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INSTALLATION of ISOLATION VALVES in the RADIATOR COOLING PIPE SYSTEM in CGH

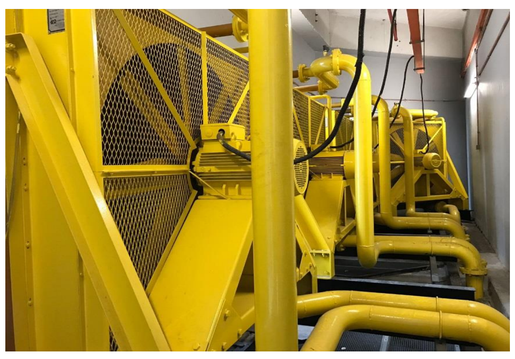
Vasagan s/o Sabapathy, CGH
Pagadala Madhava Naidu, CGH
Celestino Layson Banan Jr., CGH

SingHealth

INTRODUCTION

1.When doing Rectification Works and/or Preventive Maintenance Works involving the radiator coolant system, we require to drain the heavy duty coolant before commencing with the works. This requires us placing the heavy duty coolant into a container and dispose of it properly in compliance to the rules and regulations of NEA regarding Management of Hazardous Substances.

2.After the Rectification Works and/or Preventive Maintenance Works are completed we will refill the Radiator Coolant System and put in the required Supplementary Coolant Additives (DCA4) as per recommendation by Manufacturer / OEM.



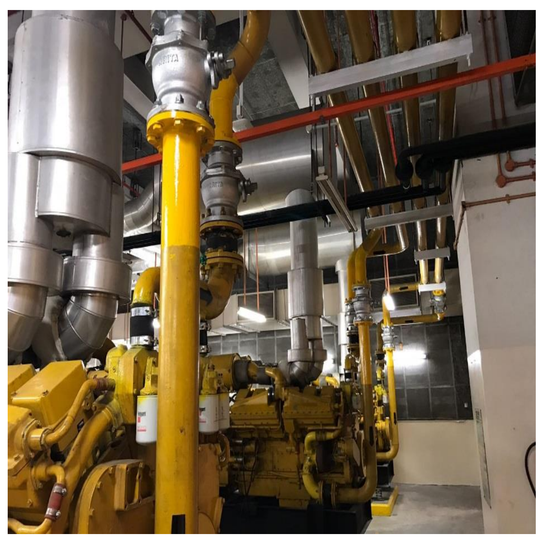
OBJECTIVES

1.To save time, material and manpower cost when doing the Rectification Works and/or Preventive Maintenance Works related to the Radiator Cooling System.
2. To save the environment by reducing the need in disposing the coolant

METHOD

1.During Rectification Works and/or Preventive Maintenance Works involving the radiator coolant system, we simply isolate the system by turning off the isolation valves both for the incoming (located at B2) and outgoing (located at B1) coolant lines and we don't need to drain the heavy duty coolant before we can start to do the works.

2.When the Rectification Works and /or Preventive Maintenance Works are already completed we will simply open the isolation valves both for the incoming and outgoing coolant lines, test the system and bring it back to normal condition.



RESULTS

This project eliminates the cost for the refilling of the radiator coolant system amounting to 250 SGD per Generator/Radiator. There are 4 Generators in Basement 2 hence total refilling costs is 1,000 SGD.

Cost of disposal of heavy duty coolant for 1 Generator / Radiator is 500 SGD (4pcs of 210li drums) so the cost for the four (4) Generators is 2,000 SGD. Cost of the heavy duty coolant to be disposed is 1,000 SGD. Hence, the total cost of disposal amounting to 3,000 SGD is also eradicated.

Before it takes 2 Technicians and 4 hours to drain the heavy duty coolant and another 4 hours to refill it. Now, we are able to save 16 man-hours amounting to 300 SGD.

CONCLUSION

With the installation of Isolation Valves in the Generator/Radiator Coolant pipe lines we were able to eliminate both the cost of radiator coolant refill during Rectification Works and/or Preventive Maintenance Works and the cost of disposal of the heavy duty coolant amounting to approximately 4,000 SGD per work activity.

We are also able to speed up the related works by 16 man-hours and savings of 300 SGD in manpower cost.