

EMISSION RECOVERY SYSTEM LEVEL GAUGE VALVES

CLASS "A" DESIGN

ABERDEEN PVC PLANT
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EMISSIONS RECOVERY SYSTEM LEVEL GAUGE VALVE
ABERDEEN CHEMICAL PLANT

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Project Description

During normal operations the sightglasses on the inlet separator, T-701; the vacuum pump seal water separator, T-702; and the compressor seal water separator, T-703 cannot be taken out of service for cleaning without taking the tanks out of service. The proposed design will install two flanged 1" plug valves between the separator and the level gauge. Bleeders with 3/4" plug valves will be added above and below the level gauges for steamout and recovery connections. New flanged 3/4" valves will be added to the HPSW supply line and the drain line to the BWS so that the level gauges can be removed for cleaning, as needed. The existing HPSW and drain valves upstream and downstream of the level gauges will be used to flush any trapped liquid in the level gauge to the Batch Water Strippers prior to opening. The bleeders above and below the level gauges can be used to steam clean the sightglass in place.

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Problem Description

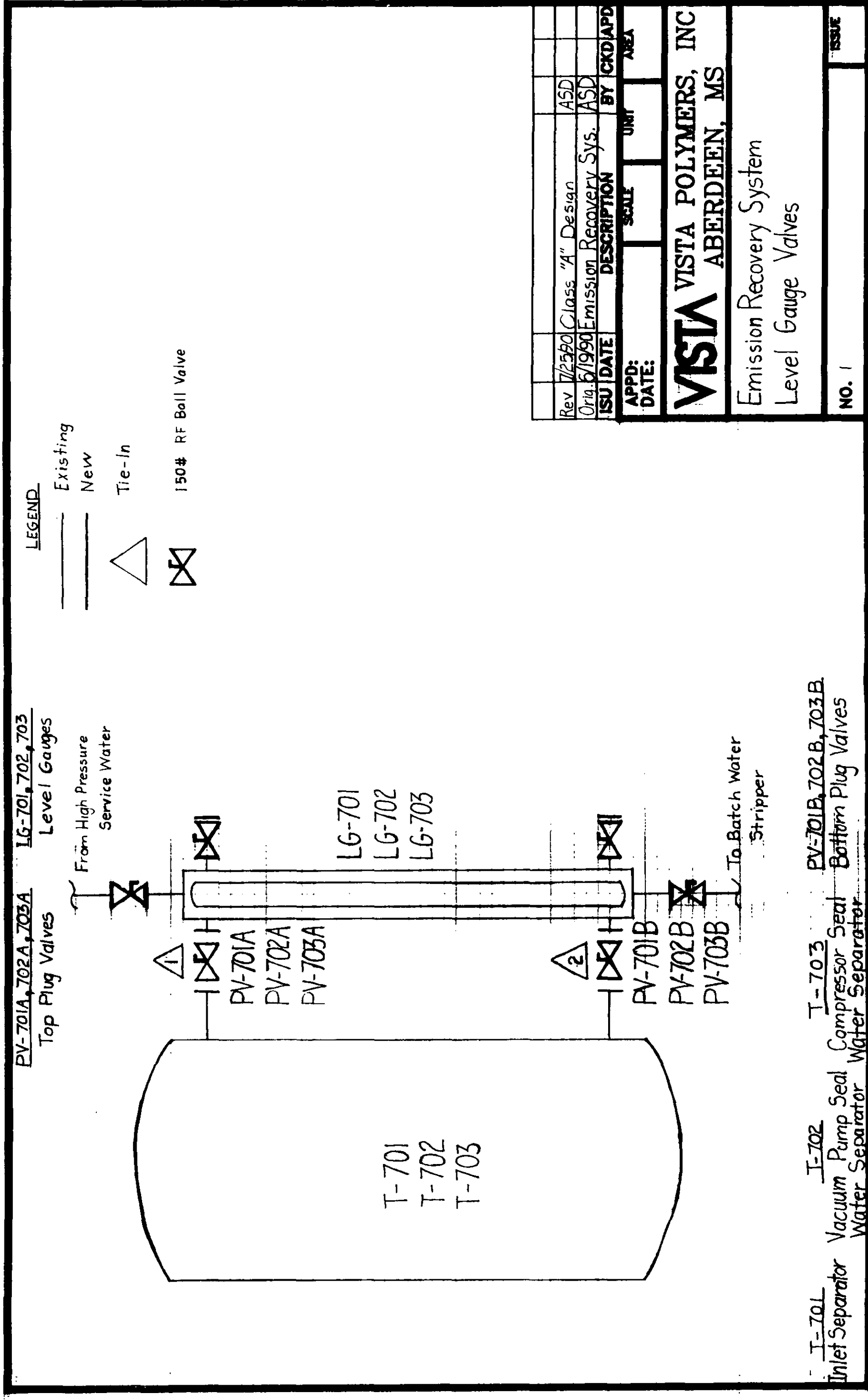
This design will install plug valves between the separators T-701, 702, and 703 to isolate the level gauges from the separators. By being able to isolate the level gauges, the sightglasses can be cleaned without taking the separators out of service. The only way to clean the sightglasses with the existing design is to shut down the emission recovery unit.

The existing sightglasses valves do not provide adequate shutoff to permit the cleaning of the sightglasses on the ERS separators while in service. Proper level control in T-701, 702, and 703 is critical to ERS operation. The Old Module A Operator routinely monitors the level in T-701, 702, and 703. In the event that the sightglasses become dingy or plugged the operators are not able to inspect the liquid level. Though each tank also has automatic level control, clear sightglasses are crucial when trying to troubleshoot the system.

Safety Impact Statement

The only safety concern with this design is that the plug valves and level gauges must be flushed well if they are to ever be removed.

A



I-701 Inlet Separator
I-702 Vacuum Pump Seal Water Separator
I-703 Compressor Seal Bottom Plug Valves
PV-701B, 702B, 703B