



Riverdale Mills TUR Project

Dual-Brush Recycling System

*By Shuai Duo
Process engineer*





- One of the largest manufacturers and distributors of galvanized and PVC coated wire mesh products.
- 200+ Employees
- Provide over 3,500 different wire mesh configuration
- 130 Riverdale St, Northbridge, MA

Our applications



Aquaculture



Fencing



Construction

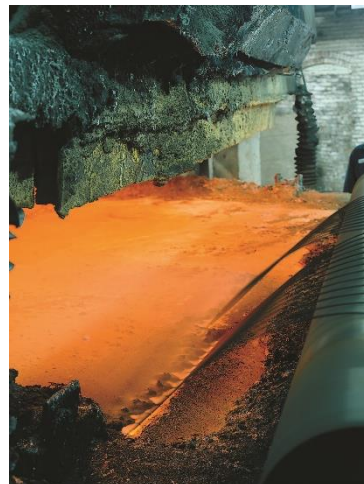
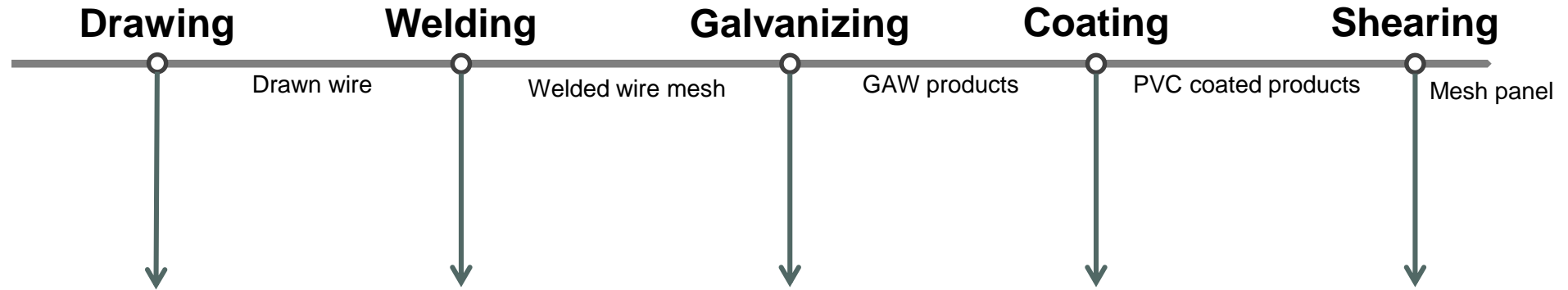


Agriculture



landscaping

How do we make our products





HCl

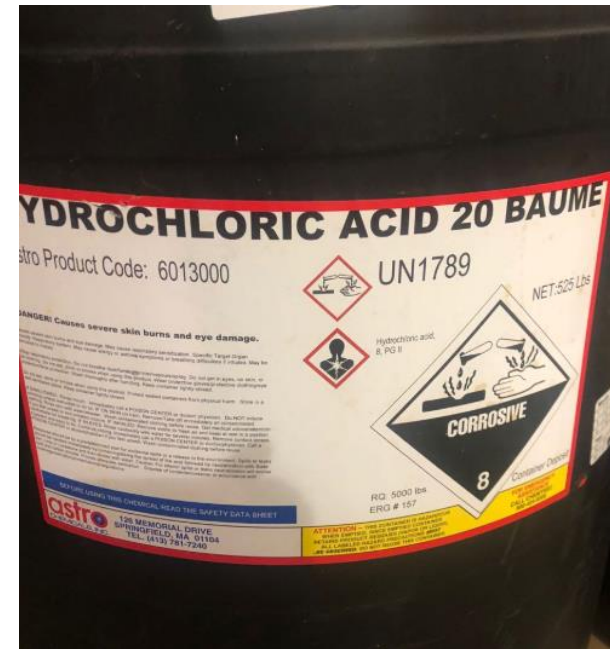
- Acid Cleaning process
- Remove the oxidization layer and rust

Ammonium Hydroxide

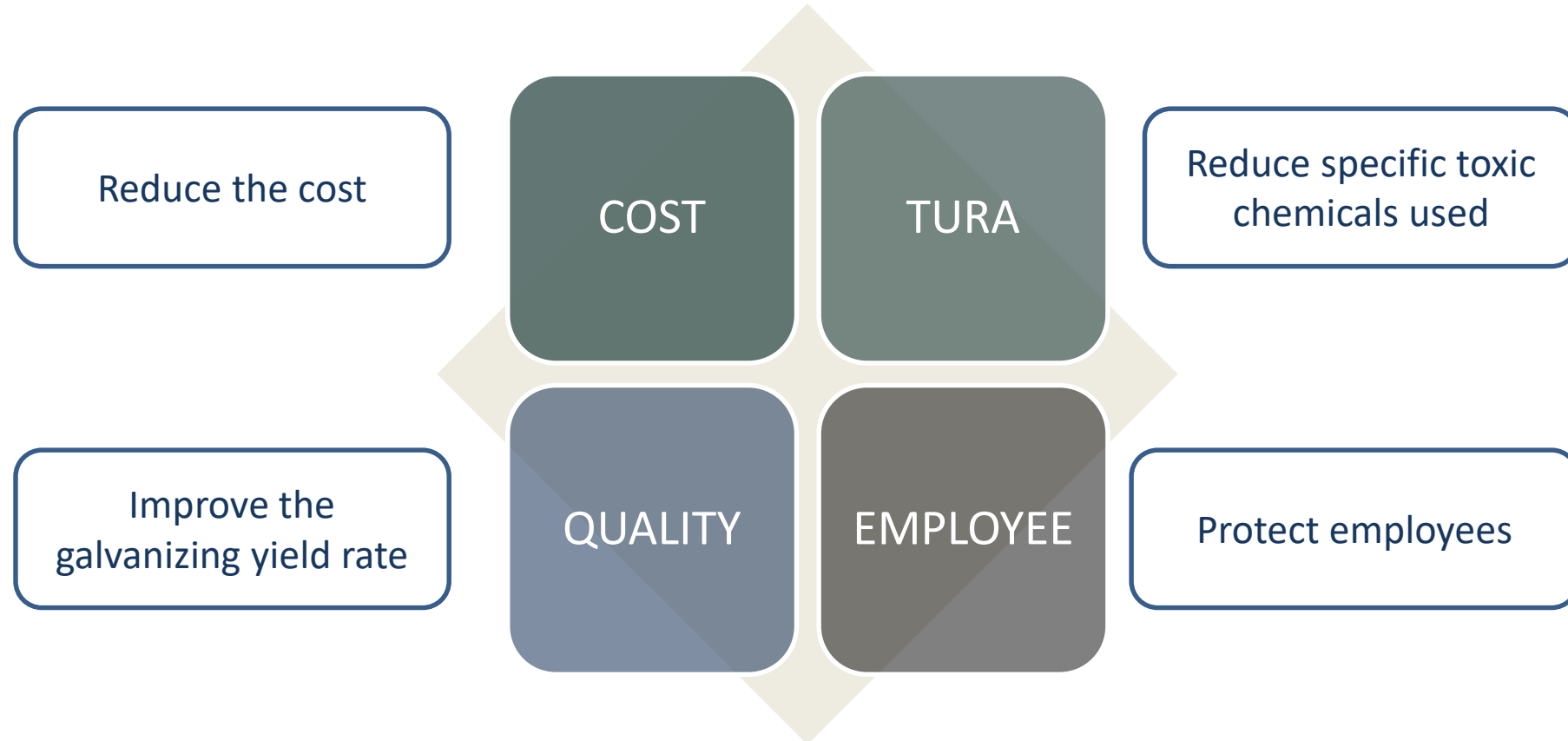
- Correct the pH in Rinse Tank
- The low pH will cause the process issue

Sodium Hydroxide

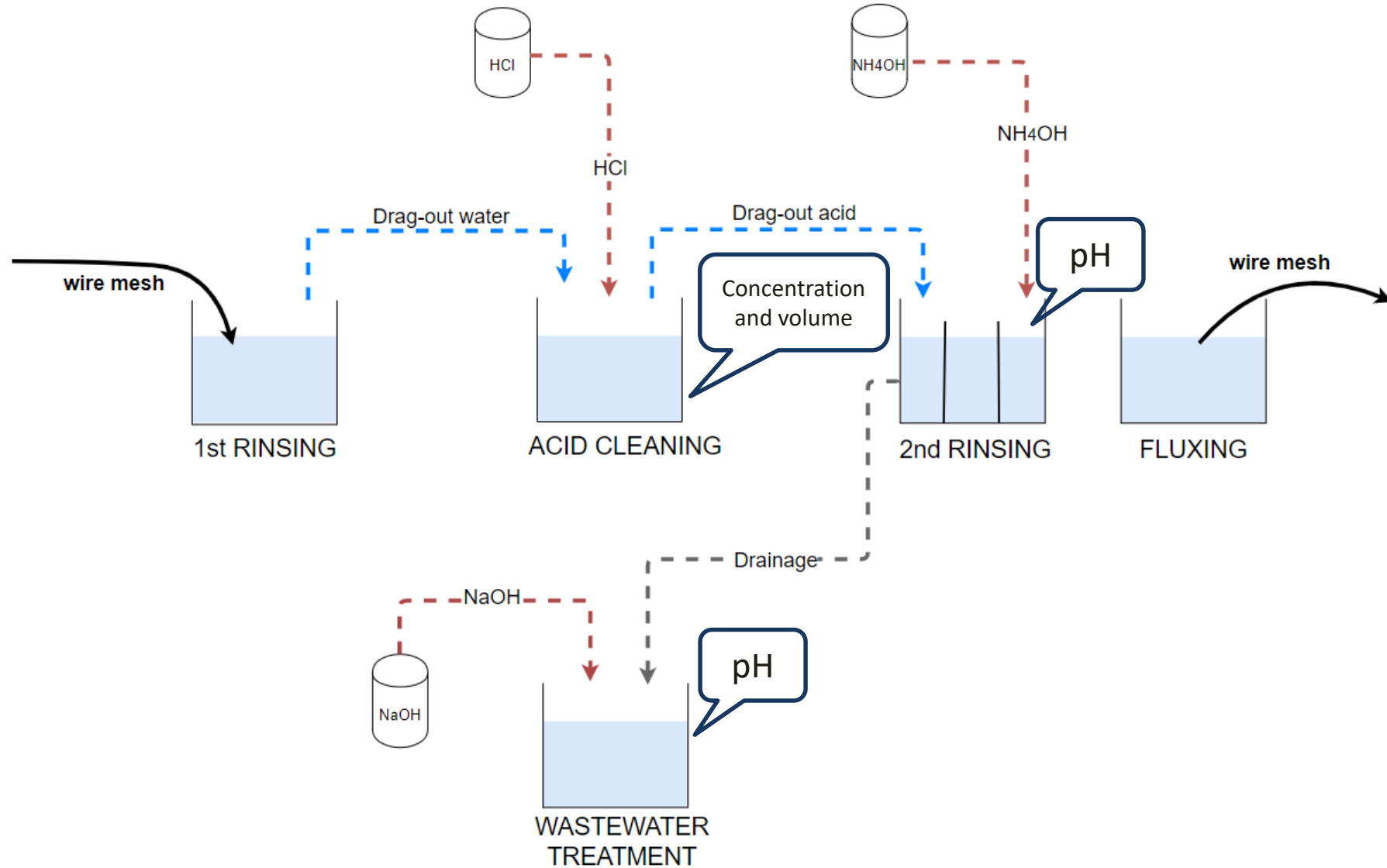
- Correct the pH in wastewater treatment
- The low pH will not meet the regulatory requirements



Motivation of Change



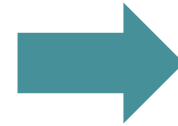
Process before optimization



Inspiration of concept

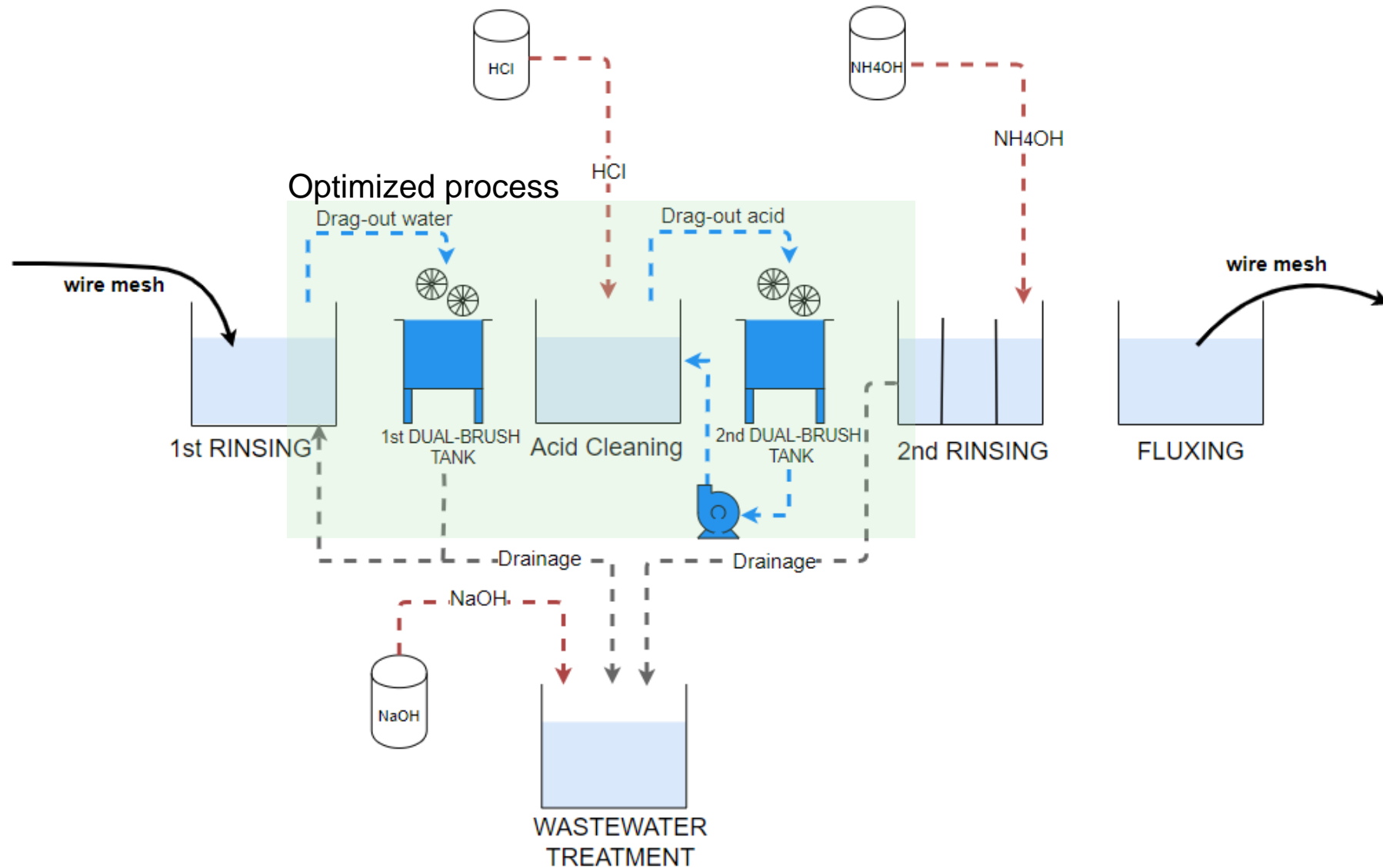


Car wash system



Dual-Brush System

Dual-brush recycling system



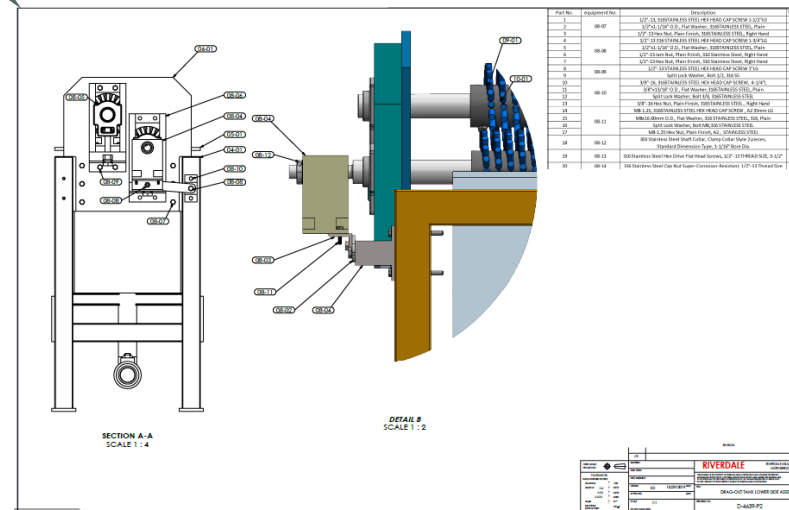
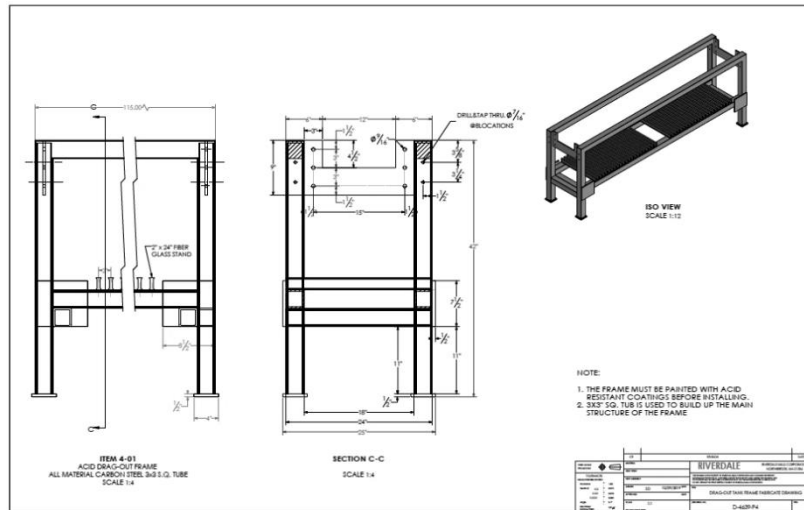
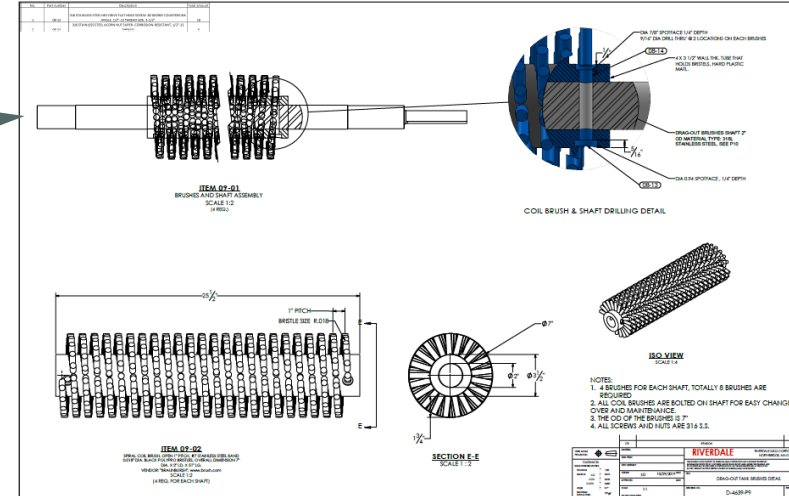
Drawing and BOM Development



Shaft and brush design

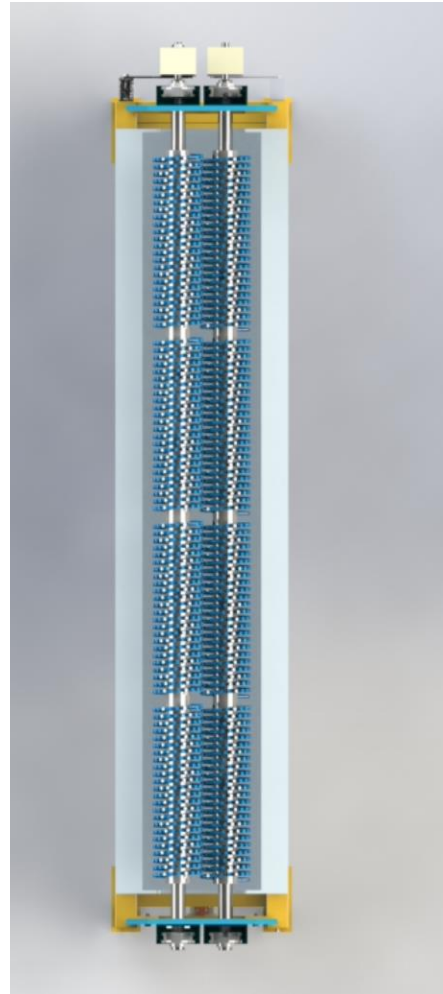
Tank frame design

Tank assembly design





Isometric view

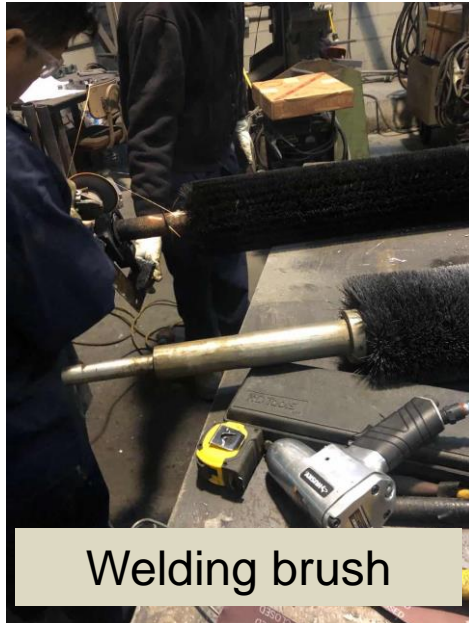


Top view

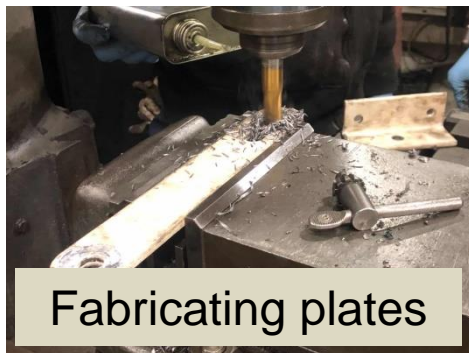


Section view

Fabrication and assembly



Welding brush



Fabricating plates



Assembling tank



Painting frame

Dual-brush recycling system



TANK 1



TANK 2





Lessons Learned



TEAMWORK

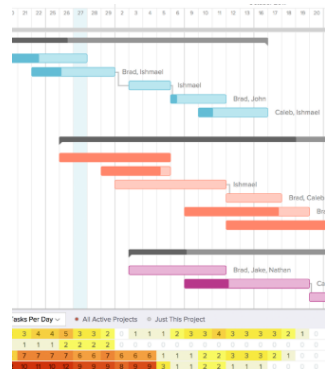
CREATIVE

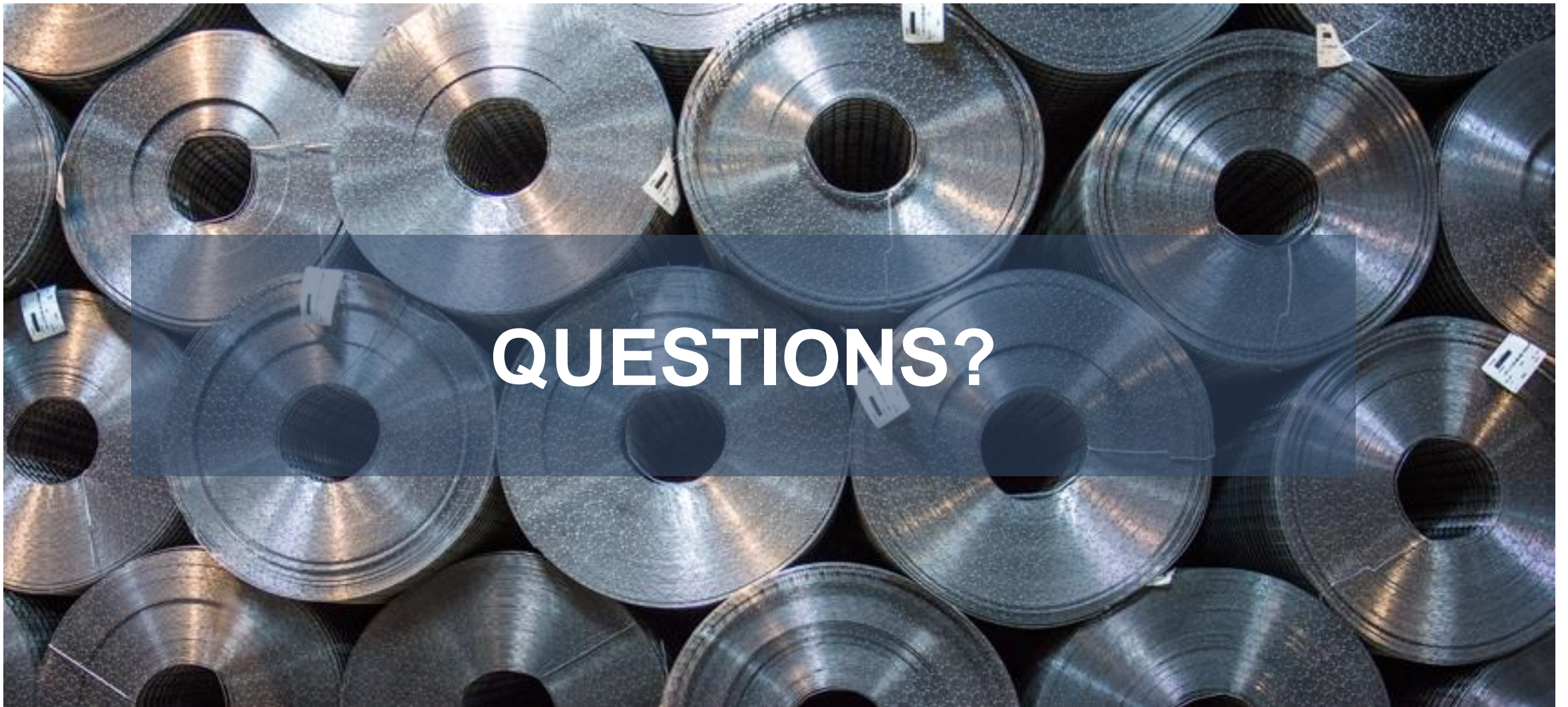


EXECUTION

MANAGEMENT

RESOURCES





QUESTIONS?

