Ethanolamines/Glycol Ethers
Tier 3 Procedure

Section Number :226
Issue Number :1.3
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Title :Flushing T-230 And Overhead Line To E-211
References :Glossary Of Equipment Identification (Text # 114)

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226. Flushing T-230 And Overhead Line To E-211

1.0 Objective:

1.1 To bypass T-230 and take it out of service without upsetting the process or harming personnel are the environment.

2.0 Responsibility:

2.1 It is the responsibility of the operations supervisor and the senior operations specialist to ensure that this procedure is fully complied with.

2.2 It is the responsibility of the senior operations specialist and the operations specialist to ensure that this procedure is executed in a safe and efficient manner.

3.0 Procedure:

3.1 Lower the ammonia concentration to 50 percent and heat up T-220 to approximately 160 degrees to remove all of the ammonia from T-220 bottoms.

3.2 Once the ammonia is out of T-220 bottoms, and there is no more ammonia in T-230 bottoms, do the following.

3.3 Put t-220 bottoms to T-240 and block in T-220 bottoms to T-230.

3.4 Swap temperature controllers on T-220 to temperature control.

3.5 Pump T-230 empty to T-240, and cut steam on E-230.

3.6 Swap D-210 vent flow to T-211 and manually block this flow to T-230 overheads line once the flow is swapped we can go ahead and lower T-211 pressure controller to 17-20 pounds per square inch absolute and manually block in E-211 recirculation control loop in the field.

3.7 Begin adding condensate to t-230 through the bottom drain valve on the reboiler. Once a level is established begin slowly pumping this level to T-240.

3.8 Once T-230 is empty, block in T-230 bottoms to T-240. Begin adding condensate again to T-230, once the level is established begin adding steam to E-230 to establish an overhead flow to E-211 and T-211.

3.0 Procedure: Cont'd.

3.9 Take overheads flow from T-230 through E-211 to T-211 for 30 minutes. After 30 minutes the psv spools at T-230 and E-211 need to be unblocked to flush this part of the line. Once the spools are unblocked, E-211 needs to be isolated from T-211. Manually block in the two block valves off E-211 bottoms head to T-211.

3.10 Open the bleed valve at the bottom of E-211 to drain the liquid to the sump. Most ammonia should be clear by now.

3.11 Boil T-230 for another 30 - 45 minutes.

3.12 After boil out is complete, block in the steam and red tag t-230 and E-211 in preparation for work on E-230 and T-230 overheads line.

4.0 Revisions:

Revision No. 1	06-10-93	Yearly Review
Revision No. 2	12-20-94	Yearly Review
Revision No. 3	12-29-95	Yearly Review