RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

8/10/2016

SAFETY SYSTEM DIGITAL PLATFORM
- MELTAC (MITSUBISHI ELECTRIC TOTAL ADVANCED CONTROLLER) -
TOPICAL REPORT

Mitsubishi Electric Corporation

TAC NO.:   **MF4228**

RAI NO.:   **#1**

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QUESTION NO.: 3 for JEXU-1041-1008, "Safety System Digital Platform – MELTAC"

With regard to TR page 17, item d), software is mentioned several times regarding the capabilities of the engineering tool. In each case, identify if this is referring to the application or platform software or both.

ANSWER:

i)   "To store copies of **software** for all processors within the division, and to conduct the manually initiated Memory Integrity Check (MIC) using that stored **software**"
The software described above means "application software and basic software".
This sentence will be revised as follows:
> "To store copies of **application software and basic software** for all processors within the division, and to conduct the manually initiated Memory Integrity Check (MIC) using that stored **application software and basic software**"

ii)   "To control the updating of **software** for any processor within the division, utilized only when a processor is taken out-of-service and declared inoperable by plant Technical Specifications and the processor CPU Module is removed and transferred to the dedicated Re-programming Chassis."
The software described above means "application software".
This sentence will be revised as follows:
> "To control the updating of application software for any processor within the division, utilized only when a processor is taken out-of-service and declared inoperable by plant Technical Specifications and the processor CPU Module is removed and transferred to the dedicated Re-programming Chassis."

Impact on Topical Report
The answer above will be added to Section 4.0 of the Topical Report (see Attachment-1).

SAFETY SYSTEM DIGITAL PLATFORM - MELTAC -   JEXU-1041-1008-P(R1R2)

- Control and drive the plant components and equipment by ESF actuation signal from the RPP
- Receive ESF actuation signals from the RPP via the intra-division Control Network
- Receive manual component control commands from the safety VDU processors via the intra-division Control Network
- Receive diverse component control signals from the Diverse Actuation System (DAS), and combine the signals with the control signals from the PSS-CCPs within the hardware based Interposing Logic (IPL) of the Power Interface (PIF) Module to determine the final control command relayed to each plant component
- Transmit the monitored status of interlocks and components to the safety VDU processors via the intra-division Control Network

c) Each PSS division typically contains at least one safety VDU processor and safety VDU panel. The safety VDU processor and safety VDU panel consist of a special purpose MELTAC controller, peripherals, and an LCD touch screen. The safety VDU processor and safety VDU panel perform the following key functions:
- Transmit the operation signals to the RPP and PSS-CCPs via the intra-division Control Network, and can be configured to provide the human-machine interface
- Receive plant sensor data, RT and ESF initiation, and actuation status from the RPP via the intra-division Control Network
- Receive interlock and component status data from the PSS-CCPs via the intra-division Control Network
- Receive touch commands from safety VDU panel

d) There is one MELTAC engineering tool connected via Maintenance Network in each PSS division used exclusively for the following functions within that one division:
- To display self-test diagnostics reported from all PSS processors within the division
- To store copies of application software and basic software for all processors within the division, and to conduct the manually initiated Memory Integrity Check (MIC) using that stored application software and basic software   ToR-3
- To control the updating of application software for any processor within the division, utilized only when a processor is taken out-of-service and declared inoperable by plant Technical Specifications and the processor CPU Module is removed and transferred to the dedicated Re-programming Chassis
- To control simulated input values for troubleshooting any processors within the division, only when a processor is taken out-of-service and declared inoperable by plant Technical Specification

e) There is one Control Network in each PSS division used for the following key intra-division communication functions:
- Interlock and ESF initiation signals from the RPP to the PSS-CCPs
- Manual control commands from the safety VDU processor to the RPP and the PSS-CCPs
- Monitored plant sensor data, RT and ESF initiation, and actuation status from the RPP to the safety VDU processor
- Monitored plant sensor data, interlock and component status data from the PSS-CCPs to the safety VDU processor

f) There is one Data Link in each PSS division used for broadcasting RT and ESF initiation signals from one PSS division to each of the other divisions.

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