

Should have been repaired when noted
 Examination of the agitator alarm silencing switch showed the switch will remain in the silence position, which it should not do, allowing the agitator to stop without sounding the alarm. Also, the motor start-stop switch would operate with very slight pressure stopping the agitator (a person's clothing brushing against the switch could conceivably stop the agitator). *This switch is guarded*

3. The separated spool piece was constructed of 3 inch Speedline rolled flanges rated to withstand 1900-2300 psi hydrostatic pressure. The use of this type of flange was discontinued about 1965. Upon discontinuing their use all existing flanges were either replaced or the insert was backwelded to the pipe as the result of a report that such assemblies had been known to separate. Poly No. 1, installed in 1960, was originally equipped with this type of flange and it was backwelded. The assembly did not separate at the point where the pipe is rolled into the insert and was backwelded. Instead, the flange slipped over the lip at the end of the insert (see attached sketch).

It appears moderate corrosion of the inside diameter of the flange and possibly wear on the lip of the insert allowed them to separate when subjected to the initial shock of the discharge. Both rupture discs in the vent line fully opened and there was no evidence of obstruction.

Conclusions

Poly No. 1 vented for an unknown reason. The possibility that the agitator stopped about the time the charge reached reaction temperature is suspected, but not proven.

The vent stack separated from the spool piece because the initial shock of the discharge forced the worn flange off of the serrated insert.

Recommendations

- ① Repair Poly No. 1 agitator alarm switch and agitator on/off switch. (Completed)
- ② Replace the vent nozzle spool piece with one properly constructed. (Completed)
- ③ Inspect all poly nozzle and piping systems for such other rolled flange assemblies and replace. (Completed and none found.)
- ④ Inspect all poly nozzle systems for other apparent weak points and correct. (A preliminary inspection has been conducted with a few minor repairs made. A two week schedule has been initiated to thoroughly examine each poly nozzle and flange assemblies to ensure they are safe.)

Evacuation Experience

While the emergency was handled very well by personnel on duty at the time of the accident, some problems were experienced. In securing self-contained breathing apparatus one operator put on the training unit, which was inadequately identified, and had an insufficient air supply. This unit has since been unmistakably identified. A second operator stated he could not obtain sufficient air through the demand regulator of another unit. He found it necessary to use

the by-pass shortening the air supply life considerably. This unit has been checked and found to be operating properly. In attempt to avoid this type of problem, future inspections of the equipment will include actual operation of the regulator.

The evacuation alarm was sounded, but there was some initial confusion about the nature of the alarm. The noise of the venting poly in addition to the area emergency whistle which had been activated made the evacuation code difficult to understand. We are considering methods of providing an evacuation alarm that will leave no doubt as to its purpose.

W. A. Riley

attachments (2)

cc: Gourp II
F. C. Dilley
H. Waltemate - with Supervisor's Report
O. F. Beckmeyer
J. L. Nelson - R. D. Scott
E. E. Mitchell - P. D. Terry
E. W. Harrington - P. H. Lawrence
W. E. Brodine
G. Pow
W. L. Cato

WAR:ss

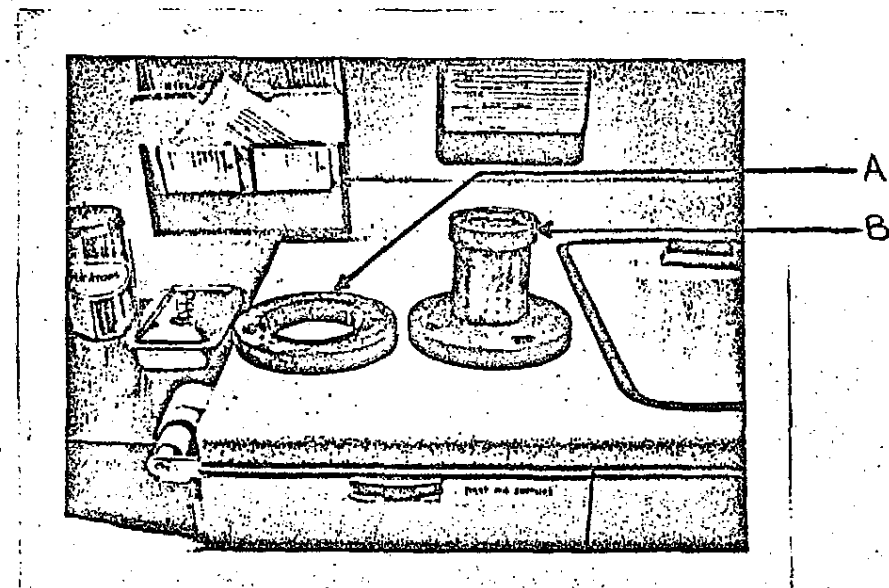
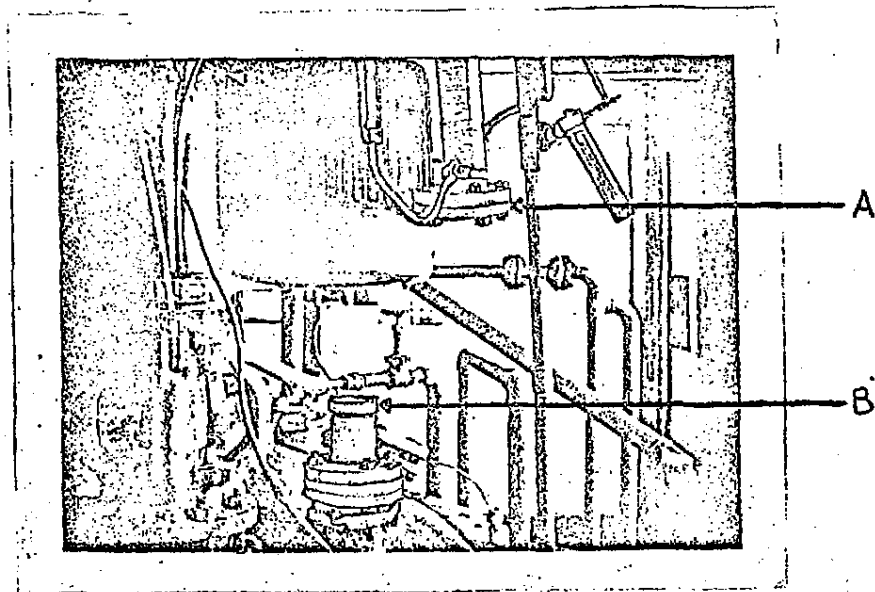
1. Each plant should determine where Speedline Flanges used & if a similar situation could occur.
2. Each plant should check there method of identifying empty Air Pack units.
3. Inspection of Air Packs should include operation of the regulator.
4. Plant evacuation alarms should be distinct & not be confused with other alarms.

2-16-72 W. Waltemate

NGC 15701

LONG BEACH PLANT

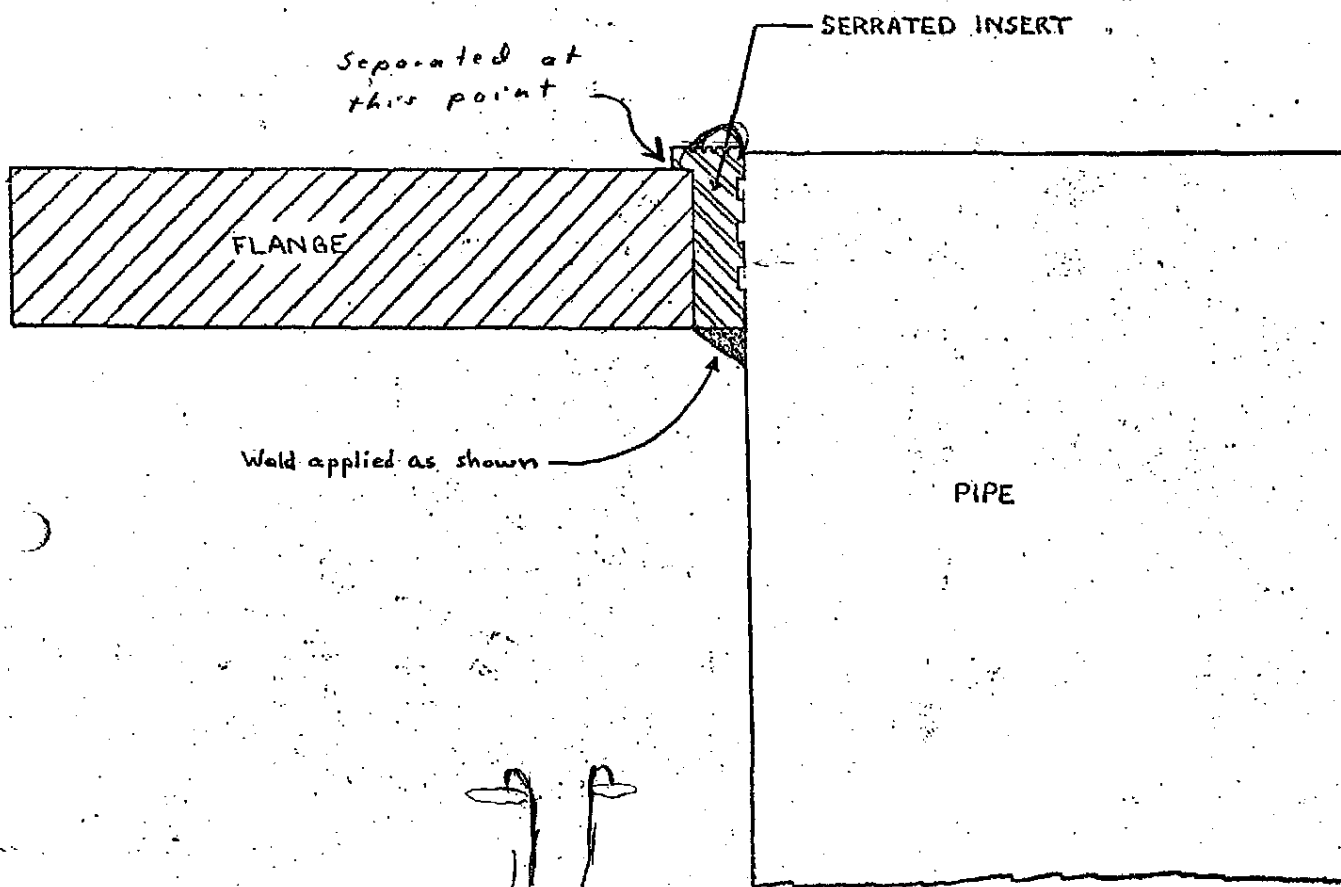
POLY NO. 1 VENT STACK SEPARATION - 1/23/72



NGC 15702

LONG BEACH PLANT

70LY NO. 1 VENT STACK SEPARATION - 1/23/72



SPEEDLINE FLANGE

NGC 15703