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| **FACILITY**: | | Chinchaga Plant PLT/c-032-H/094-H-08/00 | | | | | | | | | | | | | | | | | **PROV**. **REG**. **N0**: | | | | | 570539 | | | | | | | | | | |
| **EQUIPMENT NAME:** | | | Process Boiler Steam Generator | | | | | | | | | | | | | | | | | **TAG NO:** | | | 603FB001 | | | | | | | | | | | |
| **SIZE**: | 1524 mm | | | **ID** x | | 3962 mm | | | **L/H** | | | | L | | | | | | **MAWP**: | | | 1379 kpa | | | | | | | | | kPa @ | | 343 | °C |
| **ITEM INSPECTED**: Shell, Coil, Burner, Refractory, Insulation, Anchors, Manway. | | | | | | | | | | | | | | | | | | | **MANWAY** | | | | | | YES | | | | NO | | | | | |
| **SERVICE**: sour  sweet  cryogenic | | | | | | | | | | | | | | | **FLUID**: Glycol/Fuel Gas | | | | | | | | | | | | | | | | | | | |
| **SCOPE OF INSPECTION** | | | | | | | **TYPE OF INSPECTION:** | | | | | | | | | | **CLEANING:** | | | | | | | | | | | **ACCESS:** | | | | | | |
| PRECOMMISSIONING | | | | | | | AE | MT | | RT | | | | | | | GOOD | | | | | | | | | | | FULL | | | | | | |
| INITIAL | | | | | | | ET | MFL | | UT | | | | | | | FAIR | | | | | | | | | | | PARTIAL | | | | | | |
| REINSPECTION | | | | | | | LT | PT | | VT | | | | | | | INADEQUATE | | | | | | | | | | | EXTERNAL | | | | | | |
|  | | | | | | | OTHER | | | | | | | | | |  | | | | | | | | | | |  | | | | | | |
| **PLEASE ADD PAGES AND SKETCHES AS NEEDED (TURN OVER FOR SKETCH)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **OBSERVATIONS**: | | | | | | | EXTERNAL | | | | INTERNAL | | | | | | |  | | | | | | | | |  | | | | | | | |
| **Internal:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Small loose metal slag noted around manway. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All anchors in place throughout vessel, anchors secure and showing no indication of degradation. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coils tight and showing no signs of distortion, or indications of corrosion or mechanical damage. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minor loose deposits between coils of insulation debris between the 11 coils at the burner end. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refractory showing 4 thin cracks with no spalling at 12, 2, 5 and 10 O'clock. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inner Rim refractory: Various refractory chips at 4, 5, 7-11. 0.150" Loss. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outter Rim refractory: Various chips 10-3, largest section missing at 5 O'clock 45mm Wide x 115mm long x 15mm deep. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No exposed components through refractory. No detached pieces found in boiler. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insulation clean and intact throughout. No visible components exposed. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Burner Assembly clean and secure. Burner tip clean and intact. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manway gasket intact. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Signs of hot gas leakage at 12 O'clock on manway. Previously fixed with what appears to be application of HT Silicone. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **RECOMMENDATIONS:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Return to service, monitory manway for hot gasses and seal appropriately, reinspect at appropriate interval. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UT performed by Rob Kassian, no low readings noted, report to follow. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SUITABLE FOR  FURTHER SERVICE: | | | | | YES | | | NO | | | | | | REMEDIAL ACTION  PRIORITY: | | | | | | | | HIGH | | | | MEDIUM | | | | | | LOW | | |
| INSPECTION PERFORMED BY: | | | | | | Kevin Gawley, Reviewed Will Rettman | | | | | | | | | | | | | | | DATE OF INSPECTION : | | | | | | | | | July 17, 2012 | | | | |
|  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | (DAY-MONTH-YEAR) | | | | |
| FOLLOW-UP INSPECTION REQ’D: | | | | | | | | | | | | YES | | | | NO | | | | | BY DATE: : | | | | | | | | |  | | | | |
|  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | (DAY-MONTH-YEAR) | | | | |

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| **1) External Overview of Vessel:** 603FB001 |
| **2) Manway towards Burner End Overview: (Liquid at 12, 3, 6 and 9 O’clock: UT Couplant) IMGP1062** |

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| **3) Slag and Debris around Manway; No visibly degraded sections of metal observed: IMGP1060** |
| **4) Minor bits of loose insulation noted between 11 coils at burner end: IMGP1066:** |

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| **5) Burner End Overview: IMGP1074:** |
| **6) Representative crack on refractory: IMGP1078:** |

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| **7) Refractory Overview:**  IMGP1084 |
| **8) Missing Refractory 603FB001 Refractory Loss 11 OClock:** |

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| **7) Burner Assembly Overview: IMGP1072** |
| **5) Burner End towards Manway Overview: IMGP1086** |

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| **7) Manway Cover: 603FB001 Manway Cover Insulation** |
| **5) Hot Gas Leak: 603FB001 Manway Heat Damage Blow By** |