



Slurry System

Application / Equipment Details:

- NBE CSO: E972397008
- Material: Sodium Chloride
- Bulk Density: 83 #/ft³
- Particle Size: 40 – 70 mesh

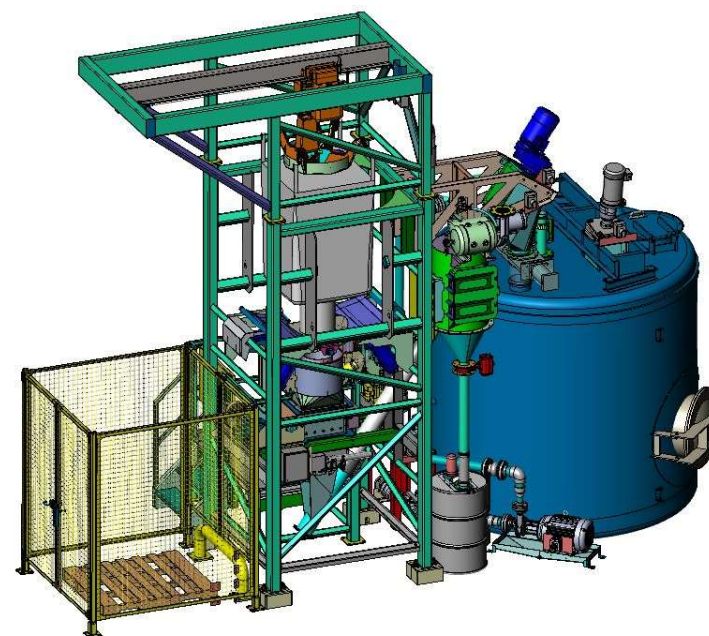
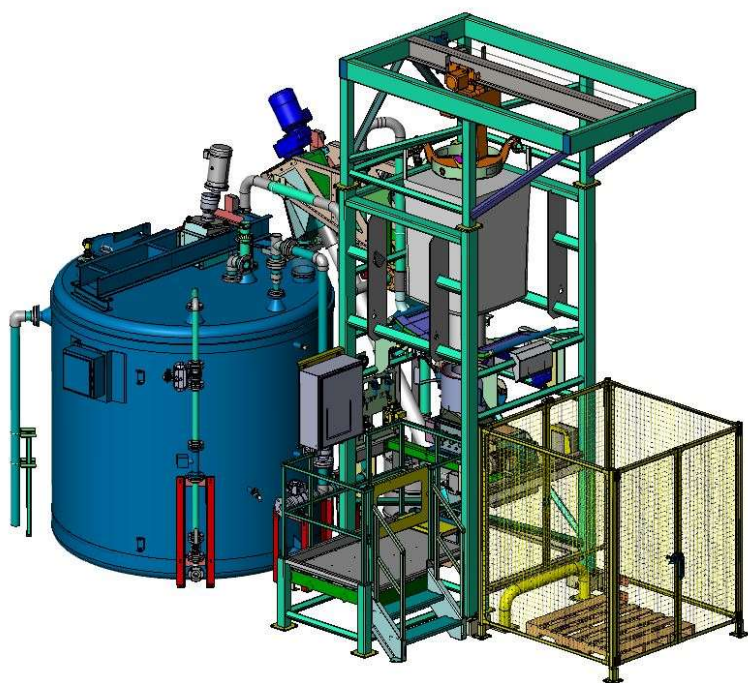
Application Overview:

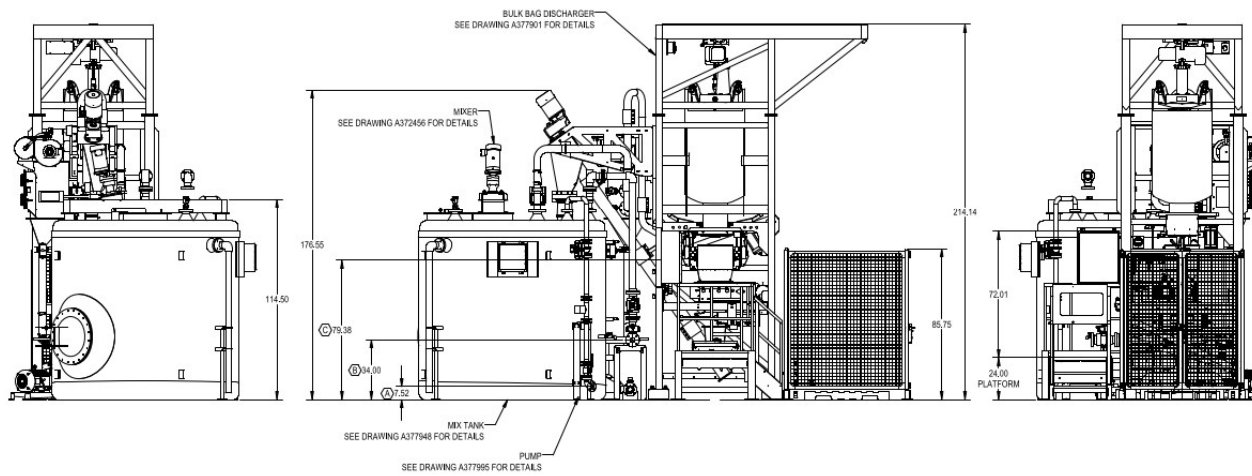
The customer needed a replacement system to combine and dissolve sodium chloride with water into a brine to feed their downstream process. Their existing system was labor intensive, unreliable, and hard to keep clean. Looking to make enhancements in those areas, along with improved safety and accuracy, NBE provided a bulk bag unloader equipped with E², dust collection, crumbler, flexible screw conveyor, and safety caging. The sodium chloride is fed into a fiberglass reinforced plastic (FRP) tank to be combined with water, utilizing a Brawn mixer to agitate the contents along with a high-shear inline mixer to shear the sodium chloride particles and quickly dissolve them. High accuracy of additions is achieved with load cells on the dry addition and a magnetic flowmeter on the water side. Conductivity instrumentation is installed in the mixing tank to verify correct solution concentrations. Sodium chloride solutions are very corrosive, so special materials such as Hastelloy, AL6XN, FRP, and CPVC were chosen for various components. NBE provided a full control package including PLC and HMI set up for automatic operation.

Real Results APPLICATION OVERVIEW



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NOZZLE SCHEDULE			
ITEM	DESCRIPTION	CONNECTION	CONSUMPTION
A	WATER INLET	2" ANSI 150# RF FLANGE	BY OTHERS
B	SOLUTION DISCHARGE	3" ANSI 150# RF FLANGE	75 GPM
C	COMPRESSED AIR INLET	3/4" NPT	15 CFM @ 80 PSI

GENERAL ARRANGEMENT - ELEVATION VIEW

APPROVED - PROCEED AS DRAWN	DATE: 01/15/2024	BY: [Signature]	FOR: [Signature]
APPROVED WITH REVISIONS NOTED	DATE: 01/15/2024	BY: [Signature]	FOR: [Signature]
NOT APPROVED - REVISE AND RESUBMIT	DATE: 01/15/2024	BY: [Signature]	FOR: [Signature]
National Bulk Equipment 3150 FARMERS DR., CHICAGO, IL 60631 PHONE: (708) 359-2222 WWW.NBE.COM		ASSEMBLY LIQUID SLURRY SYSTEM 315SS/04SS DATE: 01/15/2024 TIME: 1:24 SHEET: 4 OF 4 D A377900 D	

