Orlando Wines
Pernod Ricard

Sparkling Wine Automation Opportunities

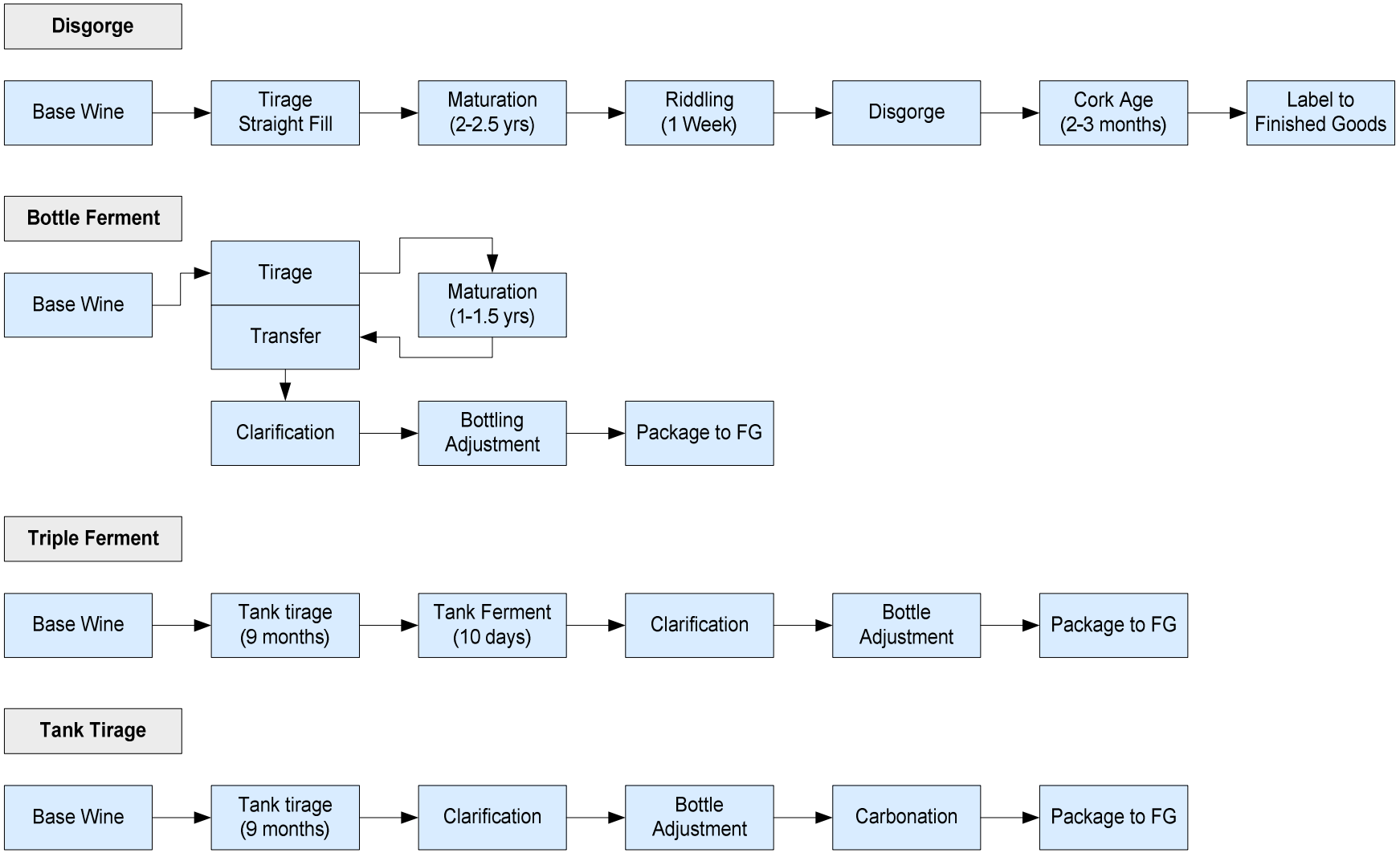
Peter Policki

Technical Engineering Manager

Agenda

- Australian Sparkling Wine Processes
- Henkell Sohnlein – Wiesbaden, Germany
- Orlando's Sparkling Process & Process Automation Opportunities

Orlando and Pernod Ricard NZ Sparkling Process Comparisons



Snapshot of the Australian Sparkling Equipment

DANGER
CONFINED SPACE
CAUTION

477

WARNING
TANK No. 471
CO² SUPPLY
PRESSURE 600 kPa
476

22
ORLANDO
SUPPLY
19
ORLANDO
SUPPLY
1

Henkell, Wiesbaden

- Approximately 100 ML production facility in Wiesbaden.

- Processing features:

  - Pall Crossflow of base wine & post secondary ferment at ambient and pressurised conditions respectively.

  - In-line dosing of yeast & sugar using yeast propagation plant.

  - Secondary ferment in horizontal fermenters (2 weeks), then transfer storage in storage tanks for 3 months.

  - Continuous cold stability post crossflow maturation filtration i.e. on finished clear product.

  - CO2 collection and reuse.

Henkell – Strategy & processes

- Driven by need for standardisation, automation, guarantee of constant high quality levels and avoid product recalls.
- Fining of base wine using gelatin & activated carbon
- Base cross flow filtered (1 million litres throughput between hot water rinses). Purpose to remove suspended fining agents bacteria and wild yeasts which may affect the secondary fermentation.
- In line sugar and yeast additions at 3% v/v post cross flow filtration.
- Ambient pressurised cross flow filtered and post continuous cold tartrate stability
- Ambient sparkling filling 16 deg C

Henkell – Sparkling Process

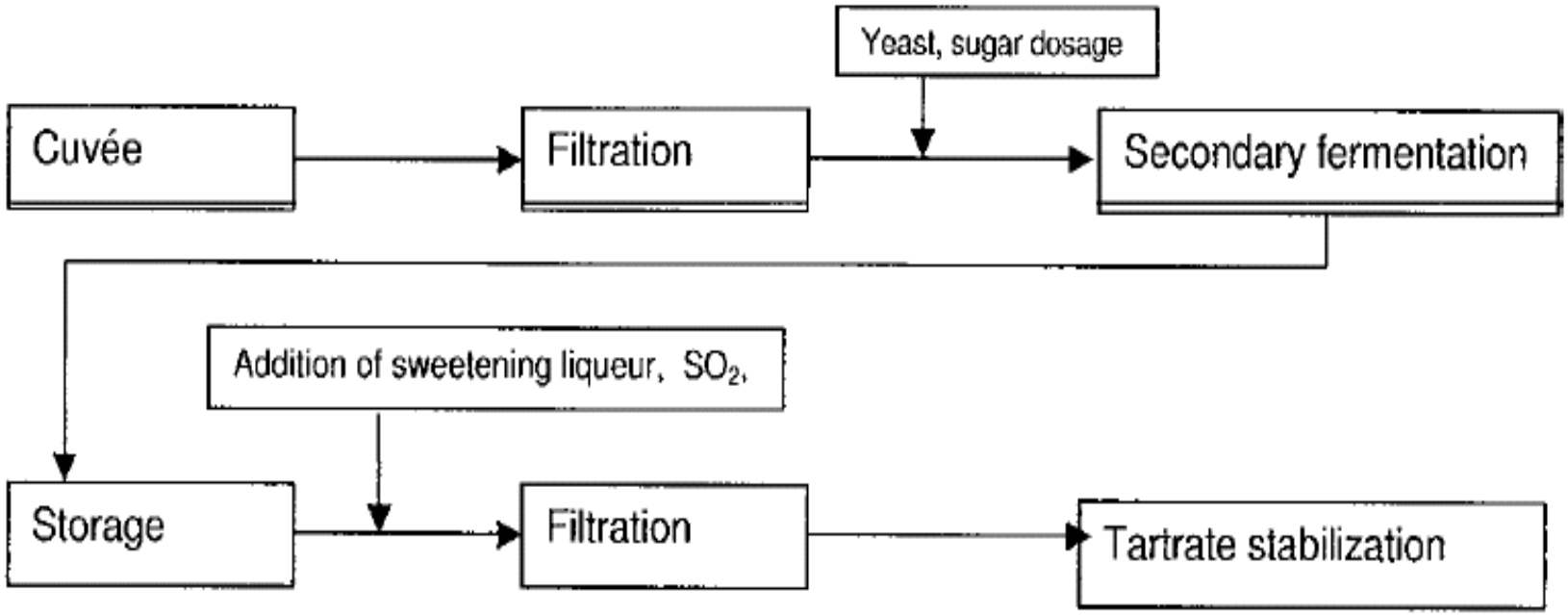
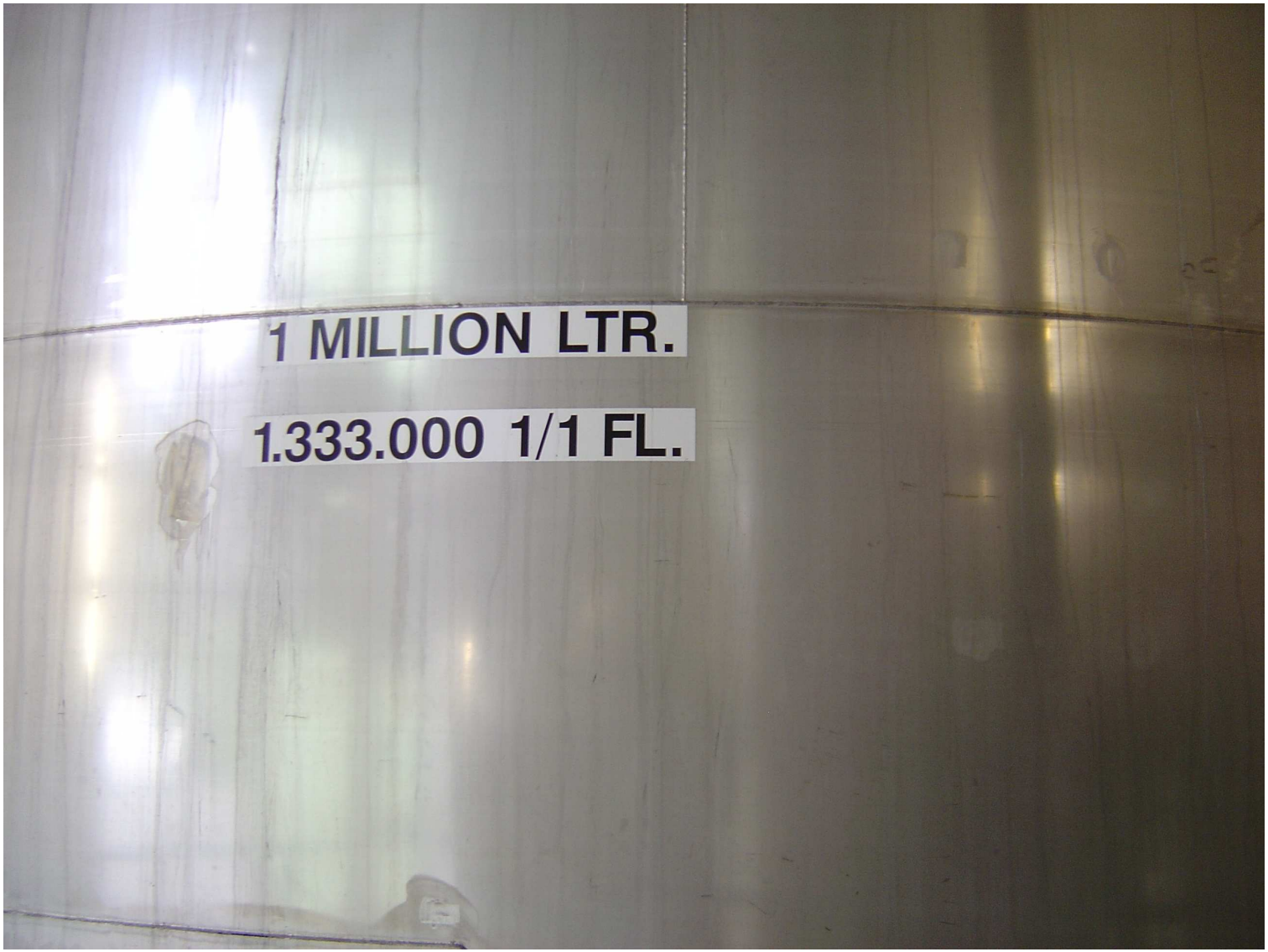


Fig. 1 - Scheme - Sparkling wine production process (Tank fermentation process)

Henkell – base wine storage



Henkell – Yeast Propagation

Henkell – Horizontal 105 kl Fermenters

Henkell – Truck transfers articulated pipework

Henkell – CO2 collection

Henkell – Continuous Cold Stability

Henkell – Product Identification

Orlando Sparkling Optimisation Plan

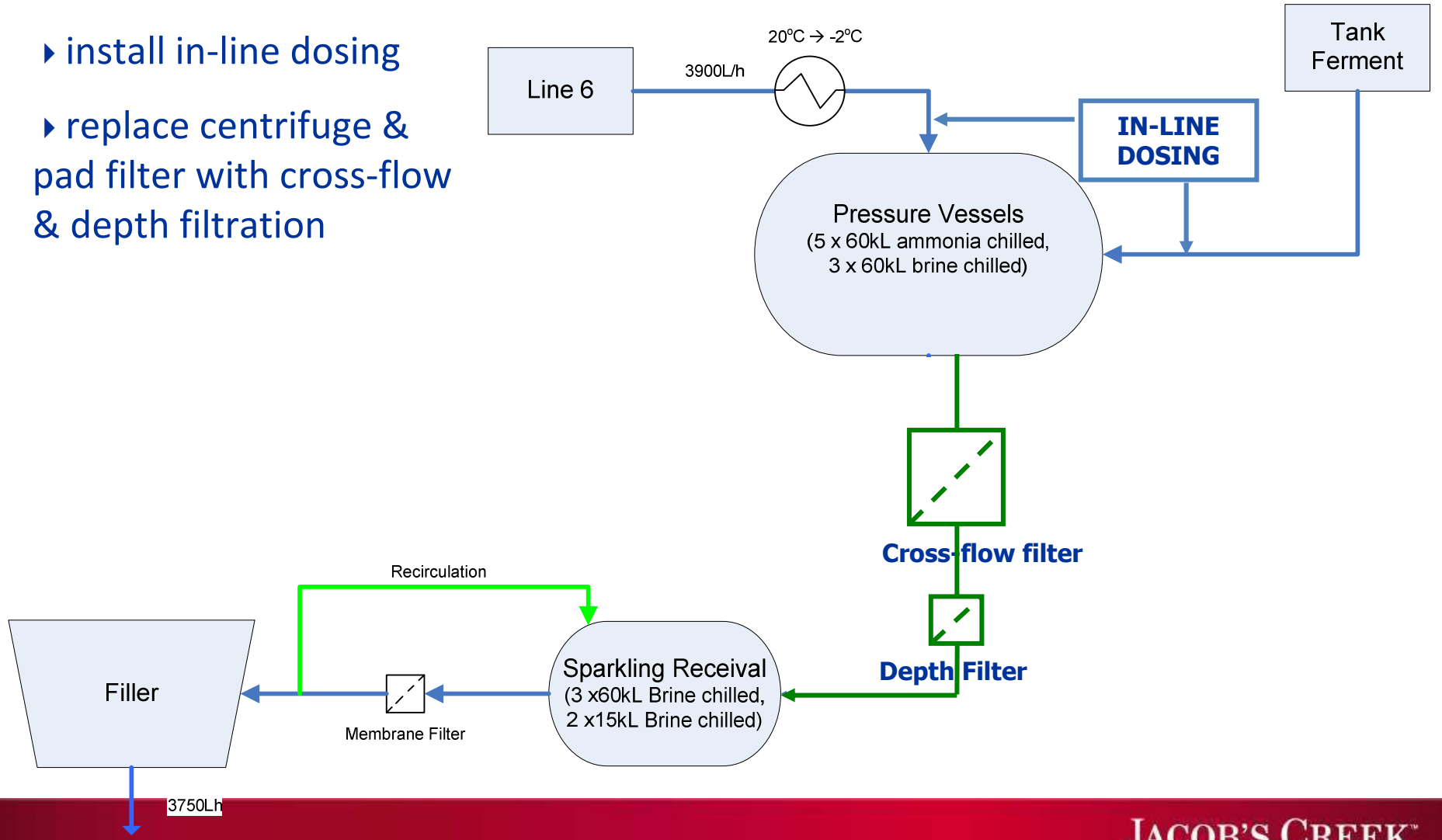
- Driven by need for standardisation, automation, guarantee of constant high quality levels and avoid product recalls.
- Crossflow filtration
- Tank Consolidation
- In line dosing of liquid sugar and yeast via aber protein measurement
- Automated mixproof valving and pigging
- CIP set
- Ambient sparkling filling 16 deg C

Proposed Design & Installation Stages

Orlando's Current Process and process opportunities

Stage 1:

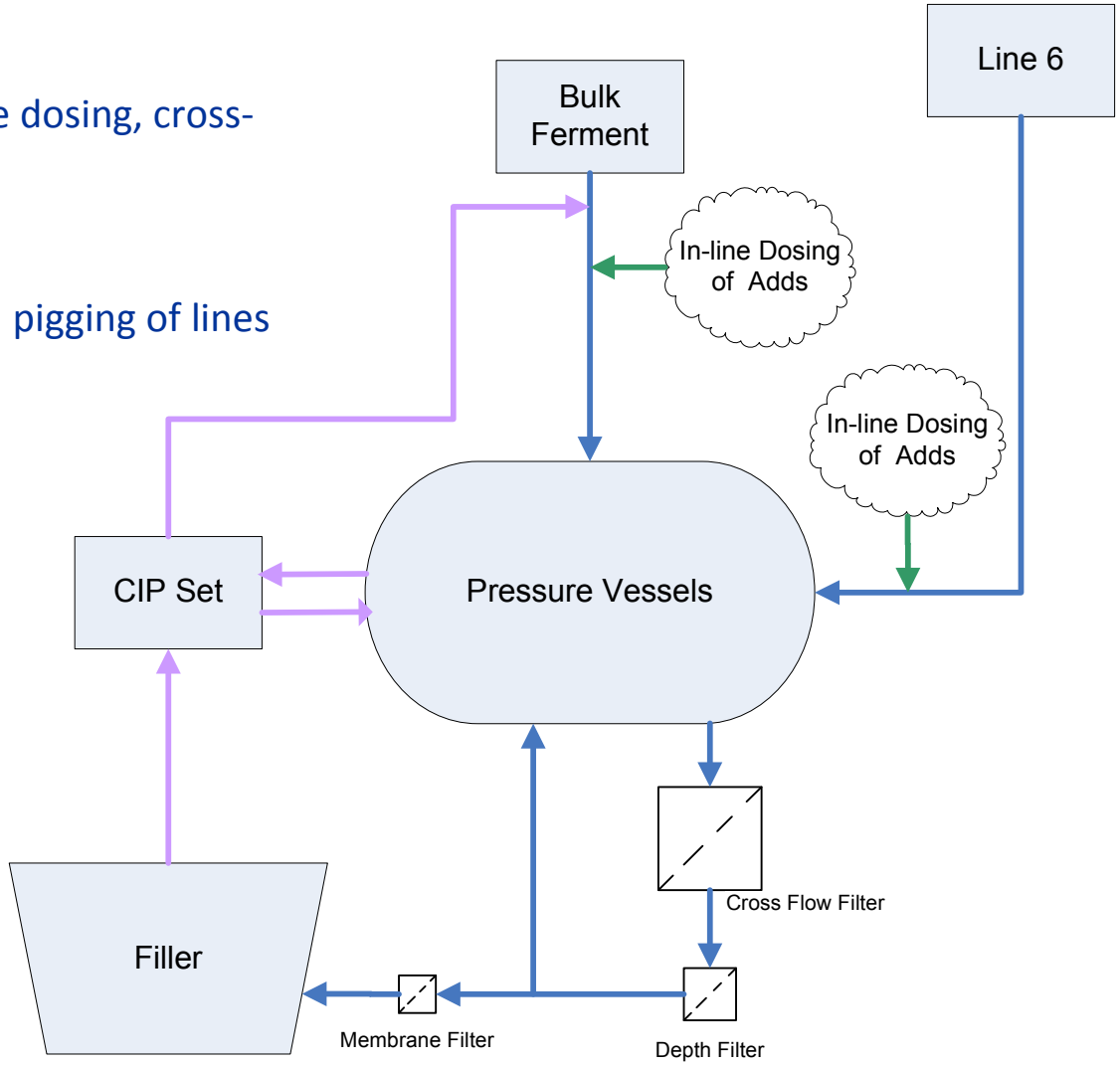
- install in-line dosing
- replace centrifuge & pad filter with cross-flow & depth filtration



Proposed Design & Installation Stages

Stage 2:

- Relocate pressure vessels, in-line dosing, cross-flow & depth filters,
- Ambient filler
- Automated mix proof valves and pigging of lines
- Automated CIP set



Questions ?