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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 | AMAD NARTO, M.Pd., M.Mar.E | ADI OKTAVIANTO, S.T, M.M |
|  | Mengetahui |
|  | Kepala Unit Laboratorium, Simulator dan Workshop | Kepala Bagian Adminitrasi Akademik dan Ketarunaan |
|  |  |  |
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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 No 2** |
| **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 bridge
2. Open the guidance booklets
3. Identify appropriate list
4. Prepare DG 2 prior to starting
5. Start DG 2 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 port2. No.1 DG is in single running3. No.2 DG is in stop and control position is auto4. Starting air valves for DG are opened1. Deck machineries power breaker is off position
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| --- | --- |
| **Briefing** | 5 minutes |
| **Exercise Duration** | 25minutes |
| **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 |  |  |  |  |  |  |
| 2 | 1 | Open the operating manuals |  |  |  |  |  |  |
| 3 | 1 | Identify appropriate list |  |  |  |  |  |  |
| 4 | 10 | 1. Go to Diesel Generator Engine No 2
 |  |  |  |  |  |  |
|  |  | 1. Check DG 2 control position \*
 |  |  |  |  |  |  |
|  |  | 1. Push bottom ÖN Source DG 2\*
 |  |  |  |  |  |  |
|  |  | 1. Change DG 2 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 Store tank
 |  |  |  |  |  |  |
|  |  | 1. Open valve system LO priming pump
 |  |  |  |  |  |  |
|  |  | 1. Start LO priming pump
 |  |  |  |  |  |  |
|  |  | 1. Pick up turning bar
 |  |  |  |  |  |  |
|  |  | 1. Open indicator cock all cylinder no 1 s/d 8
 |  |  |  |  |  |  |
|  |  | 1. Turn DG 2. Engine shaft minimum 2 turns
 |  |  |  |  |  |  |
|  |  | 1. Closed indicator cock all cylinder no 1 s/d 8
 |  |  |  |  |  |  |
|  |  | 1. Put turning bar back in place properly
 |  |  |  |  |  |  |
| 5 | 5 | Check system sea water cooling system and fresh water system |  |  |  |  |  |  |
|  |  | 1. Check, open valve sea water system and start pump no 2
 |  |  |  |  |  |  |
|  |  | 1. Check open valve fresh water and started pump no 2
 |  |  |  |  |  |  |
|  |  | 1. Check open air starting valve to DG engine no 2
 |  |  |  |  |  |  |
|  |  | 1. Check pressure main air reservoir compressor No 1 & No 2
 |  |  |  |  |  |  |
|  |  | 1. Open air valve drain air reservoir No 1 & No 2
 |  |  |  |  |  |  |
|  |  | 1. Check DO system to Diesel Engine Generator 2
 |  |  |  |  |  |  |
|  |  | Starting of DG\* |  |  |  |  |  |  |
|  |  | 1. Push starting button
 |  |  |  |  |  |  |
|  |  | 1. Check DG 2 to make sure it is in good condition
 |  |  |  |  |  |  |
|  |  | 1. Change DG 2 control to remote position
 |  |  |  |  |  |  |
| 6 | 5 | Main Switch Board push bottom to operation MCB |  |  |  |  |  |  |
|  |  | 1. Go to the main switch board
 |  |  |  |  |  |  |
|  |  | 1. Check voltage and adjust if necessary
 |  |  |  |  |  |  |
|  |  | 1. Check frequency and adjust if necessary
 |  |  |  |  |  |  |
|  |  | 1. Put synchrouscope selector switch to incoming generator
 |  |  |  |  |  |  |
|  |  | 1. Adjust synchroscope pointer turning slowly to clockwise direction by controlling remote governor
 |  |  |  |  |  |  |
|  |  | 1. Close ACB of incoming DG when synchroscope pointer is pointing upward (nearly 12 o’clock direction)
 |  |  |  |  |  |  |
|  |  | 1. Put synchrounous selector to off position
 |  |  |  |  |  |  |
|  |  | 1. Share generator load evenly
 |  |  |  |  |  |  |
| 7 | 2 | 1. Check DG 2 control mode and change from auto to manual position prior to start DG
 |  |  |  |  |  |  |
|  |  | 1. Put turning bar back to its place upon completion turning DG 2 Engine
 |  |  |  |  |  |  |
|  |  | 1. Successfully running of DG 2
 |  |  |  |  |  |  |
|  |  | 1. Successfully put both generators running in parallel operation
 |  |  |  |  |  |  |
|  | **25** |  |  |  |  |  |  |  |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Critical Performance** | **Y** | **N** |
| 1 | Check DG 2 control mode and change from auto to manual position prior to start DG 2 |  |  |
| 2 | Put turning bar back to its place upon completion turning DG 2 Engine |  |  |
| 3 | Successfully running of DG 2 |  |  |
| 4 | Successfully put both generators running in parallel operation  |  |  |
| 5 | Total actual time duration to complete mission is **25** 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 )**