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| Departemen_Perhubungan.wmf | FORM SKENARIO LABORATORIUM/SIMULATOR/ WORKSHOP | Nomor Dokumen : FM.USW.01.02a |
| Tgl. Ditetapkan : 02 November 2015 |
| Revisi No : 02 |
| Tgl. Diberlakukan : 09 Januari 2017 |
| Made By : | Reviewer : |
| PIP SEMARANG | H. RAHYONO SP.1, MM, M.Mar.E | JAMIUL ALIM, S.ST | AMAD NARTO, M.Pd., M.Mar.E |
|  | Mengetahui |
|  | Kanit Laboratorium, Simulator & Workshop | Kepala Bagian Adminitrasi Akademik &Ketarunaan |
|  |  |  |
|  | YUSTINA SAPAN, S.ST, MM | Capt. BHARTO ARI RAHARJO |

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| Type Facilities :* Laboratorium
* Simulator
* Other
 | Name Laboratorium/ Simulator/ Other :**METI** |

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| **Criteria on STCW Code** | Operation are planned and carried out in accordance with operating manuals, establish rules and procedures to ensure safety of operation |
| **Function & Level** | Marine Engineering at The Operational Level (ATT : IV)\* |
| **Program** | **Operation Of Diesel Generator**  |
| **Referensi STCW** |  STCW code table AIII/1 page 90 |
| **aim of Exercise** | To provide adequate electrical power for deck machinery operation upon request of deck officer on duty |
| **Objective** | Upon completion of this training the student should be able to:1. Respond to answer a call from Engine Console
2. Open the guidance booklets
3. Identify appropriate list
4. Prepare DG 1 prior to starting
5. Start DG 1 properly
6. Put both generators in operation
7. Provide power for deck machineries
8. Safely report to the bridge
 |
| **Initial condition** | 1. Ship is in dock yard, position dead ship
2. No.1 Emergency Diesel Generator is running
3. Emergency Air Compressor manual
4. Deck machineries power breaker is off position
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| --- | --- |
| **Briefing** | 5 minutes |
| **Exercise Duration** | 30 minutes |
| **Debriefing** | 5 minutes |

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| **Criteria** |  |  |  |  |

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| **No** | **Time frame (minutes)** | **Student action** | **Check** | **Remark** | **Actual time** | **Mark** | **No** |
| Y | N |
| 1 | 1 | Respond to answer a call from bridge |  |  |  |  | 1 | 1 |
| 2 | 1 | Open the operating manuals |  |  |  |  | 2 | 1 |
| 3 | 1 | Identify appropriate list |  |  |  |  | 3 | 1 |
| 4 | 10 | * 1. Go to Diesel Generator Engine
 |  |  |  |  |  |  |
|  |  | * 1. Check DG control position \*
 |  |  |  |  |  |  |
|  |  | * 1. Push bottom switch DG 1 On position\*
 |  |  |  |  |  |  |
|  |  | * 1. Change DG control position from remote to local control
 |  |  |  |  |  |  |
|  |  | * 1. Check lubricating oil in the sump tank
 |  |  |  |  |  |  |
|  |  | * 1. Open valve L.O Storage DG.1 system to sump tank
 |  |  |  |  |  |  |
|  |  | * 1. Fill LO Sump tank from D/G 1 Storage tank
 |  |  |  |  |  |  |
|  |  | * 1. Open valve system LO priming pump and Start
 |  |  |  |  |  |  |
|  |  | * 1. Pick up turning bar and open indicator valve cyl no: 1- 8
 |  |  |  |  |  |  |
|  |  | * 1. Turn DG 1 Engine shaft minimum 2 turns, and closed indicator valve
 |  |  |  |  |  |  |
|  |  | * 1. Put turning bar back in place properly\* (to automatic)
 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 5 | 7 | Check system sea water cooling system and fresh water system |  |  |  |  | 5 | 7 |
|  |  | 1. Check, open valve sea water system pump no1
 |  |  |  |  |  |  |
|  |  | 1. Check open valve fresh water system pump no 1
 |  |  |  |  |  |  |
|  |  | 1. Check open air starting valve to DG engine no 1
 |  |  |  |  |  |  |
|  |  | 1. Check fresh water to storage drinking water and hydraufur system
 |  |  |  |  |  |  |
|  |  | 1. Fill fresh water to exspantion tanks cooling system
 |  |  |  |  |  |  |
|  |  | 1. Go to Main Switch Board “Source ON and Auto”.
 |  |  |  |  |  |  |
|  |  | 1. Start manual/push bottom on emergency air compressor if necessary
 |  |  |  |  |  |  |
|  |  | 1. Check pressure emergency air reservoir 3 MPa
 |  |  |  |  |  |  |
|  |  | 1. Open DO service tank line system to DG No 1
 |  |  |  |  |  |  |
|  |  | Starting of DG 1 \* |  |  |  |  |  |  |
|  |  | 1. Push starting button
 |  |  |  |  |  |  |
|  |  | 1. Check DG 1 to make sure it is in good condition
 |  |  |  |  |  |  |
|  |  | 1. Change DG 1 control to remote position
 |  |  |  |  |  |  |
| 6 | 5 | Main Switch Board push bottom to operation MCB (not ECC) |  |  |  |  | 6 | 5 |
|  |  | 1. Go to the main switch board
 |  |  |  |  |  |  |
|  |  | 1. Check voltage and adjust if necessary
 |  |  |  |  |  |  |
|  |  | 1. Check frequency and adjust if necessary
 |  |  |  |  |  |  |
|  |  | 1. Close ACB of incoming DG 1
 |  |  |  |  |  |  |
|  |  | 1. Push bottom on all power/source lamp the Switch Group Panel 1 & 2
 |  |  |  |  |  |  |
|  |  | 1. Start FW cooling pump DG. 1 and SW pump DG. 1
 |  |  |  |  |  |  |
|  |  | 1. Open fresh water line for Main Air Compressor No 1 & 2, Aux Air Comp
 |  |  |  |  |  |  |
|  |  | 1. Open air valve system to Main Air Reservoir No 1 & No 2
 |  |  |  |  |  |  |
|  |  | 1. Start (push bottom On) Main Air Compressor No 1& 2 Aux Air Comp and Auto (ECC)
 |  |  |  |  |  |  |
|  |  | 1. Open drain valve main air reservoir No 1 & No 2
 |  |  |  |  |  |  |
| 7 | 5 | 1. Open air valve to all General Service line & Control Air Line (0,7 MPa)
 |  |  |  |  |  |  |
|  |  | 1. Open air valve to hydrauphore (drink tank)(0,6MPa)
 |  |  |  |  |  |  |
|  |  | 1. Push button HydrauphoreFW pump No 1 and Drink water pump Hydrauphore No 1 to Auto (MCB)
 |  |  |  |  |  |  |
|  |  | 1. Go to Emergency switch board position manual switch
 |  |  |  |  |  |  |
|  |  | 1. Open ACB emergency switch and Stop diesel emergency generator
 |  |  |  |  |  |  |
|  |  | 1. Select switch operation to Auto Emergency Generator
 |  |  |  |  |  |  |
|  |  | 1. Check all temperature and pressure on the computer control room
 |  |  |  |  |  |  |
|  |  | 1. Safely report to bridge that the deck machineries power is available
 |  |  |  |  |  |  |
|  | **30** | **Total** |  |  |  |  |  |  |

\*Critical performance below must get record **“Yes”** mark will lead the final result to mark **FAIL**

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| --- | --- | --- | --- |
| **No** | **Critical Performance** | **Y** | **N** |
| 1 | Check DG1 control mode and change from auto to manual position prior to start DG 1 |  |  |
| 2 | System fresh water and sea water cooling DG Engine is running |  |  |
| 3 | Successfully running of DG 1 and emergency air compressor stop operation |  |  |
| 4 | Emergency generators stop operation and select to automaticly operation  |  |  |
| 5 | Total actual time duration to complete mission is **30** minutes or below |  |  |

**Time factor**

|  |  |  |  |
| --- | --- | --- | --- |
| <30 minutes = 1 | 31 – 40 minutes = 0.9 | 41 – 50 minutes = 0.8 | >50 minutes = 0.5 |

**Total Time : ………………minutes Time Factor : …………….**

**Total Score : Total Mark X Total Factor = …………… x ……………. = …………….**

**Final Result : PASS / FAIL ( Passing Grade = 70 )**