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WP Distribution: Rogelio Lozada, Simon Starke



Date: August 11, 2015
To: Rogelio Lozada WP – Commissioning Mgr.
Luis Ramirez WP - Sr. Process Engineer
From: Javier Rios UOP Tech Service Specialist
CC: Distribution
Customer: EP PetroEcuador – Esmeraldas, Ecuador
Subject: **UOP-EPP-FCC PROC-024- Hot Spot recommendations for fixes and proposed path forward for 8-5-2015 inspection**

The following items were discussed and sent before for refractory dry out inspection.

Regarding the torch oil nozzle with ring cover – this is a level 3 deviation and it is optional to install. The ring coverage is not as effective for protection against erosion. The recommendation was to ensure to give further protection to the system.

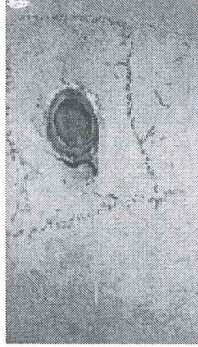


Field Observation

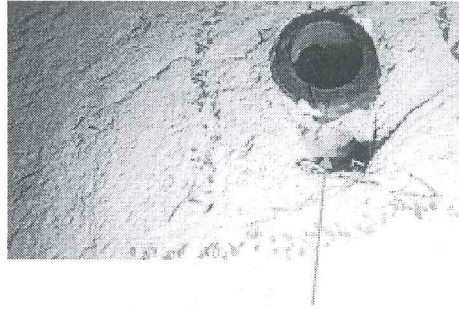
Refractory repair – Level 4

Repair for refractory after checking with specialist the plate coverage will not cover the section and be effective towards removal. Due to that reason we removed on new units the ring coverage for a few items. The repair must be done as per recommended UOP specification 3-22-7.

West end

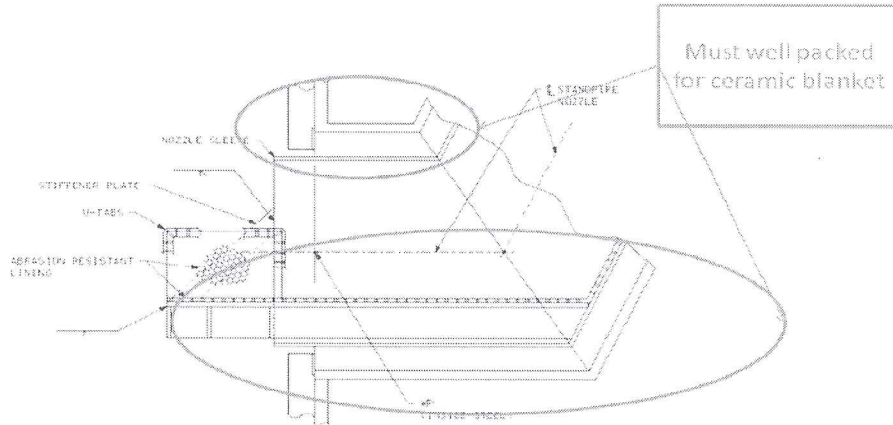
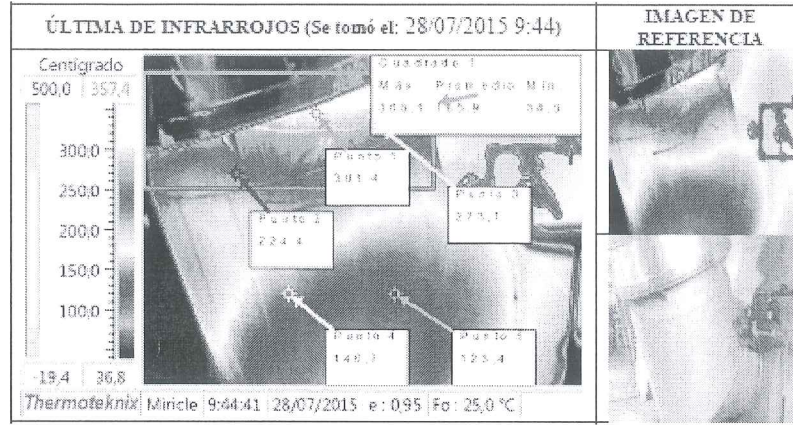


East end

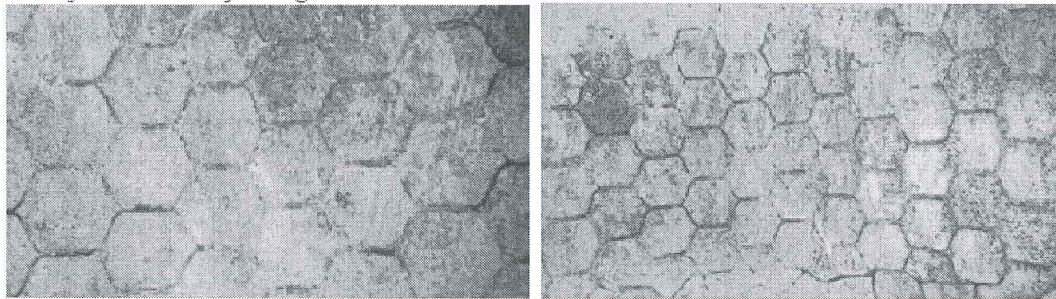
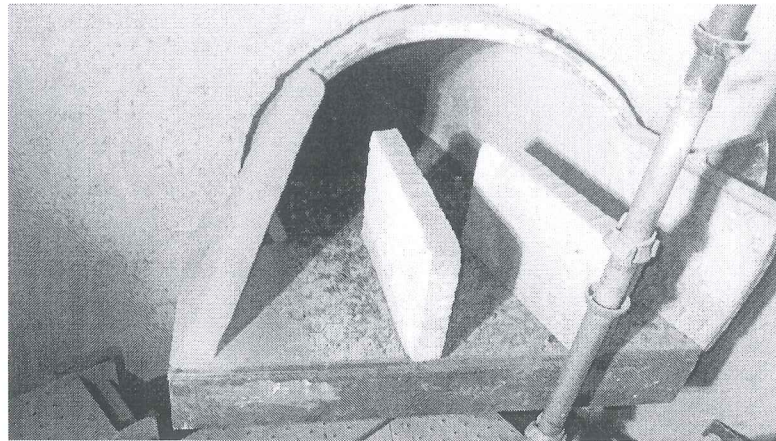


Spent catalyst Stand pipe – Level 5

The hot spot was located and inspected for refractory.



Prior to ceramic packing



Refractory lining installed in the shop (above the hot spot)

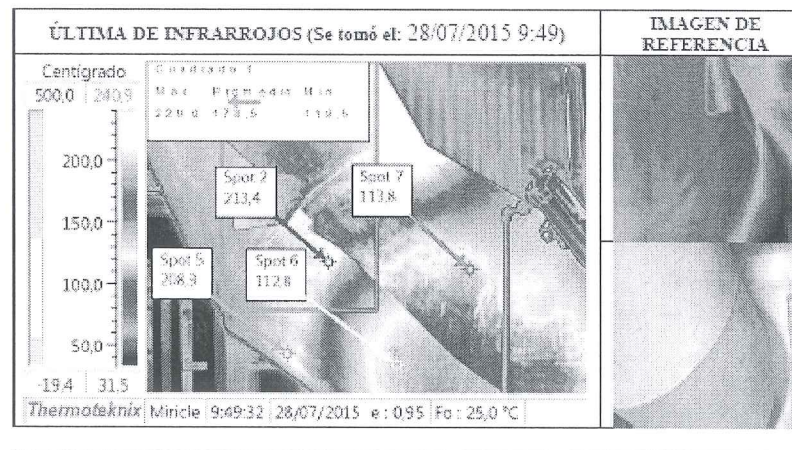
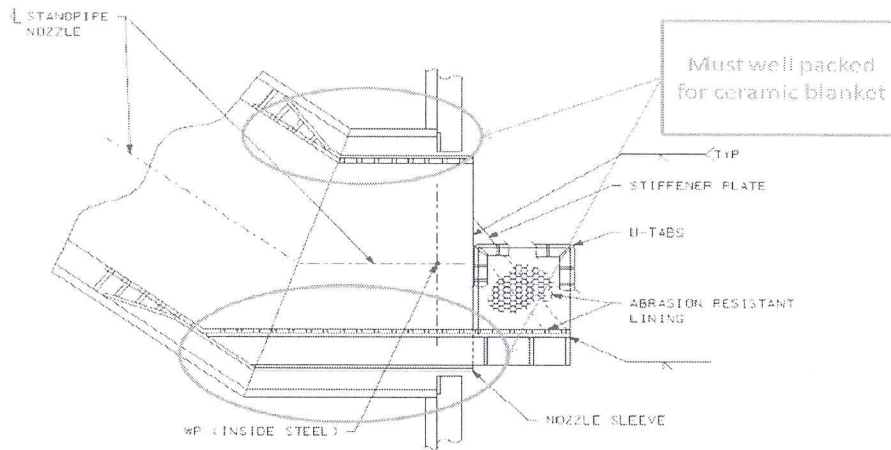
Refractory on the hot spot section

After careful review UOP understands that the potential main root cause for the stand pipe is that the ceramic packing was not incorrectly placed. This created a hot spot in the upper part due to air concentration and not able to isolate the system. The problem most likely might be internal due to the already added packing to the system outside:

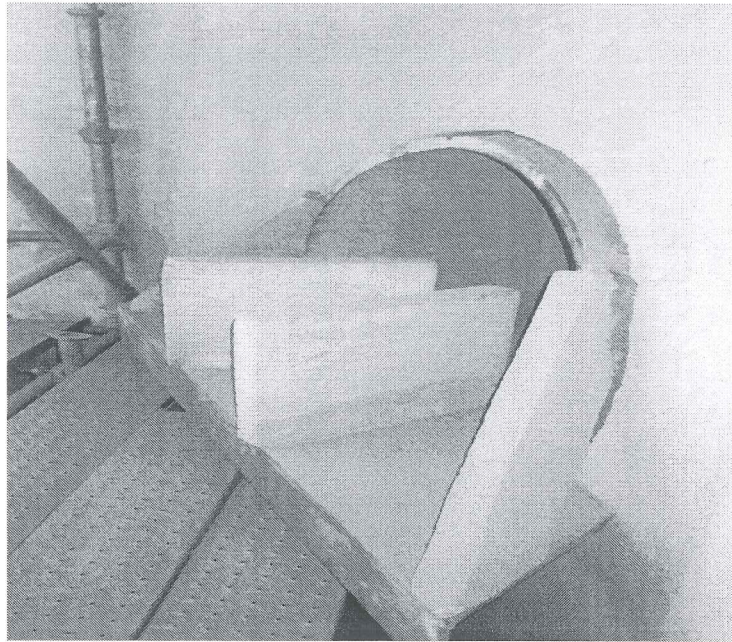
Unfortunately to fix this item the refractory and the ring must be removed to ensure that repacking the ceramic blanket to ensure the section is properly. Please note that the main reason is due to the internal ceramic that must have had cover the section. If the section of the ring is not removed then the bended section is hard to remove the packing and ensure it will work correctly.

5 Re-circulation Stand pipe

The hot spot was located and inspected for refractory.



Prior to ceramic packing



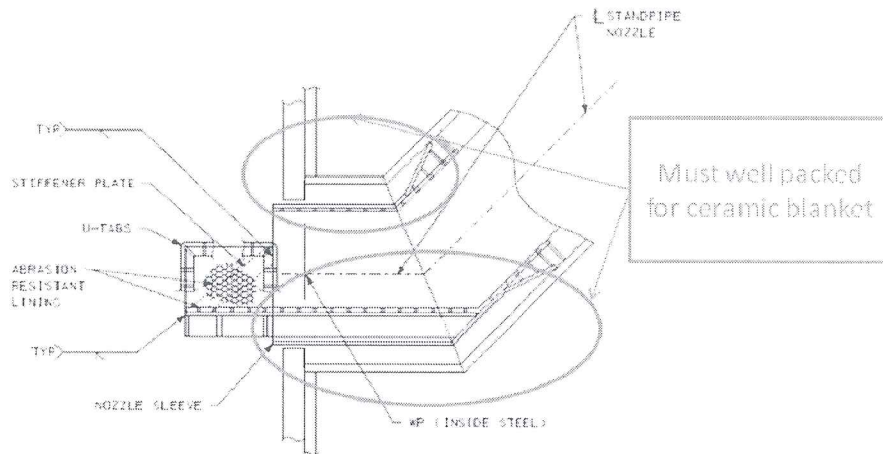
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After careful review UOP understands that the potential main root cause for the stand pipe is that the ceramic packing was not incorrectly placed. This created a hot spot in the upper part due to air concentration and not able to isolate the system. The problem most likely might be internal due to the already added packing to the system outside.

Unfortunately to fix this item the refractory and the ring must be removed to ensure that repacking the ceramic blanket to ensure the section is properly. Please note that the main reason is due to the internal ceramic that must have had cover the section. If the section of the ring is not removed then the bended section is hard to remove the packing and ensure it will work correctly.

Catalyst Cooler Stand pipe – Level 4

This item is recommended to be checked since we don't have an IR and as per findings on the other stand pipes it seems that they were not properly installed. This can be confirmed on the findings for the other stand pipes packing for the upper section.



If you have any further questions or comments please feel free to contact me at anytime.



Javier Rios

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