TYPICAL CONFIGURATION FOR CSS CONTROLLERS (PCS, PSD, FGS, HCS, HSD, HFGS) AND SOS REAL TIME DATA SERVERS (PCS, PSD, HCS, HSD, HFGS) PLACED IN AEPR.

- TOPSIDES I/Os ASSOCIATED TO TURBOGENERATION MODULES (M-12 AND M-13): ALL SUBSYSTEMS PCS, PSD, FGS, HCS, HSD AND HFGS DATA CHANNELS ARE CONNECTED TO THE SAME HSDN NETWORK.
- TOPSIDES I/Os OF FGS OF THE REMAINING MODULES: PLACED IN AEPR;
- TOPSIDES I/Os OF PCS AND PSD OF REMAINING MODULES: REMAIN IN THE FIELD WITH Ex-pz
- TOPSIDES I/Os ASSOCIATED TO TURBOGENERATION MODULES (M-12 AND M-13): ALL SUBSYSTEMS PCS, PSD, FGS, HCS, HSD AND HFGS DATA CHANNELS ARE CONNECTED TO THE SAME HSDN NETWORK.

- REDUNDANT NETWORK.
- COMMUNICATION WITH ELECTRICAL SYSTEM IMPLEMENTED USING GIGABIT ETHERNET (OPC) FOR THE FOLLOWING DISCIPLINES:
  - POWER MANAGEMENT SYSTEM (PMS) AND TURBOGENERATOR CONTROL

- ASSET MANAGEMENT APPLICATION AND PLCs APPLICATION PROGRAMS (CSS AND PACKAGE) SHALL BE LOADED ON THE Same CSS REMOTE I/O PANELS INSTALLED AT FIELD SHALL BE CONNECTED IN RING TOPOLOGY. THE CONNECTION APPLICABLE ONLY TO TOPSIDES PCS, PSD, FGS, HULL HCS, HSD AND HFGS DATA CHANNELS ARE CONNECTED TO THE SAME HSDN NETWORK.

- TYPICAL CONFIGURATION FOR DATA SERVERS:
- TYPICAL CONFIGURATION FOR CSS REMOTE I/O PANEL. FOR FURTHER DETAILS, SEE SHEET NO. 1 OF 3
- CLIENT:
- 38 - REDUNDANT HISTORICAL SERVERS IN HOT STANDBY CONFIGURATION. FOR FURTHER DETAILS, SEE SHEET NO. 1 OF 3
- 35 - ASSET MANAGEMENT APPLICATION AND PLCs APPLICATION PROGRAMS (CSS AND PACKAGE) SHALL BE LOADED ON
- 30 - TIME SERVER IS LOCATED ON ELECTRICAL SYSTEM CONTROLLER. SNTP PACKETS SHALL BE SYNCHRONIZED ACROSS ALL CSS SYSTEM PLCs (PCS, PSD, FGS, HCS, HSD, HFGS), AND UNDER CONTROLLED NETWORK CONDITIONS, ONLY. THIS NETWORK SHALL BE DESIGNED WITH PHYSICAL SEGMENTATION IN ACCORDANCE WITH DNV DS-202
- 25 - SUBSEA SIGNAL ACQUISITION SYSTEM RACK (SAS) (PN-5524001A/B) SHALL BE CONNECTED TO THE SAME HSDN NETWORK.
- 22 - COMMUNICATION WITH ELECTRICAL SYSTEM IMPLEMENTED USING GIGABIT ETHERNET (OPC) FOR THE FOLLOWING DISCIPLINES:
  - POWER MANAGEMENT SYSTEM (PMS) AND TURBOGENERATOR CONTROL

- THE CSS REMOTE I/O PANELS INSTALLED AT FIELD SHALL BE CONNECTED IN RING TOPOLOGY. THE CONNECTION APPLICABLE ONLY TO TOPSIDES PCS, PSD, FGS, HULL HCS, HSD AND HFGS DATA CHANNELS ARE CONNECTED TO THE SAME HSDN NETWORK.

- TYPICAL CONFIGURATION FOR CSS SYSTEMS (PCS, PSD, FGS, HCS, HSD, HFGS) PLACED IN AEPR.
- ELECTRICAL SYSTEM COMPONENTS ARE LOCATED AT AEPR AND, ELETRICAL DISCIPLINE IN DOCUMENT I-DE-3010.00-5140-797-P4X-001 - TOPSIDE ELECTRICAL PLAN AND I-LI-3010.1M-1200-940-P4X-002 - EQUIPMENT LIST.
- PACKAGE UNIT LAN SWITCHES.
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- OPTIMIZATION SERVER. THIS SERVER SHALL ACQUIRE DATA FROM PCS SERVER (FOR BR-OPTIMUS,
- PACKAGE FIELD DEVICES TO PERFORM COMMISSIONING AND OPERATION MAINTENANCE.
- INTEGRATOR SCOPE OF SUPPLY. FOR PACKAGES SCOPE DETAILING, SEE DOCUMENTS
- THESE CONNECTIONS ARE MADE ONLY TO TOPSIDES SWITCHES.  HULL ELECTRICAL HMIs SHALL
- SYSTEM AUTOMATION ARCHITECTURE. ELETRICAL SYSTEM COMPONENTS ARE LOCATED AT AEPR AND,
- ELECTRICAL DISCIPLINE IN DOCUMENT I-DE-3010.00-5140-797-P4X-001 - TOPSIDE ELECTRICAL
- PANEL (TGCP) ARE INDICATED IN I-DE-3010.00-5140-797-P4X-001 - ELECTRICAL SYSTEM
- ESSENTIAL ROOMS.
- PRESSURIZATION;
- PSD AND FGS SHALL BE PLACED GENERATOR'S CONTROL PANELS ROOM - GCPR IN M-13;
- CONNECTION SEQUENCE SHALL BE DEFINED BY DETAIL DESIGN PHASE TAKING INTO ACCOUNT THE
- SERVERS.
- REDUNDANT HIGH SPEED DETERMINISTIC NETWORK (HSDN) BETWEEN ALL CSS SYSTEM PLCs (PCS, PSD, FGS, HCS, HSD, HFGS), AND UNDER CONTROLLED NETWORK CONDITIONS, ONLY. THIS
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