

Slurry Make-Up System

Application Details:

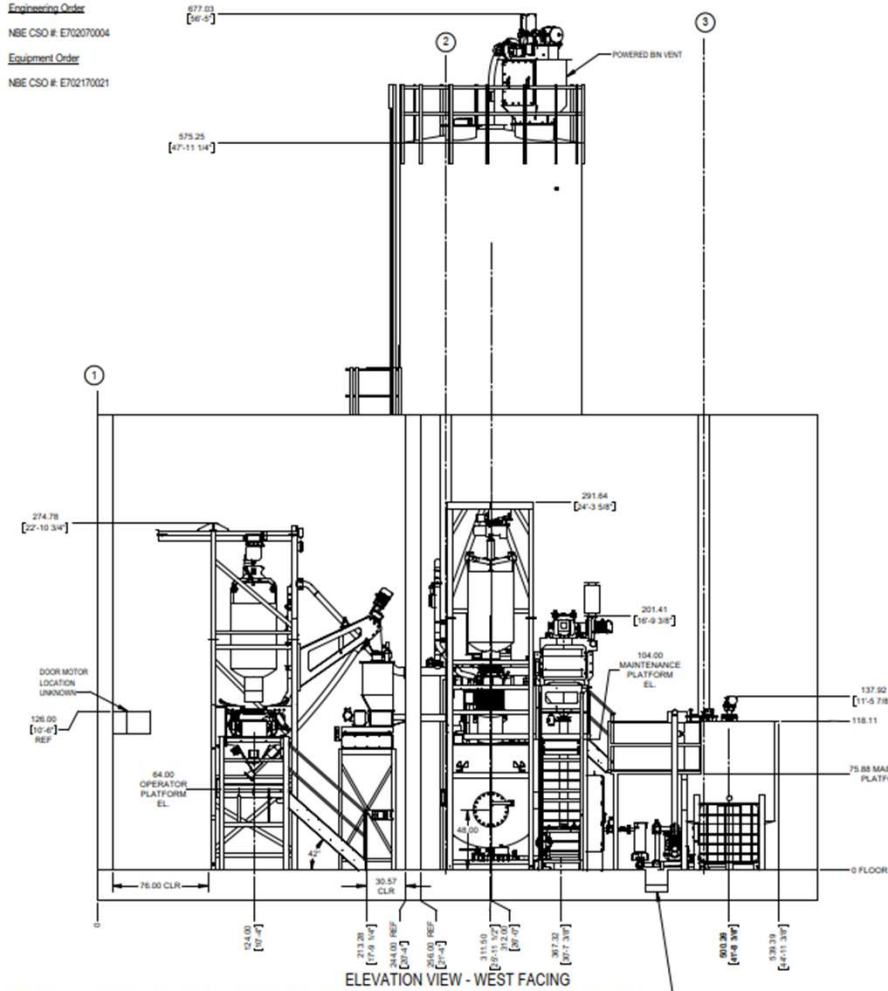
- NBE CSO: E702070004
- Material: Bentonite
- Bulk Density: 55 #/ft³
- Particle Size: Approx. 400 mesh
- Flowability: Varies; tends to bridge
- Area Classification: General Purpose (non-hazardous)
- Discharge Rate: 45-60 minutes per batch / 2-3 batches per shift
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Application Overview: The customer was moving their manufacturing facility to a new location and needed to duplicate their capabilities while maintaining operability at the existing site along with upgrading the process for improved quality and future growth. The slurry material is used in the process of manufacturing black pipe in the integrated foundry. The system includes a complete delivery system for the bentonite material that is installed in a sealed process room to help control airborne dust concerns, and a complete storage and delivery system for the feldspar (including a reserve bulk bag discharger to prevent lapses in bulk supply concerns) installed outside of the main building. The batch is started by partially filling the blending tank with approximately 2/3rds of the required water and starting the integrated high-shear mixer at low speed; the two (2) materials are then fed (by weight) into the mixing tank based on pre-set recipe details. The mixer is ramped up to full speed to ensure the materials are properly sheared to meet Q/A requirements. Once the chemistry is approved by quality control, the viscosity is adjusted by adding water to reach the desired consistency. The final batch is then transferred using the integral pump skid to the holding/process tank. The slurry is transferred through filtration to remove any unwanted agglomerates larger than 200 mesh to ensure reliable use by the foundry. The finished slurry is fed from the process tank into process bins that are used to interface directly with the foundry process. The system includes complete recipe-based controls with all necessary instrumentation and devices to provide the specified slurry at the desired consistency.

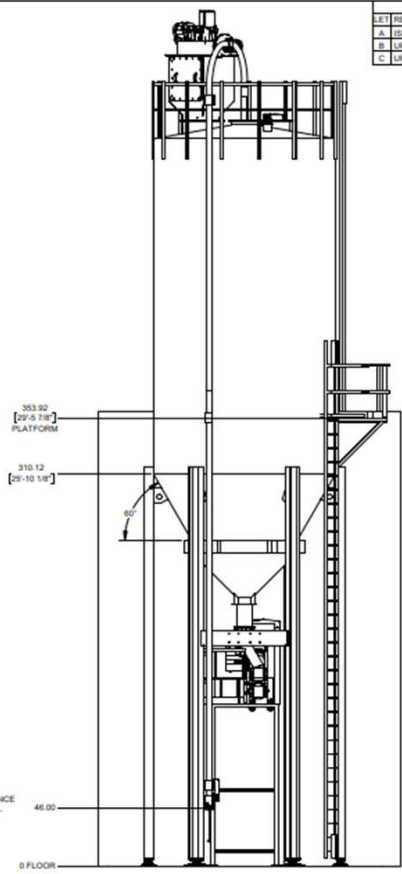
Engineering Order
NBE CSO #: E702070004

Equipment Order
NBE CSO #: E702170021

REVISIONS		NAME	DATE
LET	REVISION NOTES		
A	ISSUED FOR APPROVAL	TDT	02/23/21
B	UPDATED PER CUSTOMER COMMENTS	TDT	02/23/2021
C	UPDATED PER CSO E702170021	TDT	2/9/2022



ELEVATION VIEW - WEST FACING



NOTE: INSIDE AND OUTSIDE FLOOR ELEVATION IS ASSUMED TO BE THE SAME. CUSTOMER TO VERIFY.

ELEVATION VIEW - EAST FACING

GENERAL ARRANGEMENT - ELEVATION VIEW

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APPROVED WITH REVISIONS NOTED	
NOT APPROVED - REVISE AND RESUBMIT	

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SCALE: 1:40

