter status is presented on Propulsion refer to figure 29/30 on F document. Traction Converter box cover status is presented on Propulsion refer to figure 29/30 on F document. |
| 2 | Open the cover of traction converter 1 on C1M1. | On the VDU of active cab, verify that:  TCMS generates a diagnostic message "High Voltage equipment cover open in the train".  TCMS displays status of Traction Converter 1 and 2 on C1M1 as "OFF" (DISCHARGED).  Status of Traction Converters on remaining M-Cars shall not change (status "CHARGED"). |
| 3 | Close the cover of traction converter 1. | On the VDU of active cab, verify that:  TCMS does NOT generate a diagnostic message "High Voltage equipment cover open in the train".  TCMS displays that status of Traction Converter 1 and 2 on C1M1 as "CHARGED".  Status of Traction Converters on remaining M-Cars shall not change (status "CHARGED"). |
| 4 | Open the cover of traction converter 2 on C1M1. | On the VDU of active cab, verify that:  TCMS generates a diagnostic message "High Voltage equipment cover open in the train"  TCMS displays status of Traction Converter 1 and 2 on C1M1 as "OFF" (DISCHARGED).  Status of Traction Converters on remaining M-Cars shall not change (status "CHARGED"). |
| 5 | Close the cover of traction converter 2. | On the VDU of active cab, verify that:  TCMS does NOT generate a diagnostic message "High Voltage equipment cover open in the train".  TCMS displays that status of Traction Converter 1 and 2 on C1M1 as "CHARGED".  Status of Traction Converters on remaining M-Cars shall not change (status "CHARGED"). |
| 6 | Repeat steps 2 to 5 for C1M2. | Verify that the expected results are presented. |
| 7 | Repeat steps 2 to 5 for C2M2. | Verify that the expected results are presented. |
| 8 | Repeat steps 2 to 5 for C2M1. | Verify that the expected results are presented. |
| 9 | Repeat steps 1 to 8 for the VDU in the other cab. | Verify that the expected results are presented. |

Post-Condition

Set train to TS1